

Guidelines for States Participating in the Pipeline Safety Program



**Pipeline and
Hazardous Materials
Safety Administration**

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GLOSSARY

Agreement	The State Agency assumes inspection responsibility for facilities and reports Probable Violations to PHMSA for enforcement actions.
Certification	The State Agency assumes inspection and enforcement responsibility with respect to intrastate facilities over which it has jurisdiction under State law.
Chapter 601, Title 49 of the U.S. Code	Throughout this manual, Sections 60101 – 60140 refer to Chapter 601, Title 49 of the United States Code Chapter 601 is the recodification of the Natural Gas Pipeline Safety Act of 1968, as amended (49 U.S.C. app 1671 <i>et seq.</i>), and the Hazardous Liquids Pipeline Safety Act of 1979, as amended (49 U.S.C. app 2001 <i>et seq.</i>).
Code of Federal Regulations, Title 49 (49 CFR)-Pipeline Safety	
Part 40	Procedures for Transportation Workplace Drug Testing Programs
Part 190	Pipeline Safety Programs and Rulemaking Procedures
Part 191	Transportation of Natural and Other Gas by Pipeline: Annual Reports Incident Reports, and Safety-Related Condition Reports
Part 192	Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards
Part 193	Liquefied Natural Gas Facilities: Federal Safety Standards
Part 194	Response Plans for Onshore Oil Pipelines
Part 195	Transportation of Hazardous Liquids by Pipeline
Part 196	Protection of Underground Pipelines from Excavation Activity
Part 198	Regulations for Grants to Aid State Pipeline Safety Programs
Part 199	Drug and Alcohol Testing
Compliance Action	A Compliance Action is an action or series of sequential actions taken to enforce federal or state pipeline regulations. One Compliance Action can cover multiple Probable Violations. A Compliance Action may take the form of a letter warning of future penalties for continued violation, an administratively imposed monetary sanction or order directing compliance with the regulations, an order directing corrective action under hazardous

	conditions, a show-cause order, a criminal sanction, a court injunction, or a similar formal action.
Department of Transportation (DOT)	The United States Department of Transportation (DOT) is a federal Cabinet department of the U.S. government concerned with transportation. It was established by the Department of Transportation Act of Congress on October 15, 1966 and began operation on April 1, 1967. The Secretary of Transportation is the head of DOT.
Federal State Tracking and Reporting (FedSTAR)	This is the computer application available over the internet which is used by State Agencies to enter the required federal documentation and information.
Grant	Funds or aid in kind to carry out specified programs, services, or activities.
Grant Program	Those activities and operations of the State Agency which are necessary to carry out the purposes of the grant, including any portion of the program financed by the grantee. This technical usage of the phrase should not be confused with the Pipeline Safety Grant Program (sometimes shortened to "Grant Program"), which is the Federal assistance program in support of the State Agency's pipeline safety program.
Inspection Person-Day	All or part of a day spent by State Agency Inspectors)/Investigator(s) (including travel) in on-site or virtual evaluation of an operator's system to determine compliance with Federal or State pipeline safety regulations; or in on-site investigation of a pipeline incident; or in job-site training of an operator. (See section 5.1 for description of inspection types) Time counted for such activities should be reported as a maximum of one Inspection Person-Day per inspector present for each day devoted to safety issues, regardless of the number of operators visited during that day. (e.g., You may evaluate two operators in the same day and record each inspection visit as 0.5 person-day, or actual fraction of a day, for each operator provided the total does not exceed 1.0 person-day). Non-qualified inspectors present assisting a qualified inspector can be included in the inspection day count. On a limited basis, the inspector may count in-office inspection time to review operator written plans, procedures, programs, and records to effectively use on-site inspection time, as approved by the Program Manager, and as noted in the annual progress report. In-office inspection time must be adequately documented and made part of the State Agency's inspection records.
Inspection Unit	All or part of an operator's pipeline facilities under the control of an administrative unit that provides sufficient communication and controls to ensure uniform design, construction, operation, and maintenance procedures for the facilities.

The application of the Inspection Unit concept will ensure inspection coverage of an operator's entire system and enhance Federal/State management of workload and program evaluation. Determination of inspections will be based on the following guidelines, but where unique situations exist, good logic and judgment must be exercised when identifying the parameters of the Inspection Unit.

- ***Privately Owned Distribution System***

The Inspection Unit could be an operating area such as a specific city or metropolitan area, a group of towns, or other geographic area, and would include all distribution facilities in the defined area. However, because of the greater number of pipeline facilities in some large metropolitan distribution areas, multiple Inspection Units may be appropriate. In selecting the Inspection Unit, consideration should be given to the size of the area covered, work location, record location, and line of supervision.

If the distribution system contains transmission lines where transmission integrity management plans are required, those system(s) should be considered separate intrastate transmission Inspection Unit(s).
- ***Gas Transmission and Hazardous Liquid Pipeline System (including Ethanol)***

The Inspection Unit should include up to 500 miles of pipeline right-of-way including any compressor stations or pumping facilities within the designated limits. In some circumstances, such as densely populated areas and/or environmentally sensitive areas, and/or where judged necessary based on local conditions, a separate Inspection Unit can be established.
- ***Liquefied Natural Gas (LNG) Facility***

Each LNG facility should be considered a single Inspection Unit.
- ***Master Meter System***

Each Master Meter System should be considered a single Inspection Unit. However, more than one Master Meter System should be considered a single Inspection Unit if all facilities involved are owned, operated, and maintained under common supervisory control.
- ***Municipal***

Each Municipal operator should be considered a single Inspection Unit unless its system, similar to privately owned distribution systems, contains transmission lines where transmission integrity management inspections are done in which case the transmission system should be a separate Inspection Unit. Also operating conditions/characteristics could suggest additional Inspection Units be considered.
- ***Petroleum Gas System***

Each system should be considered a single Inspection Unit. However, more than one petroleum gas system should be considered a single Inspection Unit if all facilities involved are

	owned, operated, and maintained under common supervisory control.
• Regulated Gathering Pipeline System	Each regulated gathering pipeline system can be considered as a single Inspection Unit. Circumstances may exist when an operator has more than one regulated gathering system separated into individual Inspection Units.
Interstate Agent	The State Agency assumes inspection responsibility for interstate facilities and reports Probable Violations to PHMSA for enforcement actions.
National Response Center (NRC) (1-800-424-8802)	The federal government's national communications center, which is staffed 24 hours a day by U.S. Coast Guard officers and marine science technicians. The NRC receives all reports of releases as required by 49 CFR 191 and 49 CFR 195, Subpart B. This "telephonic" report data is shared with PHMSA as well as other federal agencies such as Homeland Security, EPS, NTSB via an information system.
National Transportation Safety Board (NTSB)	This Federal agency was created by Congress in the DOT Act of 1966. Although NTSB's authority is limited to transportation failure investigations, its mission relating to pipeline safety is to: 1. Investigate significant failures and report the circumstances relating to each failure and its probable cause. 2. Make recommendations to the Secretary, the pipeline operators, manufacturers, associations, and interested parties to minimize the possibility of recurrence of similar failures. 3. Release reports deemed to be in the public interest. 4. Conduct special studies and investigations on matters regarding safety in pipeline transportation and failure prevention.
Non-compliance	A violation or Probable Violation of any Federal or State pipeline safety regulations.
Office of Pipeline Safety (OPS)	OPS is the office that handles pipeline safety for PHMSA
Pipeline and Hazardous Materials Safety Administration (PHMSA)	PHMSA is the agency under DOT that is responsible for pipeline safety oversight.

OPS Inspector Training and Qualifications Division (TQ)	The safety training organization operated by OPS located at 3700 S. MacArthur Blvd, Suite B, Oklahoma City, OK 73179-7612. The contact telephone number is 405-686-2310.
Probable Violation	A Probable Violation is a potential Non-compliance with any Title 49, Chapter 601section or, where a section is divided into subsections (a), (b), (c), etc., any subsection of federal or state pipeline regulations. Each numbered section should be counted separately. Multiple Non-compliances of a numbered section discovered on the same inspection should be counted as one Probable Violation with multiple pieces of evidence (i.e., during a unit inspection it was discovered that an operator failed to check and service 6 distribution valves, in reference to 49 CFR 192.747 Valve maintenance: Distribution systems, this is <u>one</u> Probable Violation of 192.747(a) with six pieces of evidence and not six Probable Violations).
Program Manager	The person designated by the State Agency as responsible for all activities of the pipeline safety program
Region Director	The individual responsible for all activities of the designated OPS region
Region Office	One of five offices delegated the authority to carry out the field activities for OPS
State Inspection Calculation Tool (SICT)	A tool used to determine the required number of annual Inspection Person-Days for a State Agency.
Special Initiatives	Initiatives occasionally issued by PHMSA for a limited purpose.
State Agency	The division of each State, including the District of Columbia and Puerto Rico, authorized through a Certification or Agreement with PHMSA to administer a pipeline safety program. Also referred to as “grantee” or “recipient.”
PHMSA State Programs	The OPS division that provides technical assistance, support and evaluates State Agency programs.
Supervisor	Individual in a State Agency supervising pipeline safety inspectors/investigators as designated in Attachment 7 of the annual Progress Report. This does not include individuals solely supervising damage prevention/technical staff.

ACRONYMS

AID	Accident Investigation Division
CFR	Code of Federal Regulations
LPG	Liquefied Petroleum Gas
NAPSR	National Association of Pipeline Safety Representatives
NARUC	National Association of Regulatory Utility Commissioners
OMB	Office of Management and Budget
PDM	Pipeline Data Mart
RCFA	Root Cause Failure Analysis
U.S.C.	United States Code

Preface

The Guidelines for States Participating in the Pipeline Safety Program (Guidelines) contain guidance for how State Agencies must conduct and execute their responsibilities delegated through Certification or Agreement by the Secretary of Transportation pursuant to Title 49 of the U.S.C. The Secretary of Transportation has delegated the administration of the Certifications and Agreements to PHMSA. These Guidelines are not regulations or rules promulgated by PHMSA.

This Guidelines are provided to promote consistency among the many State Agencies that participate under Certifications and/or Agreements. The guidance contains expectations for the execution of a State Agency's responsibilities which are evaluated annually. The performance evaluation results are utilized to determine continued Certification/Agreement with a State Agency and annual grant funding amounts to the State Agency.

The Guidelines and performance of expectations are administered by PHMSA State Programs. The Guidelines are typically reviewed and revised annually. The process for the annual review and revision are as follows:

1. PHMSA State Programs creates a copy of the recent edition of the Guidelines in MS Word. "Track Changes" option is turned on in the document to illustrate the revisions (redline copy).
2. Starting January 1, a listing of proposed changes is maintained by PHMSA State Programs. Changes are typically proposed by members of the PHMSA State Programs, Regional Directors, TQ and NAPSRS.
3. During a meeting of the NAPSRS Grant Allocation Committee (GAC), the listing of revisions and the markup copy is presented by PHMSA State Programs. A draft is provided to the GAC members and NAPSRS's Administrative Manager.
4. NAPSRS's Administrative Manager distributes the listing and markup copy to NAPSRS Board Members.
5. The listing and markup copy is provided to all PHMSA State Programs staff for review and comments.
6. During the GAC's October Meeting PHMSA State Programs makes another presentation which includes the additional changes received. Discussion and editing are completed during the meeting.

7. Following the GAC October Meeting, PHMSA State Programs distributes the listing and markup copy to all members of NAPS, all Regional Directors and TQ for review and comments (at least 30 days is given for review).
8. PHMSA State Programs compiles and reviews all comments. Comments usually result in further edits or if not, the commenter is provided with reasons why it was not accepted for inclusion. Upon completion of this step the document is prepared for publication and distribution.

The updated Guidelines are distributed by December 31st for the upcoming year.

1 The Federal/State Partnership

1.1 Congressional Intent

49 U.S.C. Chapter 601 provides the statutory basis for the pipeline safety program and establishes a framework for promoting pipeline safety through exclusive Federal authority for regulation of interstate pipeline facilities and State authority for all or part of the intrastate pipeline facilities under annual Certification or Agreement. 49 U.S.C. 60107(a) authorizes Federal grants-in-aid of not more than 80 percent of a State Agency's personnel, equipment, activities, and other allowable costs for its pipeline safety program. The resulting Federal/State partnership is the cornerstone for ensuring uniform implementation of the pipeline safety program nationwide. 49 U.S.C. Chapter 601 can be found in Appendix A.

1.2 Federal Role and Organizational Structure

PHMSA's mission is to protect people and the environment from the risks inherent in transportation of hazardous materials - by pipeline and other modes of transportation. The agency's goals are:

- **Safety:** To reduce the risk of harm to people due to the transportation of hazardous materials by pipelines and other modes.
- **Environmental Stewardship:** To reduce the risk of harm to the environment due to the transportation of oil and hazardous materials by pipeline and other modes.
- **Reliability:** To help maintain and improve the reliability of systems that deliver energy products and other hazardous materials.
- **Global Connectivity:** To harmonize and standardize the requirements for pipeline and hazardous materials transportation internationally, to facilitate efficient and safe transportation through ports of entry and through the supply chain.
- **Preparedness and Response:** To reduce the consequences (harm to people, environment, and economy) after a pipeline or hazmat failure has occurred.

Under delegation from the Secretary of DOT, OPS directly administers the program and develops issues and enforces minimum safety regulations for interstate and intrastate pipelines. These regulations are written to ensure safety in (1) the design, construction, testing, operation, and maintenance of

gas and hazardous liquid pipeline facilities and in (2) the siting, construction, operation, and maintenance of LNG facilities. OPS ensures compliance with regulations through operator inspections, enforcement actions, and accident investigations. In addition, TQ conducts training in application of the regulations. PHMSA also administers grant-in-aid funding to State Agencies, conducts research, and collects and analyzes safety data.

PHMSA State Programs administers the grant-in-aid program to support State Agencies conducting gas and hazardous liquid pipeline safety programs.

The OPS Region Offices serve as the focal point for interstate pipeline compliance activities and intrastate facilities not under state jurisdiction. The region staff provides technical assistance and support to State Agency programs. State Agencies are encouraged to contact their respective State Liaison or Region Director if they have any questions about technical or other inspection issues. The PHMSA Director of State Programs should be contacted if the State Liaison or Region Director cannot be reached.

1.3 State Role and Organizational Structure

A State delegates responsibility for pipeline safety to a State Agency. The State Agency may be a public utility commission, a state fire marshal, a public service commission, or other state authority or office. State Agencies under existing law have jurisdiction over most intrastate gas, LNG, and hazardous liquid facilities within their respective States. State Agency duties normally consist of operator inspections, compliance and enforcement, safety programs, accident investigations, pipeline design, testing and construction inspections, and record maintenance and reporting.

1.4 Related Organizations

1.4.1 NAPSRS

NAPSRS, established in 1982, is an organization of State Agency pipeline safety managers, inspectors, and technical personnel who support, encourage, develop, and enhance pipeline safety. NAPSRS provides an effective mechanism for fostering the Federal/State partnership. The NAPSRS Articles of Association set forth the purpose and objectives of the organization and the procedures for electing national and region officers. The Articles of Association establish the steps for adopting resolutions to raise pipeline safety concerns of national scope for PHMSA consideration in regulatory and enforcement activities.

1.4.2 NARUC

NARUC is an organization of Federal and State agencies engaged in the regulation of utilities and carriers. Its chief objective is to improve the quality and effectiveness of utility regulation in the United States. Through its Staff Subcommittee on Pipeline Safety under the Committee on Gas, NARUC provides a communication channel among State public utility agencies, Program Managers, and Federal agencies. Like NAPSRS, the NARUC Staff Subcommittee on Pipeline Safety holds regular meetings, issues resolutions, and establishes working groups to deal with safety issues.

1.5 Invitational Travel

In support of NAPSRS and NARUC initiatives, PHMSA may provide invitational travel (100% funding) for the following:

1. The current NAPSRS Chair and/or Vice-Chair to attend the NAPSRS National meeting and five NAPSRS region meetings excluding the meeting(s) held in their respective region. In the absence of the Chair or Vice Chair, the Secretary may attend under Invitational Travel.
2. GAC: The current NAPSRS Chair, Vice-Chair, Secretary, Past Chair and five State Agency representatives (one from each region). An alternate representative may attend in the absence of the region representative provided the NAPSRS Chair consults with PHMSA Director of State Programs on the appointment and notifies the PHMSA State Programs point of contact (POC) about the selection.
3. NARUC Staff Subcommittee on Pipeline Safety: Five State Agency representatives (one from each NAPSRS Region) as designated by the NAPSRS Chair may receive Invitational Travel to attend NARUC Staff Subcommittee on Pipeline Safety functions.
4. NAPSRS Committees, Task Groups, and or other special projects: As deemed necessary and agreed to by PHMSA Director of State Programs in concurrence with NAPSRS Chair.

Each NAPSRS/NARUC committee representative that has not traveled under federal invitational travel orders shall complete the E-2 User Profile Request form. The form shall be completed prior to submitting the PHP Travel Request Form. All travel requests will need to be submitted at least one month prior to each tentative meeting. All Travel Requests and Travel Vouchers are submitted using the following e-mail address: PHMSAStateInvitationalTravel@dot.gov.

All forms are available on NAPSRS website, by contacting the NAPSRS Administrative Manager or by contacting PHMSA State Programs Point of Contact (POC). Once the POC has reviewed and concurs with the request, each committee member will be provided additional details on travel arrangements. Requests may be denied if not submitted within the time frame mentioned above or prior travel reimbursement voucher has not been submitted by the representative to PHMSA Headquarters for process.

In general, PHMSA will provide airline tickets for the approved travel and reimburse the traveler (not the State Agency) for other expenses at the standard government per diem rates. The federal lodging and per diem rates are located at: <https://www.gsa.gov/travel/plan-book/per-diem-rates> [and Airline City Pairs at: https://www.gsa.gov/travel/plan-a-trip/transportation-airfare-rates-pov-rates-etc/airfare-rates-city-pair-program](https://www.gsa.gov/travel/plan-a-trip/transportation-airfare-rates-pov-rates-etc/airfare-rates-city-pair-program) (Rental car transportation is not typically a reimbursable expense.)

To ensure invitational travel voucher requests are processed in a proper and timely manner, committee members need to submit the PHP Invitational Voucher Form as soon as they return from the meeting. The individual traveler, or group/committee designee, shall also submit a written summary of the meeting events within 30 days after the meeting to the NAPSRS Administrative Manager and PHMSA Director of State Programs.

1.6 Mutual Aid

Just like natural gas utilities that rely on mutual aid provided by other gas companies during certain events, a State Agency may need support from OPS or other State Agencies during large incidents, outages, or restorations. Any need for OPS support shall be requested through PHMSA State Programs. Any need for other State Agency support must be requested through the requesting State's department that handles the Emergency Management Assistance Compact (EMAC). The EMAC process details the needs of the requesting State Agency, the process for responding State Agencies to estimate their available resources including costs and the process for responding State Agencies to be reimbursed by the requesting State Agency. In addition to the EMAC process, PHMSA State Programs must be consulted to ensure that State Agencies proposing to provide mutual aid are suitable to provide assistance.

The following conditions apply to mutual aid:

Inspection days can only be counted for inspecting facilities in accordance with the State Certification and therefore **NO** inspection days can be counted by the responding State Agency performing inspections on behalf of the requesting State Agency.

State Agencies that do not meet their required number of inspection days will lose points on the Progress Report score unless waived by the PHMSA Director of State Programs for good cause. Although a responding State Agency could request a waiver for failing to meet the required number of inspection days, there is no guarantee that the waiver would be approved.

The number of days spent supporting a State Agency in need of mutual aid would be a consideration for waiving the points for the required number of inspection days. A simple spreadsheet documenting the inspector's name and dates providing support to the requesting State Agency would be necessary to consider the waiver of required inspection days.

A State Agency should consider the impact to safety in their home state before rendering aid to another state.

Costs for the responding State Agency **CANNOT** be charged to the Base Grant by the responding State Agency. Costs for the responding State Agency can be reimbursed by the requesting State Agency through the EMAC process. Costs reimbursed to responding State Agencies by the requesting State Agency can be charged to the Base Grant by the requesting State Agency.

2 State Participation Requirements

State Agency participation in the pipeline safety program is based on voluntary submission of a Certification pursuant to 49 U.S.C. 60105, or of an Agreement pursuant to 49 U.S.C. 60106. State Agency participation may also include acting as an Interstate Agent on behalf of PHMSA.

Under a 60105 *Certification*, the State Agency assumes inspection and enforcement responsibility with respect to intrastate facilities over which it has jurisdiction under State law. With a Certification, the State Agency may adopt additional or more stringent standards for intrastate pipeline facilities provided such standards are compatible with Federal regulations. Under a 60106 *Agreement* or an *Interstate Agent Agreement*, the State Agency assumes inspection responsibility for facilities and reports Probable Violations to PHMSA for enforcement.

Under a Certification, Agreement, or Interstate Agent Agreement, the State Agency may not subcontract pipeline safety-related work activities without prior approval from PHMSA. If the State Agency does not apply for annual Certification or Agreement, all intrastate facilities remain the responsibility of PHMSA.

2.1 Section 60105 Certification

To qualify for 49 U.S.C. 60105 gas or hazardous liquid Certification, the State Agency must meet the following requirements. Separate Certification is necessary for gas and hazardous liquid programs. PHMSA's procedures to monitor, evaluate and reject a State Agency's Certification are described in Appendix P.

1. The State Agency must have adopted each Federal safety standard applicable to intrastate pipelines under its jurisdiction as of the date of the Certification. When a federal standard is established within 120 days before the date of Certification, the State Agency must be taking steps pursuant to State law to adopt the standard.

If the State Agency is not eligible to submit a Certification at the beginning of a calendar year because it has not adopted or is not seeking adoption of a federal safety standard, the State Agency may continue its program (including its eligibility for Federal payments under 49 U.S.C. 60107) by entering a 49 U.S.C. 60106 Agreement.

2. The State Agency must be enforcing each standard. The laws of the State Agency must provide for the enforcement of the safety standards by injunctive and monetary sanctions that are substantially the same as those provided by 49 U.S.C. 60120 (Enforcement) and 60122 (Civil penalties). At a minimum, each State Agency must have Penalty Amounts of \$100,000 per day up to a maximum of \$1,000,000 for a related series of violations.

3. The State Agency must have substantially the same authority as that provided PHMSA under 49 U.S.C. 60108 (Inspection and maintenance) and 49 U.S.C. 60117 (Administrative). Thus, each person who owns or operates pipeline facilities subject to the State Agency's jurisdiction must establish and maintain records, make reports, provide information, conduct inspections, and prepare and have on file plans for inspection and maintenance.
4. The State must encourage and promote the establishment of a program designed to prevent damage by demolition, excavation, tunneling, or construction activity to the pipeline facilities to which the Certification applies that subjects' persons who violate the applicable requirements of that program to civil penalties and other enforcement actions, and addresses the elements in 49 U.S.C. 60134(b).
5. The State Agency must cooperate fully in a system of Federal monitoring of each State program to ensure compliance with the Certification.
6. The State Agency annual progress report must be accompanied by the following:
 - a. A list of the types of intrastate facilities under the State Agency's jurisdiction.
 - b. The name and official mailing address of each pipeline operator.
 - c. A summary of each investigation and a statement of all jurisdictional incidents/accidents reported to it during the preceding calendar year by an operator involving (1) personal injury requiring hospitalization, (2) fatality, or (3) property damage in the amount as specified by DOT in 49 CFR 191.3.
 - d. A summary of the State Agency's inspection and Compliance Actions taken in the preceding calendar year.
 - e. A list of the records the State Agency maintained pertaining to its program during the preceding calendar year.
 - f. The name, title, qualifications (training), and approximate percentage of time devoted to pipeline safety of each State Agency employee involved in the program.
 - g. A list of reports the State Agency required from each pipeline operator during the preceding calendar year.

2.2 Section 60106 Agreement

By mutual agreement between the Secretary and the State Agency, 49 U.S.C. 60106 Agreement permits the State Agency to undertake safety activities concerning intrastate pipelines when the State Agency does not qualify for 49 U.S.C. 60105 Certification.

A State Agency conducting a pipeline safety program under a 49 U.S.C. 60106 Agreement inspects intrastate operators for compliance with safety standards. Under such an Agreement, the State Agency will conduct all pipeline safety program activities that the State Agency can conduct under 49 U.S.C. 60105

Certification except that, in the event of a Probable Violation of the pipeline safety standards, the State Agency must notify PHMSA. PHMSA remains the authority having enforcement jurisdiction over all Compliance Actions.

To qualify for a 49 U.S.C. 60106 Agreement, the State Agency must:

1. Establish an adequate program for record maintenance, reporting, and inspection of pipeline facilities in accordance with the OPS approved state inspection plan.
2. Prescribe procedures for the approval of plans of inspection and maintenance that are substantially the same as required under 49 U.S.C. 60108.
3. Notify PHMSA of any Probable Violation of a Federal safety standard.
4. Cooperate fully in a system of Federal monitoring of the State Agency's program.
5. Submit annual reports concerning the implementation of the program with information required in Section 2.1 (6) (a-g).

2.3 Interstate Agent Agreement

As demonstrated by its participation allowed in 49 U.S.C. 60106, an Interstate Agent agrees to follow the practices and procedures in this manual and cooperate fully in the Federal evaluation of the State Agency's pipeline safety program. The Interstate Agent must meet the training requirements for State Agency inspection personnel as outlined in Chapter 4.

Interstate Agents must ensure that, unless waived by PHMSA, State Agency employees involved in conducting (including supervising the conduct of) inspections under an Interstate Agent Agreement do not have financial interests in any of the pipelines they inspect. Interstate Agents must obtain PHMSA approval prior to assuming responsibilities under an Interstate Agent Agreement. They are required to investigate reported safety-related conditions, monitor operator actions to remedy such conditions, and provide status reports to OPS. In addition, Interstate Agents agree to assume responsibility for and carry out inspections as mutually agreed with Region Director, follow OPS guidelines on incident coordination and investigation; follow requirements and formats for reports; maintain inspection and accident records; and, in consultation with PHMSA, handle inquiries and release information. Copies of the Interstate Agent Agreement and guidance document on the interstate program are in Appendix B.

2.4 Time Defined Agreement

PHMSA may need to call upon the State Agency to assist in performing a variety of duties on an ad hoc basis. This assistance may include inspection of

specific operators, inspection of construction, witness to repairs or testing, or investigation of incidents/accidents.

In some cases, PHMSA's request may involve immediate deployment of State Agency staff. To expedite the process, the Region Director will call the Program Manager to request that the State Agency act on behalf of PHMSA. The call will be followed by a letter formalizing the details of the arrangement complying with applicable parts of the Interstate Agent Agreement.

2.5 Joint Inspection of an Interstate Operator

At the request of a State Agency, PHMSA shall allow for a certified State Agency under 49 U.S.C. 60105 to participate in the inspection of an interstate pipeline facility. This does not apply to joint inspections where the State Agency is inspecting Operator assets that are under the State Agency's jurisdiction as part of the inspection. Guidelines for the State Agency's participation is as follows:

- The State Agency must have a 60105(a) Certification –
- The State Agency must make a formal request to the following email address: PHMSAInterstateInspections@dot.gov. The State Agency should list the Interstate Operator(s) they wish to participate in the inspection(s) with PHMSA. The State Agency may obtain a list of interstate pipeline operators in the state through the "Inspection Coordination" Tool in the Pipeline Data Mart. The State Agency should make the request by September 30th prior to the coming inspection year ([October 1 - September 30](#)).
- When the interstate operator is scheduled for inspection, the OPS Lead Inspector will contact the Program Manager to coordinate the State Participation. If the State Agency cannot make the inspection dates, OPS does not have to reschedule the inspection to accommodate the State Agency.
- The Lead Inspector will communicate with the Program Manager when communicating to the other inspection team members regarding the inspection dates.
- The State Agency must have accomplished all required minimum inspection days for the previous Calendar Year.
- No Inspection Person–Days are counted for these inspections.

- No travel or inspection time will be covered by the State Base Grant for these inspections.
- State Agency Inspectors must take direction from OPS Lead Inspector.
- The State Agency may use the Inspection Assistant (IA) program to participate in the inspection or follow along with federal inspector using IA for the inspection.
- The State Agency may not retain inspection documents due to FOIA issues.

2.6 Certification/Agreement Forms

In September of each year, PHMSA makes available appropriate forms to each State Agency which is included with the annual grant program application. These forms are provided electronically on FedSTAR (See Chapter 10). The electronic application is available over the internet to approved state personnel in the direct support of that State's Pipeline Safety program. Certification and Agreement forms will be completed online in FedSTAR, hardcopy documents printed from the FedSTAR system, signed by the appropriate State official and then emailed to the PHMSA State Programs grant point of contact.

2.7 Progress Report

In February of each year, the State Agency must submit a completed progress report and attachments for each gas and/or hazardous liquid program for the previous calendar year. This report must be submitted to PHMSA electronically through FedSTAR and a signed copy sent via email to the PHMSA State Programs grant point of contact (electronic signature is available). The attachments to the progress report will be used in assessing State Agency program performance in conjunction with the results of the OPS annual evaluation. A brief description of the progress report attachments follows:

2.7.1 Attachment #1: State Jurisdiction and Interstate Agent Status

This attachment requires the State Agency to indicate those pipeline operator types over which the State Agency has jurisdiction under existing law. If a State Agency has LPG operators which are a combination of private, Municipal or Master Meter operators, a note should be made in comments section on this attachment. (e.g., 4 LPG Private, 5 LPG Master Meter) If the State Agency holds Interstate Agent status from PHMSA or was a temporary Interstate Agent during the calendar year, the form also requires Interstate Agent status, the number of interstate operators and the number of interstate Inspection Units. If an operator has multiple types of system (i.e., gas distribution and intrastate

transmission, gas gathering and transmission), each type should be counted in corresponding category. Total operator count listed in Attachment 3 may not match Attachment 1 totals due to multiple types of systems per operator.

2.7.2 Attachment #2: Total State Field Inspection Activity

This attachment requires the State Agency to indicate by operator type, and inspection type as outlined in section 5.1, the number of Inspection Person-Days spent during the previous calendar year. Time counted for such activities (including damage prevention enforcement or investigation only for pipeline facilities subject to Part 192, Part 193 and Part 195 regulations and performed by an individual listed as Inspector/Investigator only on Attachment 7) should be reported as a maximum of one Inspection Person-Day for each day devoted to safety issues, regardless of the number of operators visited during that day (e.g. you may evaluate two operators in the same day and record each inspection visit as 0.5 person-day, or actual fraction of a day, for each operator provided the total does not exceed 1.0 person-day).

Design, testing and construction inspection activities are sometimes conducted in conjunction with Standard Inspections and the associated Inspection Person-Days are accounted for in the Standard Inspections column of Attachment 2. To more accurately reflect time spent on Design, Testing and Construction Inspections, these Inspection Person-Days (or a portion thereof if less than a full Inspection Person-Day) should be included in the Design, Testing and Construction Inspections column of Attachment 2 and not in the Standard Inspections column. Design, Testing and Construction is not limited to new construction activity, but can also be the inspection of repairs, upgrades, and replacement of pipeline facilities.

If the State Agency holds Interstate Agent status from PHMSA or was a temporary Interstate Agent during the calendar year Inspection Person-Days for those activities should be included for the appropriate interstate operator type.

The total number of completed Drug and Alcohol inspections described in Section 5.1 (4 (j)) shall be entered in the Total Count of Drug and Alcohol Inspections on Attachment 2. Inspection Person-Days for Drug and Alcohol and Control Room Management inspections should be included in the Standard Inspections column of Attachment 2.

2.7.3 Attachment #3: Facilities Subject to State Safety Jurisdiction

This attachment requires the business name, OPID and address of each pipeline operator subject to State Agency's jurisdiction as of December 31 of the previous year. If the State Agency holds Interstate Agent status from

PHMSA or was a temporary Interstate Agent during the calendar year, the form also requires a list of interstate operators inspected, operator type, and number of Inspection Units for each operator. The operators and Inspection Units listed should only include those as defined by federal pipeline regulations and should not include extended jurisdiction by state regulation. Notes should be included as needed to explain the information.

2.7.4 Attachment #4: Pipeline Incidents/Accidents

This attachment requires a summary or report of incidents/accidents as defined in 49 CFR Part 191 for gas or in 49 CFR Part 195 for hazardous liquid. Incident and accident information will be loaded from PDM, and each State Agency shall verify the information and enter the State determined cause code.

2.7.5 Attachment #5: State Compliance Actions

This attachment provides a summary of Probable Violations of pipeline safety regulations, Compliance Actions and civil penalties initiated by the State Agency during the previous calendar year. The summary should not include counts for Probable Violations, Compliance Actions, and civil penalties of State damage prevention laws/regulations.

2.7.6 Attachment #6: State Record Maintenance and Reporting

This attachment requires a list of records and reports maintained and required by the State Agency. (See Section 8.3 for minimum requirements)

2.7.7 Attachment #7: State Employees Directly Involved in the Pipeline Safety Program

This attachment requires a list by name, title, percent of time, months in program and qualification category of each inspector or Supervisor directly involved in the pipeline safety program during the prior year. Furthermore, it requires a summary of the number of all staff (managers/Supervisors, inspectors/investigators, damage prevention/technical and administrative) working on the pipeline safety program and the person-years devoted to the program during the prior year. If a person listed as a Supervisor in Attachment 7 conducts inspection duties for which Inspection Person-Days are included in Attachment 2, time spent as a Supervisor and Inspector/Investigator should be apportioned accordingly in Attachment 7. Individuals with no time spent in the program should not be listed. (See Table 4.2 for State Inspector Qualification Categories)

2.7.8 Attachment #8: State Compliance with Federal Requirements

This attachment requires that the State Agency indicate whether it is in compliance with applicable Federal pipeline safety requirements. It also

requests that the State Agency indicate the frequency its Legislature meets in general session. This information is used by OPS to determine whether applicable Federal regulations have been adopted within 24 months of the effective date or two general sessions of the State Legislature, whichever is longer.

2.7.9 [RESERVED]

2.7.10 Attachment #10: Performance and Damage Prevention Questions

This attachment asks each State Agency to outline any planned performance goals along with stating what accomplishments the state has made on damage prevention efforts. Various state damage prevention efforts can be viewed at the links below.

<https://primis.phmsa.dot.gov/comm/DamagePrevention.htm?nocache=9815>

<https://primis.phmsa.dot.gov/comm/publications/DPAP-Guide-FirstEdition-20080911.pdf>

2.8 Responsibility to Assist OPS in the Work Management System

OPS utilizes the Work Management System (WMS) to generate tasks to create, update and process certain pipeline operator data and to manage intrastate Inspection Units. The pipeline operator data includes both interstate and intrastate pipeline facilities. OPS is dependent on state pipeline safety programs to manage the required tasks for intrastate pipeline facilities.

State Agencies can access WMS through OPS's Off-Network Portal at <https://portal.phmsa.dot.gov/PHMSAPortal2>. When using the Off-Network Portal, a Network/Portal Username and Password must be entered. The PHMSA contact for WMS is Crystal Stewart who can be reached at crystal.stewart@dot.gov.

The tasks assigned to State Agencies are as follows:

1. Managing intrastate Inspection Units, if applicable.
2. Managing (addressing and follow-up) Notifications from Operators for:
 - Integrity Management (IM) required by 49 C.F.R. 192 and 195.

- National Registry required by 49 C.F.R. 191 and 195.
- Operator ID Assignment Requests required by 49 C.F.R. 191 and 195.
- Safety Related Condition Reports required by 49 CFR 191.23 and 195.55
- Notifications from Operators for 49 CFR § 192.18

More information related to these tasks can be found in Appendix L.

3 State Regulatory Responsibility

3.1 Adoption of Federal Regulations and Requirements

A State Agency participating in the pipeline safety program under a Certification is required to adopt Federal pipeline safety regulations or take steps to adopt such regulations. Adoption of applicable Federal regulations may be automatic, require State rulemaking actions, or necessitate State legislative action, and should be adopted within 24 months of the effective date or two general sessions of the State Legislature, whichever is longer. In addition, a state agency may issue additional or more stringent standards concerning intrastate pipelines if they are compatible with Federal regulations. Any interpretation of a regulation adopted by a State Agency must not conflict with any opinion/interpretation issued by PHMSA.

Federal pipeline safety regulations incorporate by reference certain Industry Standards. Some standards are available through TechStreet. For standards that cannot be found in Techstreet, contact Jill Nelson – Jill.Nelson@dot.gov for assistance. New requests shall be evaluated on a one-on-one basis in accordance with the PHMSA policy (see Appendix K). Based on an approved request the requester shall obtain either a paper copy of a standard or access to an electronic copy whichever is more cost and/or mission efficient. Incorporated by reference documents may also be available for review on the organization website.

3.2 WinDOT

OPS maintains subscriptions through ViaData LP. ViaData has created a new automated system for processing inspector subscriptions to WinDOT. Please visit the following webpage to submit requests: (<https://www.viadata.com/government>). ViaData can be reached at support@viadata.com, at (800) 817-6649, or on the contact page: <https://www.viadata.com/contact>.

3.3 Waiver of Federal Regulations

3.3.1 Interstate Pipelines

Waivers of Federal regulations concerning interstate facilities may be considered only by PHMSA. Interstate agents may not consider such waivers. PHMSA will consult with the interstate agent when an interstate operator requests a waiver. PHMSA currently refers to a waiver as a Special Permit.

3.3.2 Intrastate Pipelines

Upon application by an operator, a State Agency may consider a waiver of pipeline safety requirements subject to PHMSA concurrence. Waiver

applications for state pipeline safety requirements that are more stringent than the federal minimum pipeline safety standards are not subject to PHMSA concurrence. A waiver may be granted when it is not practical for an operator to comply with a regulation of general applicability. The information found in 49 CFR 190.341(c) provides basic information that should be included in the waiver request. The State Agency is encouraged to consult with OPS on the appropriateness of granting a waiver before formal action is taken. The State Agency should send the proposed waiver request and the contact information for the State Agency technical expert assigned to the waiver review to the following group email: PHMSAOPSSStateWaivers@dot.gov. OPS will assign a technical point of contact for the State Agency to work with the State Agency's technical expert throughout the State Agency's waiver review process. PHMSA may require additional considerations or conditions to be included in the State Agency's approval of the waiver. The inclusion of these considerations or conditions in the State Agency's written approval could avoid PHMSA's objection to the waiver during PHMSA's 60-day deliberative process.

If a State Agency finds that a waiver request is consistent with pipeline safety and is justified, it may issue written approval under such terms and conditions as are appropriate. Written approval should include a statement of reasons for granting the waiver.

If a State Agency finds that a waiver request is not consistent with pipeline safety or is not otherwise justified, it must issue written denial of the request. Written denial should include a statement of reasons.

A State Agency must notify PHMSA in writing by registered or certified mail of each waiver granted by the State Agency. Each notice must provide the following information:

1. The name, address, and telephone number of the applicant
2. The safety regulation involved
3. A description of the pipeline facilities involved
4. The justification for approving the waiver, including the reasons why the regulations are not appropriate and why the waiver is consistent with pipeline safety
5. A copy of the State Agency's order or letter to the applicant
6. All correspondence concerning waivers should be addressed to:

Associate Administrator for Pipeline Safety
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Avenue, SE
Second Floor, East Building
Washington, DC 20590

PHMSA will acknowledge receipt of each notice and consider each in the order it was received. PHMSA may provide further opportunity for public comment.

If PHMSA does not object to the waiver, it will so notify the State Agency. The waiver is effective upon approval by PHMSA or if there is no action by PHMSA 60 days after the receipt of waiver from State Agency. If, before a waiver is to become effective, PHMSA notifies the State Agency that it objects to the waiver, the action granting the waiver will be stayed. PHMSA will then allow the State Agency an opportunity to present its arguments with opportunity for a hearing. Thereafter, PHMSA will make the final determination whether the waiver may be granted and will notify the State Agency of its decision.

In the event of an emergency waiver, the PHMSA written notice and hearing requirements may be omitted if the State Agency finds that notice is impracticable, unnecessary, or not in the public interest. However, the State Agency must immediately notify the PHMSA Director of State Programs of its decision to grant the emergency waiver and follow up with written notification to the Director with 48 hours. After granting the emergency waiver, the State Agency must investigate the circumstances causing the specific emergency and require the operator to act to prevent its reoccurrence in the future. Each State Agency should follow the emergency waiver methods prescribed in 49 U.S.C. 60118(c) (2) of the Pipeline Safety Act (See Appendix A).

For all waivers in effect, State Agencies are required to verify that the conditions of those waivers are being met. This includes having the operator amend procedures. Where appropriate, State Agencies must terminate a waiver if it is no longer valid. For all waivers that are no longer in effect (e.g., project is completed, time frame has expired, State Agency termination, code change), State Agencies must notify PHMSAOPSSStateWaivers@dot.gov that the waiver is no longer in effect.

4 Personnel

4.1 State Agency Minimum Required Inspection Activity

As outlined in 49 U.S.C. 60105 (b), each program must have a sufficient number of qualified employees to ensure safe operations of pipeline facilities and take into account factors including –

- A. The number of miles of natural gas and/or hazardous liquid pipelines in the State, including the number of miles of cast iron and bare steel pipelines.
- B. The number of services in the State.
- C. The age of the gas distribution system in the State; and
- D. Environmental factors that could impact the integrity of the pipeline, including relevant geological issues.

4.1.1 Determination of Inspection Activity

To meet the State Agency's commitment to pipeline safety, each State Agency must maintain an adequate, base-level number of pipeline safety inspection activity days. The inspection activity level is arrived at by each State Agency conducting an operator-by-operator analysis using the SICT. The basis of the inspection activities will include the following inspection types, as applicable.

- Standard - Procedures
- Standard - Records
- Standard – Field
- Distribution Integrity Management (DIMP) - program
- Distribution Integrity Management (DIMP) – implementation review
- Gas Transmission Integrity Management (TIMP) – program
- Gas Transmission Integrity Management (TIMP) – field
- Hazardous Liquid Integrity Management (LIMP) – program
- Hazardous Liquid Integrity Management (LIMP) - field

- Operator Qualification (OQ) – program (Prot. 1-8)
- Operator Qualification (OQ) – field (Prot. 9)
- Design, testing and construction
- Investigating Incidents and Accidents
- Damage Prevention Activities
- On-site Operator Training
- Compliance Follow-up
- Control Room Management (CRM)
- Public Awareness Inspections (PAP)
- Drug and Alcohol

In addition, the inspection activity analysis will include a notation of any risk factors and other considerations applicable to the operator. Those factors should include, but are not limited to, the following:

1. Material composition of pipelines and various risks associated with those materials (cast iron, unprotected bare steel, etc.)
2. High Consequence Areas (HCA) (transmission lines only)
3. Environmentally sensitive areas (e.g., water supply and crossings) (this is a hazardous liquid issue)
4. Outside force considerations such as hurricanes, seismic activity, landslides, and sinkholes
5. Travel (large geographic area to cover)
6. Damage prevention considerations
7. New or replacement construction activity
8. Compliance issues

9. Mergers, acquisitions, divestitures, name changes, new operators, and changes in operator personnel
10. Shared procedures or programs
11. Safety culture

The inspection activity level derived pertains only to the minimum level of pipeline safety inspection activity. The level does not include supervisory or clerical personnel, nor does it include staff requirements for inspection of pipeline facilities that are not covered by Chapter 601.

Each State Agency will perform an inspection activity needs analysis on each operator using the “Inspection Activity Analysis” forms shown in section 4.1.5. Results will be summarized in a standard format so that a national analysis of the data may be conducted and tracked. This data will be entered into the SICT located in PHMSA’s database portal at the following link - <http://portal.phmsa.dot.gov/PHMSAPortal2>.

The inspection activity needed for each operator will be developed by analyzing each applicable type of inspection and applying the following criteria:

- Determination of inspection duration and frequency based on experience with the operator provided the frequency meets the intervals in Section 5.1.
- Answering the number of inspection days needed to complete each inspection activity.
- Answering the optimum intended inspection interval based on the need and experience. This interval will consider any known risks and any other relevant factors.
- Inspection activity should include all the individuals performing the inspection (e.g., if you send 2 inspectors for 5 days of inspection each, the total would be 10 Inspection Person-Days).
- Only include applicable inspections (an LDC with no transmission will not have TIMP as a type of inspection).
- Inspections can be listed as fractions, for example if you spend 1 hour out of an 8-hour inspection, it would be appropriate to show 0.125 days.

- Each State Agency will provide a risk ranking of system pipe for each operator for informational purposes. The ranking will be on a scale of 1-10 (a score of 10 equals the highest risk). The risk ranking will be low for operators that have modern piping (e.g., coated and cathodically protected steel and polyethylene plastic) and high for operators that have leak-prone piping (e.g., cast iron and bare steel).
- Each State Agency will provide a listing of any concerns taken into consideration for the operator being analyzed. (As noted above such as miles of cast iron, miles of unprotected steel, damage prevention concerns, etc.).
- Each State Agency will also list any unique considerations valid to the operator which may not be risk related. (Such as travel distance to conduct inspections, etc.).
- Similar operators (Master Meter and Municipal, etc.) can be summarized in groups.
- For Interstate Agent States, Interstate Operators are not included in this effort. The State Agency should refer to their Interstate Agent inspection plan.

4.1.2 Peer Review

Each State Agency's inspection activity level will be evaluated by a peer-review group made up of the GAC and PHMSA State Programs. The task group will meet and evaluate each State Agency's inspection activity plan and develop a consensus agreement on the proposed level of inspection activity needed. The peer-review group will examine the recommended inspection activity for the following elements:

- Reasonableness of inspection activity based on peer-review group's knowledge in performing inspections
- Reasonableness of inspection activity in comparison to similar operators with similar risks
- Whether all inspection elements are being met with respect to the operator's risks
- Has the State Agency considered reasonably known risk?

- State Agency input of unique situations in that State
- State Agency input of unique attributes of any operator

When the peer-review process is completed, final minimum inspection days will be recommended to OPS. OPS will provide written feedback to each State Agency when issues are found, or further explanation of the data is needed. OPS will then communicate final minimum inspection days to each program to be used in performance scoring.

4.1.3 Inspection Activity Examples

Each State Agency will provide individual operator assessments for all types of operators under its program jurisdiction. Examples of operator types are as follows with various examples shown below:

- Local Distribution Companies (LDC)
- Municipal Gas Operators
- Master Meter Operators
- LPG Operators
- Gas Transmission Operators
- LNG Operators
- Hazardous Liquid Operators – including gathering
- Gas Gathering Operators – Offshore, Onshore Type A, B and C
- All other jurisdictional operators – (Anhydrous, Carbon Dioxide, Ammonia, etc.)

4.1.4 Updates to SICT

The SICT will be updated annually by each program by July 31st each year. Only operators that exist at the time of the update shall be included in the SICT. The results will be subject to peer-review (Section 4.1.2) and OPS consultation with program as needed.

4.1.5 SICT Examples

LDC Example Company:	LDC Gas Company
Number of Service Lines:	625698
Number of Inspection Units:	20

Type of inspection	(1) Total Number of Person-Days to do each type of Inspection by inspector(s)	What is your intended (optimum) inspection interval by type of inspection	Total Person-Days per Year
Standard - Procedures	13	1.5	8.666666667
Standard - Records	13	1.5	8.666666667
Standard - Field	13	1.5	8.666666667
DIMP program	6	5	1.2
DIMP implementation review	13	1.5	8.666666667
TIMP program	4	5	0.8
TIMP implementation review	2	1	2
TIMP field	1	1	1
OQ program (Prot. 1-8)	6	5	1.2
OQ field (Prot. 9)	13	1.5	8.666666667
Design, testing & construction	70	1	70
Investigating Incidents/Accidents	6	2	3
Damage Prevention Activities	54	1	54
On-Site Operator Training	4	1	4
Compliance Follow-ups	2	1	2
CRM	3	5	0.6
PAP	13	1.5	8.666666667
Drug and Alcohol	2	5	0.4
	238		192.2

High Risk Pipe - Ranking* **8**

*On a scale of 1-10 - does the company have high risk pipe concerns - 10 is highest concern.

If inspect all Inspection Units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

83 miles cast iron; 283 miles' bare steel unprotected mains;
1847 miles protected bare steel mains
1079 miles of unprotected bare steel service/yard lines

Other Unique Considerations (Travel, Certain Inspection Unit issues, etc.)

This LDC has non-HCA transmission mileage

Municipal Company Example:

Number of Service Lines:

Municipal Gas Co.

1058

Number of Inspection Units:

1

Type of inspection	(1) Total Number of Person-Days to do each type of Inspection by inspector(s)	What is your intended (optimum) inspection interval by type of inspection	Total Person-Days per Year
Standard - Procedures	0.25	2	0.125
Standard - Records	0.25	2	0.125
Standard - Field	0.25	2	0.125
DIMP program	1	5	0.2
DIMP implementation review	0.25	2	0.125
TIMP program	0	1	0
TIMP implementation review	0	1	0
TIMP field	0	1	0
OQ program (Prot. 1-8)	0.5	5	0.1
OQ field (Prot. 9)	0.25	2	0.125
Design, testing & construction	1	1	1
Investigating Incidents/Accidents	0	1	0
Damage Prevention Activities	0	1	0
On-Site Operator Training	0.25	5	0.05
Compliance Follow-ups	0	1	0
CRM	0	1	0
PAP	0.25	2	0.125
Drug and Alcohol	0.1	5	0.02
	4.35		2.12

High Risk Pipe - Ranking*

2

*On a scale of 1-10 - does the company have high risk pipe concerns - 10 is highest concern.

If inspect all Inspection Units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

0 miles of bare steel main

2 miles of bare unprotected steel service/yard lines

Other Unique Considerations (Travel, Certain Inspection Unit issues, etc.)

No unusual considerations

Transmission Company Example:

Miles of Transmission Lines:

1551

Number of Inspection Units:

3

Type of inspection	(1) Total Number of Person-Days to do each type of Inspection by inspector(s)	What is your intended (optimum) inspection interval by type of inspection	Total Person-Days per Year
Standard - Procedures	1.7	1	1.7
Standard - Records	1.7	1	1.7
Standard - Field	1.7	1	1.7
DIMP program	n/a		
DIMP implementation review	n/a		
TIMP program	4	5	0.8
TIMP implementation review	2	2	1
TIMP field	1.7	1	1.7
OQ program (Prot. 1-8)	4	5	0.8
OQ field (Prot. 9)	1.7	1	1.7
Design, testing & construction	4	1	4
Investigating Incidents/Accidents	1	10	0.1
Damage Prevention Activities	1	5	0.2
On-Site Operator Training	0	1	0
Compliance Follow-ups	1	3	0.333333333
CRM	3	5	0.6
PAP	1.7	1	1.7
Drug and Alcohol	2	5	0.4
	32.2		18.43333333
High Risk Pipe - Ranking*	2		

*On a scale of 1-10 - does the company have high risk pipe concerns - 10 is highest concern. If inspect all Inspection Units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

53 miles of bare protected steel, 3% of system

Other Unique Considerations (Travel, Certain Inspection Unit issues, etc.)

No unusual considerations

Hazardous Liquid Pipeline

Miles of Trunk lines:

Number of Inspection Units:

Hazard Liquid Co.

37

1

Type of inspection	(1) Total Number of Person-Days to do each type of Inspection by inspector(s)	What is your intended (optimum) inspection interval by type of inspection	Total Person-Days per Year
Standard - Procedures	0.41	2	0.205
Standard - Records	0.41	2	0.205
Standard - Field	0.41	2	0.205
DIMP program	N/A	N/A	
DIMP implementation review	N/A	N/A	
LIMP program	0.1	5	0.02
LIMP implementation review	0	1	0
LIMP field	0	1	0
OQ program (Prot. 1-8)	0.5	5	0.1
OQ field (Prot. 9)	0.41	2	0.205
Design, testing & construction	1	1	1
Investigating Incidents/Accidents	0	1	0
Damage Prevention Activities	0	1	0
On-Site Operator Training	0.41	5	0.082
Compliance Follow-ups	0	1	0
CRM	0	1	0
PAP	0.41	2	0.205
Drug and Alcohol	0.1	5	0.02
	4.16		2.247

High Risk Pipe - Ranking*

1

*On a scale of 1-10 - does the company have high risk pipe concerns - 10 is highest concern.

If inspect all Inspection Units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

new coated protected steel pipe and Class 1 area

Other Unique Considerations (Travel, Certain Inspection Unit issues, etc.)

No unusual considerations - No USA's

4.2 Allocation of Effort

For each full-time equivalent (FTE), pipeline safety inspector position, the State Agency must devote a minimum of 85 Inspection Person-Days (see Glossary) to pipeline safety compliance activities each calendar year. Staff that devotes only a portion of their time to compliance activities should produce a corresponding percentage of Inspection Person-Days. The level of inspection effort reported by the State Agency will be scored by OPS during the annual review of the State Agency's Progress Report.

4.3 Training

TQ provides nationwide training and technical assistance in support of OPS, and their efforts to assure safety in the transportation of gas and hazardous liquids in the nation's pipelines. TQ develops and delivers many training courses that are directly related to the determination of an operator's compliance with the various pipeline safety regulations. Instructors for these courses are permanent TQ employees as well as federal, state, and contract associate staff.

TQ's pipeline safety training is performance-oriented and consists of web-based training (WBTs), lectures, written material, demonstrations, practical exercises, group discussion, and video presentations. Each course focuses on a specific area of pipeline safety regulations. Students apply classroom instruction to practical scenarios by participating in group and individual "hands-on" lab exercises. Some courses may be taught virtually. These are referred to as Virtual Instructor Led Training (VILT) courses. To attend certain courses, the student must complete self-paced training. To facilitate this process, TQ automatically enrolls students in online self-paced WBT courses that must be completed before attending these courses. It is important to note that failure to complete the required WBT training by the specified deadline will result in removal from the roster and placement back on the waitlist.

4.3.1 Required Training

TQ offers several training programs described as learning paths (outlined in Appendix C). Each learning path identifies the required courses for completion. The paths also show the prerequisite relationship of courses: all course prerequisites must be completed successfully before a student can attend subsequent training. Requirements for successful completion are covered in the TQ documents for each class. The Gas and Liquid Inspector paths, commonly referred to as the "core courses," are the foundation for more advanced paths. For example, a gas inspector's training begins with the Gas Inspector Path. Then, if their Program

Manager approves, the inspector can continue their training with an advanced path such as the Gas Integrity Management path.

Beginning with the completion date of the first instructor or virtual instructor-led training course, an inspector has three years to attempt all training unique to the core Gas Inspector and Liquid Inspector learning paths. The 3-year time-to-completion period may be extended to 5-years if students are required to retake courses to successfully meet academic standards. Managers should request the required core learning path courses as soon as practical after employing the inspector. In the event a required course is not scheduled by TQ within the 3-year completion period, an inspector will not be deemed unqualified if they are registered or waitlisted for the course(s). If a new course is added to a path, an inspector has an additional three years to attempt it (five years to successfully complete). If the new course is replacing an existing course, students do not have to return to TQ to retake the newer class. However, TQ strongly recommends that experienced students return and take the newer courses to enhance their knowledge.

Lead inspectors on Standard Inspections must meet the necessary qualifications as described in Table 4-1. Lead inspectors on specialty inspections must complete all mandatory training for that inspection type prior to leading that type of inspection. For example, OQ lead inspectors must successfully complete the OQ course before conducting an OQ inspection. In addition, at least one inspector/Program Manager from each State Agency must successfully complete the TQ sponsored Root Cause/Incident Investigation course.

Damage Prevention technicians/engineers or other agency personnel may attend TQ courses on a space available basis. The purpose in attendance of the course(s) is for personal safety and to gain knowledge in recognizing possible pipeline safety violations.

Table 4-1 - Guidelines for Determining Minimum Qualifications of State Agency Lead Inspectors to Conduct Standard Inspections

Category	Qualification Guidelines
Engineering Degree	May lead an inspection if they have: - An engineering degree from an accredited engineering college or university and / or is a registered professional engineer and - An EEE* in gas or liquid pipeline engineering, enforcement, construction, inspection, or other related job functions; or - Completed appropriate TQ and / or State Agency training as determined by the Program Manager.
Significant Experience	May lead an inspection if they have: - A <u>minimum</u> of 5 years of EEE* in gas or liquid pipeline engineering, enforcement, construction, inspection, or other related job functions and - Completed appropriate TQ and / or State Agency training as determined by the Program Manager.
Limited Experience	May lead an inspection if they have: - Less than 5 years of EEE* in gas or liquid pipeline engineering, enforcement, construction, inspection, or other related job functions and - Completed the Gas Inspector or Liquid Inspector core learning path requirements and / or - Completed State Agency training as determined by the Program Manager.

* Equivalent Education/Experience (EEE) - A combination of college level (degree or non-degree) education or training and technical experience that has furnished the inspector with the knowledge, skills, and abilities to conduct independent pipeline safety inspections and investigations.

- Using an on-the-job evaluation process/procedure developed by the State Agency, each Program Manager shall have the option of considering the needs of the State Agency, size of the inspection staff and other factors in deciding whether an inspector is qualified to be a lead inspector on Standard Inspections prior to completion of the full required TQ learning path.
- Evaluation processes/procedures used to qualify inspectors as lead inspectors prior to the completion of training shall contain the qualifying criteria, factors, and steps necessary to achieve qualification for each Standard Inspection activity. The processes/procedures shall be documented by the Program Manager on appropriate State Agency evaluation forms noting the dates that each step of the process was completed by the inspector and signed off by the Program Manager. If

the Program Manager is not available or does not have pipeline safety inspection experience, the State Agency may request PHMSA State Programs Director to conduct the evaluation of the inspector using these guidelines.

4.3.2 Course Re-Testing

If a student fails a course, TQ recommends they retake the course in its entirety and will automatically waitlist the student for the subject course.

However, at the request of the program manager, the TQ Director will consider allowing a student who failed a course to retake the course final exam in lieu of repeating the course if the following conditions are met:

1. The student's initial overall score was within ten percent of mastery level (the minimum passing score).
2. Achievement of a higher retest score will raise the overall grade to the required minimum passing score.

If either of the conditions are not met, the student is required to reenroll and complete the failed course in its entirety.

If a Program Manager retest request is approved, the retest must be taken within sixty days of the failure.

IMPORTANT NOTE: PHMSA- PL1250 Safety Evaluation of Gas Pipeline Systems Course and PHMSA-PL2258 Safety Evaluation of Hazardous Liquid Pipeline Systems Course are not approved for retesting and must be retaken in their entirety.

4.3.3 Training Waivers

OPS will consider granting a waiver from the recommended 3-year training period or from initial attendance at individual TQ courses on a case-by-case basis. Descriptions of waivers follow.

- **Extension of Time Waiver** - A State Agency may request an extension of time waiver if an inspector cannot complete a required course within the 3-year period because of serious illness, leave associated with the Family Medical Leave Act, or uncontrollable workload demands (e.g., involvement in accident investigation). If an inspector cannot complete a required course within the 3-year period because class slots are not available, the State Agency must include TQ verification of the class status and the date of the State Agency's registration submittal.

- **Permanent Waiver** - A State Agency may request a permanent waiver if an inspector has had previous training, education, or on-the-job experience that provides an equivalent level of knowledge presented in the course. The State Agency must clearly demonstrate that the inspector's training is equivalent to the required TQ training. If an inspector takes a similar job in another State Agency's pipeline safety program, TQ training credits will be transferred to the new State Agency.

4.3.4 Procedures for Requesting a Training Waiver

- The Program Manager petitions the PHMSA Director of State Programs requesting waiver of the requirements. This request includes justification and must specify whether it is for an extension of time or permanent waiver. An extension of time waiver should not be requested sooner than the calendar year within which the 3-year grace period ends. An extension of time waiver request should include the proposed date to which the training requirement would be extended.
- The PHMSA Director of State Programs reviews the package, with concurrence of the Director of TQ, and decides on whether to grant the waiver. Written approval or denial is sent to the requesting State Agency. A copy of this response is sent to TQ. If denied an appeal may be submitted to the PHMSA Associate Administrator of Pipeline Safety for further consideration.

4.4 Individual Qualifications

Each State Agency should be staffed with qualified personnel who are experienced in pipeline operations, pipeline safety operations and/or have an educational background in engineering or related technical fields. Personnel with less than these minimum qualifications may be hired provided the State Agency takes immediate steps (scheduling TQ classes as available) to provide training opportunities to meet the required level of competency. Staff should not be permitted to conduct independent activities until it is determined that they have demonstrated the ability and proficiency to perform their duties satisfactorily. OPS has defined five qualifications categories for program staff. (See Table 4-2)

Table 4-2 - Categories and Qualifications for State Agency Inspectors

Category	Qualifications

I		- Has an engineering degree from an accredited engineering school or is a registered professional engineer <i>and</i> - Has a minimum of 3 years' experience in gas or liquid pipelines or the enforcement of pipeline safety regulations at the Federal or State level <i>and</i> - Has received completion certificates or waivers for all applicable Gas Inspector or Liquid Inspector core learning path requirements
II	A	- Has an engineering degree from an accredited engineering school <i>and</i> - Has received completion certificates or waivers for all applicable Gas Inspector or Liquid Inspector core learning path requirements
	B	- Is a registered professional engineer <i>and</i> - Has received completion certificates or waivers for all applicable Gas Inspector or Liquid Inspector core learning path requirements
	C	- Has a minimum of 5 years of experience in gas or liquid pipelines or the enforcement of pipeline safety regulations at the Federal or State level <i>and</i> - Has received completion certificates or waivers for all applicable Gas Inspector or Liquid Inspector core learning path requirements
	D	- Has a minimum of 10 years of experience in gas or liquid pipelines or the enforcement of pipeline safety regulations at the Federal or State level <i>and</i> - Has received completion certificates or waivers for half of the applicable Gas Inspector or Liquid Inspector core learning path requirements
III		- Has a college degree or - Has a minimum of 5 years of experience in gas or liquid pipelines or the enforcement of pipeline safety regulations at the Federal or State level
IV		Has less than 5 years of experience in gas or liquid pipelines or the enforcement of pipeline safety regulations at the Federal or State level
V		Has less than 1 year of experience in gas or liquid pipelines or the enforcement of pipeline safety regulations at the Federal or State level

4.5 Continuing Education and State Inspector Mentoring Program

In addition to the required TQ pipeline safety courses, the State Agency is encouraged to continue to send its safety inspectors to TQ classes, industry-sponsored seminars, and other pipeline safety courses. Such a continuing education program will provide for a well-rounded, technically up-to-date training experience. Costs of such outside training may be charged to Base Grant in accordance with Training and Education in Section 9.15.1.

In coordination between OPS and NAPSR a mentoring program for State Agency inspectors is established to provide additional training opportunities. The program is described in Appendix H. The program described in Appendix H allows for an individual to customize the additional training to meet their development needs. To initiate the process, the application in Appendix H can be completed by the Program Manager requesting training through mentoring for an individual(s) and submitted to the PHMSA Director of State Programs for approval.

4.6 Changes in State Agency Personnel

Any official change in the Program Manager shall be communicated immediately to PHMSA Director of State Programs and respective OPS Region Director. Any contact information, names of personnel affected, and transition plan shall be communicated, if known. This notification shall be in writing and from the head of the State Agency. As a courtesy, written communication or an email should be provided to PHMSA Director of State Programs regarding any change in the head of a State Agency.

In addition, each State Agency shall notify TQ and PHMSA Director of State Programs as soon as practical of any changes to their pipeline inspection staff so training records and database(s) access may be updated accordingly. Training requests for inspectors should be added immediately into the TQ training database so enrollments can be made into required TQ training courses and resources are made available to accommodate the needs of all State Agencies. The PHMSA Director of State Programs will request the appropriate database administrator to remove access for any departed inspection staff member(s). State Agencies can obtain a form to complete by navigating to the User Access Forms on the NAPSR private site. Once in User Access Forms click through the following links in sequence:

- NAPSR Team Site, Home Page, left side Quick Link, PHMSA User Request Access Forms link/folder.

- Fill in the appropriate information to add, delete, or update an employee. Email the form to UserAccessRequest@napsr.net. The email must come from the Program Manager for internal control purposes.

4.7 Program Manager/Supervisor Training

Each State Agency shall ensure the Program Manager or Supervisor is knowledgeable of pipeline safety technology, enforcement applications, and administrative procedures (i.e., PHMSA Grant-in-aid process, etc.). Each Program Manager or Supervisor shall obtain the necessary knowledge by completing the mandatory TQ learning paths listed below. The Gas Inspector Path or Liquid Inspector Path is not required if the State Agency does not have a Gas or Liquid Program. If Program Managers or Supervisors also perform inspections, they must meet the requirements for inspectors contained in Section 4.3.1. Program Managers or Supervisors will have a period of five years from the date of their appointment to complete the required training courses. Supervisor means those individuals as defined in the Glossary. Refer to 4.3.2 for failure and retesting. Course prerequisites must also be met before attending the training class.

- **Gas Inspector Path**
- **Liquid Inspector Path**
- **Failure Path**

49 U.S.C. 60124 requires that DOT report the qualifications and number of State Agency pipeline safety staff in its bi-annual report to Congress. This information is provided by TQ. Inspector qualifications are used as a metric for scoring a State Agency's performance for grant funding.

4.8 New Program Manager Orientation

PHMSA State Programs provides an orientation session for newly appointed Program Managers. PHMSA State Programs may also conduct an orientation session for existing Program Managers upon request. Requests for orientation sessions must be provided to the PHMSA Director of State Programs. Orientation sessions will be scheduled upon the availability of resources. NAPSRS also provides new Program Manager training during the annual NAPSRS National Meeting.

5 Inspection and Compliance Program

5.1 Inspection

Inspections of pipeline operators must be made in a positive, constructive, and comprehensive manner. State Agencies may obtain technical support for addressing any inspection related issues by contacting your State Liaison, Region Director, or PHMSA Director of State Programs. The effectiveness of the State Agency's pipeline safety efforts depends on information obtained through inspections and evaluation of operator compliance. Each State Agency must, therefore, have a current written plan for its pipeline safety program. At a minimum, the plan should include the following eight elements:

1. **Operator data** - Each State Agency must maintain a list of the name and mailing address of each jurisdictional operator. The official address for each operator should be the one to which all pipeline-safety-related correspondence is sent and considered the official notice to the operator. In addition, information about the pipeline location and/or service areas should be maintained.
2. **Procedures for determining inspection priorities** - Each State Agency must develop a risk-based procedure for scheduling when an Inspection Unit is to be evaluated unless it can demonstrate the inspection interval it utilizes eliminates the need for a risk-based approach and all Inspection Units are inspected annually. The inspection intervals in 5.1.2 a. will begin on December 31st of the year a new operator or unit is added to Attachment 3 of the Progress Report. Appendix S contains a sample risk prioritization model that can be followed to incorporate a risk-based procedure into a written plan. This procedure should provide for the establishment of an inspection priority list and consider the following data-driven criteria:

- a. The length of time since the last inspection.

- i. Standard Inspections (General Code Compliance) as defined in Section 5.1 4. a.

A State Agency must complete a Standard Inspection of each operator's Inspection Units within a five-year time interval as defined in Section 5.1 2. a. iv. Beginning in calendar year 2019, a State Agency must complete a Standard Inspection of each LNG operator's Inspection Units within a three-year time interval, except for Drug and Alcohol which remains on a five-year interval, as

defined in Section 5.1 2. a. v. A change in operator does not alter the five-year or three-year time intervals.

- ii. Program Inspections (Operator Qualification, Gas Transmission Integrity Management, Gas Distribution Integrity Management or Hazardous Liquid Integrity Management)

A State Agency must complete all applicable Program Inspections of each operator's Inspection Units within a five-year time interval. A change in operator does not alter the five-year time interval.

- iii. At least 20% of Inspection Person-Days each year must be spent on Design, Testing and Construction Inspections. The 20% will be applied to the SICT minimum requirement which is communicated to each State Agency by July 31st of the previous year. This requirement does not apply to hazardous liquids programs.

- iv. A State Agency can meet the five-year interval requirement as follows:

- 1. Date-to-Date Planning Approach: A State Agency may choose to track and plan their inspections on a date-to-date approach. Under this methodology from the completion date of inspection as stated in Section 5.1(5), for example March 15, 2020, to the beginning date of the next inspection, March 15, 2025, would not exceed five 365-day periods between the inspection dates.

- 2. Calendar Year Planning without Grace Period Approach: A State Agency may choose to plan and track inspections on a calendar year basis but not to exceed the five-year date-to-date goal. In this approach a State Agency would conduct the initial inspection in Calendar Year One and the re-inspection in Calendar Year Five. An example of this would be:

- CY 2020 date of inspection falls within this calendar year (Calendar Year One)

CY 2021 skip

CY 2022 skip

CY 2023 skip

CY 2024 – date of reinspection falls within this calendar year and starts cycle again with the reinspection date (Calendar Year Five/Calendar Year One for next cycle)

CY 2025 skip

CY 2026 skip

CY 2027 skip

CY 2028 – reinspection date falls within this calendar year and start cycle again with the reinspection date (Calendar Year Five/Calendar Year One for next cycle)

3. Calendar Year Planning with Grace Period Approach: A State Agency may schedule inspections as noted below which provides for a grace period of up to a year in the most extreme circumstance beyond the five-year period between inspections.

CY 2020 – inspection date occurs within calendar year

CY 2021 – skip

CY 2022 – skip

CY 2023 – skip

CY 2024 – skip

CY 2025 – reinspection date occurs within calendar year (Will not meet requirements if

reinspection does not occur in this calendar year and occurs in calendar years CY2026 or later)

CY 2026 – skip

CY 2027 – skip

CY 2028 – skip

CY 2029 – skip

CY 2030 – reinspection date occurs within calendar year (Will not meet requirements if reinspection does not occur in this calendar year and occurs in calendar years CY2031 or later)

v. A State Agency can meet the three-year interval requirement for Standard Inspection of each operator's LNG Inspection units as follows:

1. Date-to-Date Planning Approach: A State Agency may choose to track and plan their inspections on a date-to-date approach. Under this methodology from the completion date of inspection as stated in Section 5.1(5), for example March 15, 2020, to the beginning date of the next inspection, March 15, 2023, would not exceed three 365-day periods between the inspection dates.

2. Calendar Year Planning without Grace Period Approach: A State Agency may choose to plan and track inspections on a calendar year basis but not to exceed the three-year date-to-date goal. In this approach a State Agency would conduct the initial inspection in Calendar Year One and the re-inspection in Calendar Year Three. An example of this would be:

CY 2020 date of inspection falls within this calendar year (Calendar Year One)

CY 2021 skip

CY 2022 – date of reinspection falls within this calendar year and starts cycle again with the reinspection date (Calendar Year Three/Calendar Year One for next cycle)

CY 2023 skip

CY 2024 – reinspection date falls within this calendar year and start cycle again with the reinspection date (Calendar Year Three/Calendar Year One for next cycle)

3. Calendar Year Planning with Grace Period Approach: A State Agency may schedule inspections as noted below which provides for a grace period of up to a year in the most extreme circumstance beyond the three-year period between inspections.

CY 2020 – inspection date occurs within calendar year

CY 2021 – skip

CY 2022 – skip

CY 2023 – reinspection date occurs within calendar year (Will not meet requirements if reinspection does not occur in this calendar year and occurs in calendar years CY2024 or later)

CY 2024 – skip

CY 2025 – skip

CY 2026 – reinspection date occurs within calendar year (Will not meet requirements if reinspection does not occur in this calendar year and occurs in calendar years CY2027 or later)

- b. The history of the Inspection Unit (leak history, prior Non-compliance, accident/incident history, excavation damage trends and any other information available from the operator's annual reports, etc.)

- c. Internal and external events affecting the Inspection Unit (construction, recent changes in operator personnel or operating procedures, etc.)
 - d. For large operators, rotation of locations inspected
3. **Written procedures/guidelines for Inspectors covering each type of required inspection.** To ensure the efficient, effective, and consistent completion of State Agency conducted inspection activities the State Agency must develop detailed written procedures for reviewing operator compliance with the State and Federal pipeline safety regulations.

The procedures must provide detailed guidance for inspectors conducting each type of inspection and when appropriate cover the following key inspection activities:

- a. **Pre-Inspection Planning:** Those activities conducted by the inspector prior to conducting a quality in-depth inspection. Pre-Inspection Planning should include: 1) Directions for acquiring the appropriate documents, forms, equipment, and personal protection equipment needed for the type of inspection being conducted; 2) Directions for reviewing the operator's available information in state files and state/federal databases to become familiar with the operator's system and inspection issues; 3) Conduct a review of previous inspection reports including violations cited to identify past inspection issues; the review may require additional follow-up actions; and 4) Directions for providing operator notification of the inspection, coordinating expectations with the operator, and scheduling the inspection visit.

At times, there may be opportunities for a State Agency to collectively conduct an inspection with OPS and/or other State Agencies when regulated assets are covered under the same operator programs such as OQ, CRM, Drug/Alcohol, or IM. In this situation, OPS encourages State Agencies and/or OPS Regions to coordinate to conduct joint inspections when possible. A State Agency wanting to conduct a joint inspection with OPS or other State Agency that occurs within or outside of their home state can contact the regional PHMSA State Programs Liaisons to assist with any coordination activities. Although conducted as a joint inspection, each State Agency must follow their State Agency specific inspection procedures

and provide at least one inspector qualified for the type of inspection being performed.

b. **Inspection Activities:** Those activities required for conducting a thorough and comprehensive inspection. Inspection Activities should include: 1) Directions for conducting an opening interview with the operators' representatives present at the inspection visit; 2) Directions for reviewing operator procedures, records, and pipeline facilities in the field; 3) Directions for completing inspection documentation; 4) Directions for conducting an exit interview with the operator's representatives; 5) Instructions for documenting the potential enforcement issues found during the inspection and discussion with the operator's representatives on the findings, and; 6) Directions on access to operator's records, pipeline facilities or requesting from the operator clarification on documentation.

c. **Post Inspection Activities:** Those activities required after an inspection is completed. Post Inspection Activities should include: 1) Verification all required data points are uploaded or entered into the proper state and federal data bases within a reasonable time; 2) Instructions for the gathering and updating new information concerning the operator; 3) Detailed instructions for completion and filing all necessary paperwork as a result of the inspection, including time limits for processing probable compliance/enforcement action; 4) Detailed instructions for the retention of inspection records and documents including date of destruction if required.

4. **Written procedures that provide for methodical, systematic, comprehensive, and consistent inspections.** To properly conduct an inspection of an operator's facilities, an inspector shall utilize an inspection form or checklist referenced to the applicable Federal and/or State regulations. IA and Federal Inspection forms will be updated at times when PHMSA issues regulatory changes. The most recent inspection form revision can be accessed in the PHMSA Common Forms section of FedSTAR. IA Desktop and IA Mobile applications may be downloaded at <https://primis.phmsa.dot.gov/IA-Releases/IA-D/>. State Agencies are not precluded from using their own forms if the State Agency's forms cover all applicable code requirements addressed on Federal

Inspection forms. At a minimum, an inspection plan should cover the following types of inspections:

- a. Standard (General Code Compliance) – a comprehensive and thorough review of an operator's compliance records, operations and maintenance plans including reviews required by 49 U.S.C. § 60108(a) (Section 114 of the Pipes Act of 2020), emergency procedures, public awareness plans, control room management, drug and alcohol programs and pipeline facilities. This would include, at a minimum, an evaluation of such items as corrosion control, leakage surveys, overpressure protection and pressure regulating equipment, odorization levels and equipment, repaired and/or active leaks, emergency valves, emergency response etc. This includes:
 - i. Any field verification of an operator's compliance records and activities relating to LNG facilities.
 - ii. Individual day(s) exclusively inspecting any specific item under a Standard Inspection. For example, exclusive day(s) inspecting/evaluating specific items such as regulator stations, valves, odorization, leak surveys, corrosion, etc.
 - iii. A comprehensive review of all components should be completed within a time specified by the State Agency's procedure manual. A comprehensive review includes both records and field verification of compliance items.
 - iv. Control Room Management – inspections of requirements of 49 CFR 192.631 or 49 CFR 195.446. Inspection Person-Days should be included in the Standard Inspections column of Attachment 2 of the annual Progress Report(s) until the Progress Report is revised to include a column for Control Room Management inspections.
 - v. Drug and Alcohol – these inspections are conducted using PHMSA Anti-Drug and Alcohol Misuse Programs Inspection Protocol Form (Form 4.1) and completing Protocol Areas A through E, IA, or an equivalent form.

A State Agency may choose to utilize the Drug and Alcohol inspection results of another State Agency or PHMSA to meet its inspection requirements. Drug and Alcohol inspection results may be found using IA, PDM or by contacting the other State Agency. The year in which the inspection was performed by the other State Agency will be considered the year in which the inspection was performed for determining the inspection frequency in Section 5.1 2. a. i. There is no interval requirement if a state chooses to utilize PHMSA Drug and Alcohol inspections.

A State Agency shall perform and document the following to utilize another State Agency's or PHMSA's Drug and Alcohol inspection results:

- i. obtains written permission from the other State Agency (no permission is required from PHMSA).
 - ii. confirm that non-compliances that affect your State have been corrected.
 - iii. review any changes to the operator's plan that have occurred since the other State Agency's or PHMSA's inspection was performed.
 - iv. review records specific to your State; and notify the other State Agency and/or PHMSA of any issues found.
 - vi. Any inspection would be considered a Standard Inspection unless otherwise noted in b. through h. below:
- b. Design, Testing and Construction – this includes construction activities, evaluation of design and the integrity testing of new or replacement facilities. Review of construction documentation may be included as part of construction inspection days; however, the majority of inspection time should be in the field inspecting construction.
 - c. Operator Training –this would include a supervisor/inspector /investigator, damage prevention/technical staff member making a requested and announced presentation at an operators' training/safety meeting, gas/liquid association seminar/conference, damage prevention conferences or TQ

seminar pertaining to the Pipeline Safety Regulations that are enforced by your State Agency. Training may be conducted on location or a common site for multiple operators.

- d. IMP - Integrity Management Program – these are inspections involving integrity management inspections on Hazardous Liquid, Gas Transmission and Gas Distribution lines. Program procedures need to ensure all programs are up to date along with monitoring progress on operator tests and remedial actions. An annual review is necessary on the implementation of integrity management programs of large operators.

IM Guidance is available on the OPS web site in the Technical resources page <https://primis.phmsa.dot.gov/> as well as the enforcement guidance located in the PHMSA Electronic Reading Room at <http://www.phmsa.dot.gov/foia/e-reading-room>.

Technical support for inspectors conducting IM inspections is available by initiating contact with the designated region OPS State Program Liaison. Subject matter experts for the specific topic will be identified and made available for consultation and support.

- e. OQ - Operator Qualification – these are inspections of an operator's plans using Form 14 OQ Plan Review, IA, or an equivalent form. If the inspection is spent primarily doing OQ field validation activities, the time should be reported in this category, otherwise report time in the respective category for the primary scope of the inspection.
- f. Investigating Incidents/Accidents – this would include any potential Incident/Accident activities and failure investigations, including any pertinent follow-up investigative activities.
- g. Damage Prevention Activities – Inspection and enforcement activities related to inspections and enforcement of 49 CFR 192.614 or 49 CFR 195.442. This would include but not limited to verification of one call tickets, timely marking the facilities, safe excavation practices or any other excavation activities related to matters of public safety.

- h. Compliance Follow-up – inspections or evaluations to see if actions are completed as requested to an operator from a previous inspection or Compliance Action.

5. **Procedures for notifying an operator when Non-compliance is identified.** Upon completion of an inspection, other than incident investigations, the State Agency shall: (1) within 30 days, conduct a post-inspection briefing with the owner or operator of the gas or hazardous liquid pipeline facility inspected outlining any concerns; and (2) within 90 days, to the extent practicable, provide the owner or operator with written preliminary findings of the inspection (Inspection findings are defined as being any Non-compliance found after the investigation is complete). An inspection, where a Non-compliance is found, is considered complete as soon as practical after all data or necessary information is reviewed and/or gathered to substantiate whether compliance requirements have been met. This may be prior to the completion of the review of all compliance requirements of an operator and the State Agency should ensure findings are issued promptly after the review of any individual items is complete. In the event there are no findings associated with an operator inspection, the State Agency should refer to its procedure on inspection closure. State Agencies will be required to report the number of days they have exceeded the 30- or 90-day requirements for an individual operator when requested by OPS.

In addition to the 30- and 90-day requirements above, a written Compliance Action detailing the Probable Violations shall be sent with the Program Manager's signature (or higher-level State Agency official) to a company officer if the operator is a private corporation or to the chief executive officer of a locality (e.g. – mayor of a municipality, chairman of the board of a quasi-governmental unit such as a utility district). The written Compliance Action should also include applicable civil penalties in which the operator may be subject to for failure to comply with regulations. If this written Compliance Action is sent within 90 days of the completion of the inspection, then this written Compliance Action shall be considered as meeting the 90-day requirement as well. The operator shall be notified immediately of any hazardous or unsafe situation discovered during the inspection. The State Agency's compliance procedures must include that the operator provide a written response within a specified time for correcting Probable Violations. The procedures shall include the types of Compliance Actions available to the State Agency. Examples of Compliance Actions may include, but are not limited to, Warning Letters, Notice of Probable Violation, and

Compliance Orders. Each Compliance Action will have a brief description of the process and when it will be recommended for use.

Each State Agency participating in any joint inspection, with OPS and/or other State Agencies, must follow its own procedures for enforcement of any Probable Violations found to be affecting facilities under the State's jurisdiction.

6. **Procedures for follow-up activities to ensure that proper corrective action has been taken by the operator within a specific time frame after notification of Non-compliance.** Depending on the seriousness of the Non-compliance and the circumstances involved, a written response from the operator documenting the corrective actions taken may be sufficient. The State Agency must conduct follow-up actions when Non-compliance is discovered during an inspection. The determination of the appropriate procedure for ensuring that all Non-compliance is corrected is the responsibility of the State Agency. However, the State Agency must maintain a complete record of each Non-compliance found and have a review procedure that will ensure that proper and timely follow-up activity has been completed for each Non-compliance. Procedures should outline when the program considers Probable Violations are closed. This information will be reported on Attachment 5 of progress report. Probable Violations still pending at end of each calendar year will be reported as carryover Probable Violations on the progress report Attachment 5.
7. **Recordkeeping procedures to document the results of inspection, follow-up, and Compliance Actions taken.** The State Agency must keep records of all pipeline safety inspections and follow-up activities. Inspection records should include the inspection dates, the operator/Inspection Unit, the name of the inspector, the location and type of facilities inspected, the names and titles of operator staff contacted at the Inspection Unit, the regulation sections checked for compliance, and the resulting evaluation conclusions. Follow-up records should include all correspondence or other contact between the State Agency and the operator, the results of follow-up inspections, and other information necessary to demonstrate that the Non-compliance has been corrected.
8. **NTSB Recommendations.** Each inspection plan should include provisions to ensure any applicable safety recommendations developed by NTSB, and accepted by the Secretary, are followed by pipeline operators under each state jurisdiction. OPS expects that

each State Agency will ensure operators follow these recommendations and may be included in their annual evaluation in accordance with 49 CFR 198.13 (b) (2). Each plan should confirm that all operators are addressing the following NTSB recommendations (if applicable):

- Did the state review operator procedures for determining if exposed cast iron pipe was examined for evidence of graphitization and if necessary remedial action was taken?
- Did the state review operator procedures for surveillance of cast iron pipelines, including appropriate action resulting from tracking circumferential cracking failures, study of leakage history, or other unusual operating maintenance condition? (Note: See Gas Piping Technology Committee's ANSI Z380.1, Guide for Gas Transmission, Distribution and Gathering Piping Systems which can be obtained through the American Gas Association)
- Did the state review operator emergency response procedures for leaks caused by excavation damage near buildings and determine whether the procedures adequately address the possibility of multiple leaks and underground migration of gas into nearby buildings Refer to 4/12/01 letter from PHMSA in response to NTSB recommendation P-00-20 and P-00-21?
- Did the state review operator records of previous accidents and failures including reported third-party damage and leak response to ensure appropriate operator response as required by 49 CFR 192.617 or 49 CFR 195.402(c)(5)?
- Did the state review operator procedures for determining areas of active corrosion on liquid lines in sufficient detail?
- Did the state adequately review for compliance operator procedures for abandoning pipeline facilities and analyzing pipeline accidents to determine their causes?
- Is the state aware of environmentally sensitive areas traversed by or adjacent to hazardous liquid pipelines?
- Ensure that gas distribution pipeline operators are using best practices recommended by the manufacturer in their operations and maintenance manuals and/or distribution integrity management programs, including using the specified tools and methods, to correctly install PermaLock mechanical tapping tee assemblies.
- Did the state verify operators that operate low pressure distribution systems enhanced processes and procedures to include the failure modes and effects analysis, or equivalent structured and systematic methods, to identify and mitigate possible over pressure failure events? Did the state verify these operators developed and implemented procedures for construction-related work specific to low-pressure distribution systems, such as repairs, uprates in pressure or replacement of pipeline or pressure regulation facilities? Refer to

NTSB Recommendations P-19-14 and P-19-15 and PHMSA's response to the recommendations.

- Did the state verify operators are complying with state and federal regulations for service regulators located inside buildings? Refer to NTSB Recommendations P-19-001 and P-19-002.

Note: A complete list of components of an operating plan is contained in the Pipeline Safety Program Evaluation form used by OPS during the annual evaluation of the State Agency's program.

9. Advisory Bulletins Issued By PHMSA

Each inspection plan should include provisions to ensure any applicable Advisory Bulletins issued by PHMSA are acted upon by pipeline operators under each state jurisdiction. State Agencies must verify Operators took appropriate action regarding advisory bulletins issued since the calendar year of the previous program evaluation.

5.2 Compliance

An important aspect of any State Agency's compliance program involves the gathering of the necessary evidence for documenting Non-compliance. After each inspection, the findings should be documented and include an account of the situations encountered during the inspection and a copy of the inspection checklist. The documentation must identify and describe each regulation with which the operator is believed to be in Non-compliance. Copies of relevant operator records, statements from operator personnel, photographs, calculations, and all other data pertaining to each issue of Non-compliance should be made a part of the documentation.

5.2.1 Procedures for State Agencies with a Section 60105 Certification

Compliance Actions should contain a statement of the Agency's enforcement authority and authorized civil penalty amounts provided by state statute. Because of the wide variation in State laws and administrative procedures, each State Agency must summarize its formal compliance process in the State Agency's written program procedures.

PHMSA may issue a Stay of Enforcement of a federal minimum pipeline safety standard (regulation) for a defined time period. This Stay of Enforcement does not affect a State Agency ability to enforce the regulation. PHMSA may ask State Agencies to voluntarily follow the Stay of Enforcement, but they are not obligated to do so. A State Agency may stay enforcement of any of its regulatory requirements that are more stringent than PHMSA requirements.

5.2.2 Procedures for State Agencies with a Section 60106 Agreement or Interstate Agents

A State Agency operating under the authority of the 49 U.S.C. 60106 is a limited representative of PHMSA. A copy of the inspection documentation identifying a Non-compliance in a format acceptable to the RD must be submitted within 60 days to the appropriate Region Office. The State Agency should also advise the operator that there is a reason to believe that a Non-compliance exists and that this issue has been referred to the OPS Region Office for further action.

If, after reviewing the available information, the RD determines that a Non-compliance does exist, the RD will notify the operator in writing and proceed with appropriate Compliance Action. The State Agency will be sent a copy of the notice letter and will be kept informed of the case progress and resolution.

5.2.3 PHMSA Orders to Intrastate Operators

If PHMSA decides that a pipeline facility is hazardous, PHMSA can order the operator to take necessary action. On occasion, PHMSA will waive the requirements for notice and a hearing and will immediately issue a corrective action order. This action is taken when PHMSA decides that failure to issue an order expeditiously would result in serious harm to life, property, and/or the environment. After the order is issued, the operator will have an opportunity for a hearing.

5.2.4 Referring Concerns of Possible Criminal Activity to the Office of Inspector General (OIG):

It is a federal crime for any “person,” including any company, pipeline owner, pipeline operator, contractor, or agent of such person, to willfully and knowingly violate a provision of the Federal Pipeline Safety Regulations (49 C.F.R. Parts 190-199). The term “willfully” generally means that a person’s actions are voluntary and deliberate, not accidental, or simply negligent. The term “knowingly” generally means that an individual simply knows or is aware of what he is doing, not that he knows his actions are illegal. In many cases, such conduct may also constitute a crime under applicable state law. If a State Agency becomes aware of any actual or possible criminal activity, they should report it to the DOT OIG and/or to state criminal authorities, for example the state Attorney General’s office. The DOT OIG operates a telephone hotline (1-800-424-9071) to receive complaints of alleged criminal violations that affect regulated pipelines. Complaints may also be emailed to hotline@oig.dot.gov.

6 Incident/Accident Investigation and Safety-Related Conditions

6.1 Investigation of Pipeline Incidents/Accidents

Pursuant to Federal/State regulations, a State Agency shall conduct a telephonic investigation of each NRC report related to gas, and hazardous liquid pipelines and LNG facilities subject to PHMSA regulations where the State has a 60105 Certification or 60106 Agreement. When the incident occurs on interstate facilities, a State Agency with an Interstate Agent Agreement typically will be the lead investigator, but it is ultimately for the AID Director to determine if the State Agency or OPS will continue as the lead regulator. The Region manages all enforcement actions for interstate facilities. The primary objective of the investigation activities is to identify the probable cause, minimize the possibility of recurrence of this operator and other operators in the state's jurisdiction and to institute enforcement action where Non-compliance with the safety standards has occurred. At a minimum, an Investigation Report must be completed which includes Observations, Contributing Factors and applicable recommendations to prevent reoccurrence. A template for this report can be found in Appendix E. If Non-compliance by an operator is determined, it should be included in the Investigation Report. The State Agency must take enforcement action for any determined Non-compliances.

AID will notify the State Agency when it receives an initial NRC report, an NRC 48-hour update report, or other report of an incident/accident of pipeline facilities in that State. AID staff will relate all details of the incident/accident provided to PHMSA in accordance with the reporting requirements under 49 CFR, Parts 191, 193, or 195. The National Pipeline Incident Coordinator's (NPIC) goal is to initiate the investigation within 15 minutes after receipt incident report. For events that are particularly time-sensitive, the NPIC calls the State Agency. If the State Agency cannot be reached promptly, the NPIC contacts the operator directly. For less time-sensitive incidents, if the State Agency cannot be reached, the NPIC will wait one hour before directly contacting the operator. The NPIC may call the operator directly when the jurisdiction is uncertain. Upon receipt of the report from the NPIC, the State Agency may make an immediate e-mail statement to the NPIC that they have received the report and are working to gain additional information if they have not been able to secure credible updates or if they are not able to obtain sufficient information within the 15-minute target time. During the telephonic investigation phase, the State Agency validates preliminary information, obtains additional information, evaluates the severity of the incident and the pipeline operator's response, and disseminates the information to the NPIC. The State Agency and AID staff should maintain close contact until the investigation is completed. The State Agency should

communicate its plans for investigating the incident to the NPIC (888-719-9033) and provide updates as directed by the NPIC.

6.2 On-scene investigations

For incident/accidents on intrastate pipelines where the State Agency is the lead regulator, OPS typically only participates in the on-scene investigation if there is a fatality or significant evacuation of the population, the State Agency requests assistance, or the NTSB/other federal agency deploys.

For incident/accidents on interstate pipelines where the State Agency is an Interstate Agent, the AID Director will decide whether AID or the State Agency will lead the on-scene investigation, but the State Agency will always have the option to participate.

A State Agency may investigate an incident/accident on a pipeline where OPS is the lead regulator if the AID Director establishes a Time Defined Project Specific Agreement with the State Agency. Details on Time Defined Project Specific Agreements are included in the PHP-50's document, Guidelines for States Participating in the Pipeline Safety Program, Appendix B.

Irrespective of the team composition, the chain of command and communication channels remain the same for OPS staff. The OPS Lead On-scene Investigator reports to the AID Director for all issues related to the incident. All communications to and from the field are channeled through the NPIC. When the State Agency is the lead regulator, they report up through State Agency chain of command and provide the NPIC with updates.

On-scene team members' roles and responsibilities are provided in Table 6-1: Responsibilities Matrix for On-Scene Investigations. The responsibilities for team members depend on who is the lead regulator and the composition of the on-scene team.

- For intrastate pipeline facilities
 - o State jurisdiction (under 49 U.S.C. 60105 State Pipeline Safety Program Certification)
 - o State jurisdiction (under 49 U.S.C. 60106 State Pipeline Safety Agreements)
- OPS jurisdiction (including interstate pipelines where the State Agency is an Interstate Agent)
- NTSB deploys

NTSB also investigates pipeline incidents/accidents, so State Agency staff should be aware of the Board's responsibilities and authorities. In those

investigations where a State Agency with 49 U.S.C.60105 Certification and NTSB participate; NTSB and State authority is concurrent. The State Agency may choose to be a Party to the NTSB investigation. The State Agency should execute its enforcement responsibilities regardless of NTSB involvement. OPS's Accident Investigation Policy (AIP) which provides further documentation of Federal/State cooperation resides in Appendix E; however, the AIP is currently under review for revision and has been removed from Appendix E.

Table 6-1 - Responsibilities Matrix for On-scene Deployments

Responsibilities Matrix for Personnel at On-scene Investigations	Lead Investigation	Support Investigation	Write Investigation Report *	Complete CAO Data Report*	Complete Violation Report*	Inspect for Compliance	Lead Oversight of RCFA	Oversight of Enforcement Actions Including Return-to-Service Plan
State Agency jurisdiction (under 60105 Certifications)								
State Agency Only	State	NA	NA	NA	NA	State	State	State
State Agency and AID	State	AID	NA	NA	NA	State	State	State
State Agency and Region	State	Region	NA	NA	NA	State	State	State
State Agency, AID, and Region	State	Both, AID Lead for OPS	NA	NA	NA	State	State	State
State Agency jurisdiction (under 60106 Agreements)								
State Agency Only	State	NA	State	Region	Region	State	State	Region
State Agency and AID	Event Specific	Event Specific	AID	AID	AID	State	State	Region
State Agency and Region	Event Specific	Event Specific	Region	Region	Region	State	State	Region
State Agency, AID, and Region	Event Specific	Event Specific	AID	Region/AID	Region/AID	State	State	Region
OPS jurisdiction								
AID Only	AID	NA	AID	AID	AID	Region	AID	Region
Region Only	Region	NA	Region	Region	Region	Region	Region	Region
AID and Region	AID	Region	AID	Region/AID	Region/AID	Region	AID	Region
NTSB deploys								
State Agency (60105) and AID	NTSB	State	NA	AID	AID	State	NTSB	State
State Agency (Interstate Agent) and AID and/or Region	NTSB	Both, AID Lead for OPS	NA	Region and/or AID	Region and/or AID	State	NTSB	Region
AID	NTSB	AID	NA	AID	AID	Region	NTSB	Region
AID and Region	NTSB	Both, AID Lead for OPS	NA	Region/AID	Region/AID	Region	NTSB	Region
*Or State Agency's equivalent form. **NTSB leads the investigation and has priority over others' investigation. They coordinate resources and prepare the written investigation report. PHMSA may obtain information directly from parties involved in, and witnesses to, the incident/accident, provided they do not interfere with the NTSB's investigation. PHMSA does not write a report when NTSB deploys.								

6.3 Basic Investigative Procedures

To conduct an effective incident/accident investigation, State Agency staff must be familiar with basic investigative procedures. An investigation requires a thorough knowledge of the design, construction, operation, and maintenance factors involved in pipeline safety. A Pipeline Incident/Accident Investigation Report form is available in FedSTAR (SUDS).

The inspection of the operator's response to an emergency shall, include but not be limited to, evaluating the operator for compliance with their procedures and with 49 CFR 192.615, 193.2509, 49 CFR 195.402(e) or 195.403, as appropriate. Further inspection shall determine if the operator complied with the requirements of their incident/accident investigation procedures and 49 CFR 192.617, 193.2515 or 49 CFR 195.402(c)(5), as applicable. Appropriate inspection documentation shall reference each section of the above cited regulations and the compliance of the operator.

6.4 Incident Investigation Procedures

Each State Agency should keep adequate records of notifications of all incidents received. If an onsite investigation of an incident was not made, the State Agency should obtain sufficient information by other means to determine the facts and support the decision not to go on-site. Each State Agency should also have a mechanism for receiving and responding to after-hours notifications as necessary.

Investigations shall be thorough with conclusions and recommendations documented in an acceptable manner. In addition, the State Agency should initiate any applicable enforcement action for violations found during incident investigation(s). Each State Agency should also assist region office and the AID by taking appropriate follow-up actions related to the operator incident reports to ensure accuracy and that the operator's final report has been received by PHMSA. The State Agency should work with respective operators to determine any discrepancies on incident cause or contact Region Director/AID for assistance on resolution.

6.5 PHMSA AID Daily Telephonic Investigation Report

Operators are required to report incidents/accidents to the NRC. AID develops the Daily Telephonic Investigation Report, a summary of the information gathered during the Telephonic Investigation for all NRC reports or 48-hour Update reports received since the previous Daily Telephonic Investigation Report. The NPIC emails the report daily to NAPSAR All States email distribution group. PHMSA State Programs maintains the email list.

6.6 Access to NRC Reports

Access to NRC Reports - State Agency staff can view NRC reports the next-day in PDM via the Portal.

30-DAY REPORT REVIEW

WRITTEN REPORTS FROM THE OPERATOR (Forms 7100 & 7001 INCIDENT REPORTS)

Within 30 days of a reportable incident/accident, the operator is required to submit a written report, PHMSA Form 7100 (for gas incidents) or 7001 (hazardous liquid accidents), to OPS under 49 CFR 195.54 (Hazardous Liquid), 49 CFR 191.15 (Transmission, Gathering, LNG, Underground Storage), and 49 CFR 191.9 (Distribution). When the operator obtains new relevant information, they are required to supplement the written report. PHMSA expects operators to submit a final report when the apparent cause has been determined and the report is complete and accurate. After the NPIC receives the operator's 48-hour Update Report, the AID continues to monitor the investigation until the report has been filed.

AID, State Agencies, and the Operations Systems Division (PHP-6) are responsible for the quality assurance and control of the data operators submit on PHMSA accident Forms 7100 and 7001 per Incident Report Data Management Policy (PHP-5340.5B).

AID's Incident Report Team Lead is responsible for AID's review of operators' incident forms to ensure the data is complete and accurate. For incidents subject to State authority, AID works with the State Agency to resolve any identified discrepancies or gaps in the report. AID receives feedback from the State Agency and enter the status in WMS.

When the report is complete and accurate, AID recommends to the State Agency that the report can be closed. If the State Agency concurs, AID closes the report. If the State Agency does not respond to a repeated request, the AID Incident Report Team Lead can approve closing the report. Closed reports are uploaded into WMS so that the NRC report is linked to the Incident report.

6.7 Safety-Related Conditions

A pipeline operator is required to file a Safety-Related Condition Report (SRCR) with PHMSA whenever a condition, as defined in 49 CFR 191.23 or 49 CFR 195.55, exists that cannot be corrected within 5 working days after the operator determines that a condition exists but not later than 10 working days after the operator discovers the condition.

The State Agency will receive new SRCR alert e-mails from the Work Management System (WMS) and will review the SRCR the same business day to identify reports that warrant immediate investigation by the State Agency. The State Agency should contact the operator and document the actions taken by both the State Agency and the Operator in the Note Tab in WMS within 10 business days of the SRCR being sent to the State Agency. For additional information refer to SRCR in WMS Policy in Appendix L.

7 Damage Prevention Program and One Call Notification

As required by 49 U.S.C 60134, a State must have an effective damage prevention program or working toward the establishment of a damage prevention program **and**, as required by 49 CFR 198, Subpart C adopt a one-call notification program that will notify a pipeline operator of excavation activity that could threaten the safety of the pipeline.

7.1 Damage Prevention

As required by 49 U.S.C. 60105, a State authority must encourage and promote the establishment of a program designed to prevent damage by demolition, excavation, tunneling, or construction activity to the pipeline facilities to which the Certification applies and that subjects persons who violate the applicable requirements of that program to civil penalties and other enforcement actions that are substantially the same as are provided under this chapter, and addresses the elements in 60134(b). A State must demonstrate that it has made substantial progress toward establishing such a program, and that such program will meet the requirements or have an effective damage prevention program that meets the nine element requirements of 49 U.S.C. 60134(b) as listed below:

1. Participation by operators, excavators, and other stakeholders in the development and implementation of methods for establishing and maintaining effective communications between stakeholders from receipt of an excavation notification until successful completion of the excavation, as appropriate.
2. A process for fostering and ensuring the support and partnership of stakeholders, including excavators, operators, locators, designers, and local government in all phases of the program.
3. A process for reviewing the adequacy of a pipeline operator's internal performance measures regarding persons performing locating services and quality assurance programs.
4. Participation by operators, excavators, and other stakeholders in the development and implementation of effective employee training programs to ensure that operators, the one-call center, the enforcing agency, and the excavators have partnered to design and implement training for the employees of operators, excavators, and locators.

5. A process for fostering and ensuring active participation by all stakeholders in public education for damage prevention activities.
6. A process for resolving disputes that defines the State's role as a partner and facilitator to resolve issues.
7. Enforcement of State damage prevention laws and regulations for all aspects of the damage prevention process, including public education, and the use of civil penalties for violations assessable by the appropriate State authority.
8. A process for fostering and promoting the use, by all appropriate stakeholders, of improving technologies that may enhance communications, underground pipeline locating capability, and gathering and analyzing information about the accuracy and effectiveness of locating programs.
9. A process for review and analysis of the effectiveness of each program element, including a means for implementing improvements identified by such program reviews.

7.2 One Call Notification

As required by 49 CFR 198, Subpart C, a State must adopt a one-call notification program that will notify a pipeline operator of excavation activity that could threaten the safety of the pipeline. A State notification program must require eight minimum standards, which may be found in 49 CFR 198.37:

1. Each area of the State that contains underground pipeline facilities must be covered by a one-call notification program.
2. Each one-call notification system must be operated in accordance with Sec. 198.39.
3. Excavators must be required to notify the operational center of the one-call notification system that covers the area of each intended excavation activity and provide the following information:
 - a. Name of the person notifying the system.
 - b. Name, address, and telephone number of the excavator.
 - c. Specific location, starting date, and description of the intended excavation activity. However, an excavator must be allowed to begin an excavation activity in an emergency but,

in doing so, required to notify the operation center at the earliest practicable moment.

4. The State must determine whether telephonic and other communications to the operational center of a one-call notification system under paragraph (c) of this section are to be toll free or not.
5. Except with respect to interstate transmission facilities as defined in the pipeline safety laws (49 U.S.C. 60101 et seq.), operators of underground pipeline facilities must be required to participate in the one-call notification systems that cover the areas of the State in which those pipeline facilities are located.
6. Operators of underground pipeline facilities participating in the one-call notification systems must be required to respond in the manner prescribed by 49 CFR 192.614 (c)(4) through (c)(6), to notices of intended excavation activity received from the operational center of a one-call notification system.
7. Persons who operate one-call notification systems or operators of underground pipeline facilities participating or required to participate in the one-call notification systems must be required to notify the public and known excavators in the manner prescribed in 49 CFR 192.614 (b)(1) and (b)(2), of the availability and use of one-call notification systems to locate underground pipeline facilities. However, this paragraph does not apply to persons (including Master Meter operator's) whose primary activity does not include the production, transportation or marketing of gas or hazardous liquids.
8. Operators of underground pipeline facilities (other than operators of interstate transmission facilities as defined in the pipeline safety laws (49 U.S.C. 60101 et seq.), and interstate pipelines as defined in 49 CFR 195.2, excavators and persons who operate one-call notification systems who violate the applicable requirements of this subpart must be subject to civil penalties and injunctive relief that are substantially the same as are provided under the pipeline safety laws (49 U.S.C. 60101 et seq.).

7.3 Damage Prevention and One-Call Grants

Grants are made available to states for efforts in both State Damage Prevention Programs (SDP) and the State One-Call Grant Programs. Damage Prevention Grants are described along with their eligibility requirements under 49 U.S.C. 60134. Grant allocations are determined by PHMSA annually.

The Statute for One-Call notification grant programs is located under 49 U.S.C. 61, which also outlines the authorized grant appropriation in 6107. 49 U.S.C. 61 can be found in Section III of Appendix A. Annual one-call grant guidelines are recommended by the GAC and relayed to all State Agencies (after OPS approval) prior to the opening of the application for this grant.

8 State Agency Program Performance

OPS uses two means to assess a State Agency's overall performance in the pipeline safety program - an annual program evaluation, and a review of information attached by the State Agency to its annual progress report. The evaluation is used primarily to determine performance (e.g., operating practices, quality of State Agency inspections, investigations, Compliance Actions, and adequacy of recordkeeping). The progress report attachments are used primarily to determine the State Agency's compliance with program requirements (e.g., extent of jurisdiction, inspector qualifications, number of inspectors, number of Inspection Person-Days, adoption of applicable Federal regulations and attendance at Federal/State meetings). A State Agency's performance is the major factor considered in allocating grant-in-aid funds each year.

OPS and NAPSRS developed a list of performance metrics which are published on PHMSA's PRIMIS Website. These metrics can be viewed by all stakeholders in pipeline safety including the public. The intent of the performance metrics is meant to illustrate trends in a State Agency to provide insight into areas of continuous improvement. The performance metrics are not intended to compare performance across State Agencies. PHMSA's PRIMIS Website can be accessed at:

<http://primis.phmsa.dot.gov/comm/states.htm>

8.1 Annual Program Evaluation

The OPS annual program evaluation is a review of the State Agency's pipeline safety program. It includes an examination of State Agency policies, plans, procedures, and records of the previous calendar year as well as the observation of the field inspection of a pipeline operator. Some evaluation form questions relate to NTSB recommendations for which PHMSA has committed to action in the inspections of operators. These questions include a reference to the NTSB recommendation number. Additional information on each recommendation can be viewed in Appendix R or accessed with the recommendation number through the NTSB's web site at <https://data.nts.gov/carol-main-public/basic-search>. The evaluation is usually conducted by PHMSA State Programs.

OPS reviews changes to the program evaluation form with the Program Managers at Region NAPSRS meetings. At the beginning of each calendar year, OPS will make available a copy of the final form to each State Agency. PHMSA State Programs personnel should notify the State Agency in advance of the

schedule for the annual evaluation to ensure that the State Agency has adequate lead-time to prepare for the evaluation.

The State Agency's pipeline safety program will be evaluated for conformance with the procedures in this manual as well as any other specific policies and procedures OPS provides to the State Agency. The evaluation will include the following:

1. **Verification of progress report attachments.** PHMSA State Programs personnel will review for completeness and accuracy the information provided by the State Agency in the attachments to its most current progress report.
2. **Record review.** PHMSA State Programs personnel will review the administration of the program and associated records to support program activities. PHMSA State Programs staff will also evaluate the State Agency's financial/budget information submitted in support of the grant-in-aid funding.
3. **Field inspection.** PHMSA State Programs personnel will observe the State Agency's inspection of at least one intrastate Inspection Unit. If the State Agency is also an Interstate Agent, the evaluator may also observe the inspection of an interstate Inspection Unit. In addition, the RD may target specific areas for review in the field inspection. These areas will be selected in advance in consultation with the Program Manager. If possible, a different inspector, operator and geographic area should be observed each year.

PHMSA State Programs will conclude the evaluation with a verbal performance review addressing major strengths and weaknesses of the program. Within 60 days after the on-site review, the PHMSA Director of State Programs should send a letter to the State Agency's chairperson (or equivalent) with a copy to the Program Manager detailing the program's effectiveness in meeting the terms in the State Agency's Certification/Agreement and any policy problems (e.g., overall program performance, jurisdiction status over intrastate operators, staffing level, equipment to carry out program functions, major budgetary or travel restrictions, initiative in seeking necessary legislation or adopting required regulations). Where appropriate, the letter will include recommendations for program improvement. The PHMSA Director of State Programs, when appropriate, will include in the letter the contributions and participation in various PHMSA/NAPSR and other committees and work groups of the Program Manager and State Agency pipeline safety staff. If required, the State Agency's chairperson will be requested to respond in writing within 60 days and describe actions the State Agency proposes to take to address program deficiencies.

The proposed actions are deemed acceptable if PHMSA Director of State Programs does not object in writing within 60 days. ***Failure to respond in writing within the required timeframe will result in a loss of performance points in the following year's evaluation.***

Following the mail out of the PHMSA Director of State Programs' letter to the State Agency's chairperson (or equivalent, PHMSA State Programs will send a copy of the completed evaluation form to the Program Manager addressing programmatic problems (e.g., insufficient documentation of inspection forms and records, incorrect completion of progress report attachments, inadequate administrative enforcement procedures, or poor staff communication).

8.2 Compliance with Program Requirements

PHMSA State Programs personnel annually review each State Agency's program performance using the State Evaluation Form. As part of the annual review, the evaluator validates information submitted on the Annual Progress Report. A State Agency must respond to questions regarding its compliance with various Federal requirements. If a requirement is not applicable (e.g., offshore inspections), the State Agency so indicates on the Progress Report and the evaluator notes it where applicable on the State Evaluation Form. If a Federal regulation has been adopted, the State Agency indicates the date adopted on the Progress Report. If a Federal regulation has not been adopted, the State Agency must either describe on the Progress Report the steps it is taking toward adoption or explain why it is not taking steps toward adoption.

The annual Progress Report validated during the State Evaluation also requests data on the civil penalty levels in effect in the State as of December 31 of the evaluation year, attendance at the NAPS Region Meeting, and the frequency of the general legislative session. Information on the general legislative session is considered when determining if applicable Federal regulations have been adopted within 24 months of the effective date or within two general sessions of the State Legislature.

For a state to be given credit for taking steps to adopt a regulation, the regulatory action, bill in committee or docket before an agency, must be verifiable and in process prior to the end of the first 24 months or two legislative sessions after the applicable regulation becomes in effect. Any regulations not meeting this requirement will not be considered adopted until actual legislation is signed into state law.

8.3 Recordkeeping

Recordkeeping is vital to the operation of a pipeline safety program. State Agency files shall be well organized and accessible (this includes electronic files). At a minimum, the following records should be maintained by the State Agency for a period of at least five calendar years plus the current calendar year, or longer if the respective State Agency requires.

1. Written program procedures (see Chapter 5)
2. Inspection reports (at a minimum, current inspection report and previous inspection report)
3. Compliance Actions
4. Incident/accident investigative reports
5. Safety-Related Condition investigative reports
6. Correspondence sent to/received from operators
7. Documents to support the Progress Report and State Program Evaluation
8. Waivers (special permits) – retain until waiver is no longer in place
9. TQ waivers for courses – retain until 6 years after employee is no longer in the pipeline safety program.
10. Documents to support the Federal Grant requirements contained in 2 CFR 200

8.4 Attendance at NAPSRS Meetings

OPS supports NAPSRS and recognizes its importance in the Federal/State cooperative pipeline safety effort. The meetings provide an opportunity for the State Agencies and PHMSA to discuss common objectives and problems concerning pipeline safety. Each State Agency shall send the Program Manager to the annual NAPSRS National Meeting (National Meeting) and appropriate NAPSRS Region meetings or risk reduction of grant-in-aid funds. In the event the Program Manager is unable to attend either of the meetings, the PHMSA Director of State Programs and the appropriate State Liaison shall be notified by email as soon as possible of the alternate representative. The PHMSA Director of State Programs will determine if a reduction in applicable performance points is appropriate.

In addition to the Region meetings, NAPSR holds an annual National Meeting. The main purpose of the National Meeting, which is attended by the NAPSR Board of Directors, members, and various PHMSA staff, is to develop resolutions and recommendations that will improve the national pipeline safety effort and enhance the working relationship between the States and PHMSA. Following the meeting, the resolutions and recommendations are forwarded to PHMSA, with appropriate personnel then being responsible for returning written responses to NAPSR.

8.5 State Pipeline Safety Training and/or Seminars

Each State Agency shall demonstrate that it conducted or participated in a pipeline safety training session or a seminar within the last three calendar years, either in-person or virtually, to educate operators on current regulations. An OPS representative may be present and provide regulatory updates to the participants. For states with both gas and hazardous liquid programs it would be appropriate to hold a combined training session or seminar. Requests for assistance from OPS may be submitted via email, to the appropriate OPS Director(s), at least 4 months in advance of the start of the upcoming calendar year.

9 DOT Grant-in-Aid Program

This chapter describes the application and submission procedures and grant management requirements a State Agency must follow to receive the benefits of the gas and/or hazardous liquid pipeline safety grant program. It is intended to assist State Agencies in applying for and administering Federal grant funds authorized by 49 U.S.C. 601.

9.1 Scope of Grant

The scope of the grant is to support up to 80 percent of the cost of personnel, equipment and activities reasonably required to carry out inspection and enforcement activities of intrastate pipeline facilities under a Certification or Agreement with the Administrator or to act as an agent of the Administrator with respect to interstate pipeline facilities. The activities covered are those specifically for the inspection of gas or hazardous liquid pipeline facilities to ensure compliance and enforcement as necessary of 49 Code of Federal Regulations.

9.2 Address

Unless directed otherwise by the PHMSA Director of State Programs, all correspondence concerning the grant program should be addressed to:

Director of State Programs
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Pipeline Safety - State Programs, PHP-50
1200 New Jersey Avenue, SE
Second Floor, E22-321
Washington, DC 20590
Telephone Number: (202) 366-4595

To avoid damage from DOT's package threat scanning process, all correspondence should be shipped through non-US Postal Service shippers such as FedEx, UPS, etc.

9.3 Eligibility

To qualify for Federal grant funds under 49 U.S.C 60107, a State Agency must participate in the pipeline safety program either under Certification in accordance with 49 U.S.C. 60105 or under an Agreement in accordance with 49 U.S.C.60106.

9.4 Assistance Listing Information

The federal grant Assistance Listing for the Pipeline Safety Base Grant is 20.700. This was formerly known as the Catalog of Federal Domestic Assistance (CFDA).

9.5 General Obligations

The State Agency assumes responsibility for the administration of the grant program through the application of sound management practices and for seeing that program funds have been expended and accounted for in accordance with program objectives, the *Assistance Agreement*, these *Guidelines*, 2 CFR 200 and any other applicable Federal rules and regulations.

In recognizing its own unique combination of staff, facilities and expertise, each participating State Agency has the primary responsibility for employing the organization and management techniques necessary to assure proper and efficient administration of the program.

9.6 Grant Application

The purpose of the *Grant Application* is to provide PHMSA with information concerning the State Agency's need for Federal financial support for its pipeline safety program. PHMSA will make an application available to each State Agency in August of each year. The deadline for filing this application is September 30. (Note: Failure to return the application by this date may result in the loss of grant funds.) To assist PHMSA in determining the funding needs of all State Agencies, those State Agencies that decide NOT to apply for grant funds are also requested to notify PHMSA by September 30. If PHMSA determines that an application is incomplete or insufficient to qualify, PHMSA will advise the State Agency of the reason for the disapproval. The State Agency must then take appropriate corrective action prior to reapplying.

The Grant Application, which is made available in FedSTAR (<https://portal.phmsa.dot.gov>), is furnished to each State Agency by PHMSA contains multiple sections. These include:

9.6.1 Attachment #1: Description of State Pipeline Safety Program.

This attachment requires a description of all ongoing and planned pipeline safety program activities for which grant reimbursement is requested. This summary must clearly indicate the types of actions to be performed and contain sufficient details to justify the proposed budget. This should include but is not limited to the applicable items from the following list:

- Program Description
 - Miles of Main
 - Number of Services
 - Miles of Transmission Lines

- Number of Inspection Units
 - Number of Operators
 - Inspection Frequency by Operator Types
- Expected number of inspection days during upcoming calendar year
 - Summary of Inspection Work Plan
 - Notations should be made of any special projects, etc.
- Notable program activities to be conducted during upcoming calendar year
 - Major construction projects
 - Major enforcement cases that are expected to take large amounts of resources
 - TQ Seminar or other operator training you intend to participate and expected attendance
 - Interstate Agent (if applicable)
- Any legislative proposed, current, or pending activities
 - This should include any damage prevention rulemakings
- Listing of Pipeline Program Staff (Supervisors and Inspectors)– this should include the following
 - Individual Names and titles (enough information should be provided to describe their job duties)
 - If less than 100% what is estimated time to be spent in program
 - Listing of vacancies
 - Listing of hiring expectations
- Listing of Damage Prevention Staff (if applicable)
 - Individual Names and titles or functions (enough information should be provided to describe their job duties)
 - Estimated time spent on underground pipeline damage prevention and methodology used to determine this percentage. (i.e., Pipeline cases/Total Cases)
- List of other Administrative Staff
 - Individual Names and titles or functions (enough information should be provided to describe their job duties)
 - Estimated time spent in support of pipeline program
 - This should include any individuals/positions who will have their salary and benefits submitted as a direct cost applied to the grant reimbursement.
- Listing of projected equipment purchases (this should directly correlate with estimated program budget submitted)
 - This should include automobiles and estimated cost of each
 - Other intended equipment purchases (i.e., printers, computers, or related items)
- Any expected contracts for outside services

- All contracts must be preapproved and will not be reimbursed without prior approval and copies must be submitted to PHMSA State Programs
- Other relevant program information

9.6.2 Attachment #2: Pipeline Safety Program Estimated Budget.

This attachment requires an estimate of the total expenses related to the State Agency's pipeline safety program. It should include all costs directly relating to pipeline safety that the State Agency plans for the next calendar year regardless of the funding source. The estimate should be presented so that the costs for each item are readily identifiable as to the budget categories established on the form. All cost estimates should be as realistic as possible. Accurate estimates will reduce the amount of reallocation necessary at the end of the program year and permit PHMSA to more realistically allocate available funds to all State Agencies. The State Agency must receive pre-approval from PHMSA State Programs in advance of executing any contract (see Professional Service Costs in 9.15.1) or if there is a substantial change to the scope of the pipeline safety program affecting the approved budget. Copies of any approved final contract should be forwarded to PHMSA State Programs within 30 days of execution.

9.7 Annual Funding Level

After funds have been appropriated by Congress, PHMSA will process the applications and allocate available funds to those State Agencies meeting the program qualifications. 49 U.S.C. 601 limits the Federal contribution to State pipeline safety programs to not more than 80 percent of total program costs. If Congressional appropriations are insufficient to fund all programs at the 80 percent level, the amount allocated to each State will be determined by PHMSA to distribute available funds equitably as prescribed in 49 CFR 198, Subpart B.

9.8 Grant Allocation and Percentage of Funding

PHMSA will provide to all State Agencies a Grant Allocation Document. This document is provided annually between April and June (subject to federal budget appropriation). The pipeline safety grant **allocation** is a targeted amount of funding a State Agency may receive for activities during a calendar year providing their actual program expenditures meet the budget estimate submitted in their grant application. Otherwise, the State Agency will receive the percentage of funding for actual program expenses which is listed on the annual Grant Allocation Document. The percentage of program funding is determined based on the Grant Allocation Formula (see 9.8.2) and the total amount of appropriated funding provided by PHMSA. The maximum amount

of any State Agency funding is capped at 80 percent as noted in previous section.

9.8.1 Initial Allocation vs. Final Allocation

The basis of the initial allocation are program cost estimates which are submitted by each state agency three months prior to the start of the calendar year or grant year. The initial allocation allows a state pipeline program to proceed operation with a funding percentage guarantee which is outlined in Assistance Agreements made to each program.

PHMSA provides a final allocation of grant funds after actual expenses are submitted for the previous calendar year. Historically, grant program cost estimates are at least ten percent over the actual expenses submitted at year-end. The final allocation allows PHMSA to recalculate program funding based on actual costs which generally allow all programs to receive a higher percentage of funding using the same total congressional appropriation for the year in question. Assistance Agreements are only modified if the final payment exceeds the maximum amount identified in the original agreement.

9.8.2 Grant Allocation Formula for Grant Award
Pipeline Safety Grants are awarded based on the following formula:

Grant Award =

State Agency Budget Amount¹ x State Agency Performance Score² x Percent Allocation³

$$\text{Percent Allocation (80\% maximum)} = \frac{\text{Total Available Funding}^4}{\sum \text{All Programs (State Score X State Budget)}^5}$$

9.8.3 State Performance Score

A performance score for each State Agency is developed annually which determines the maximum amount of funding that a program will receive in each calendar year for which a grant application was submitted. The score can be waived by the PHMSA Director of State Programs as required to implement program initiatives and improve overall safety program. The formula, outlined in 49 CFR 198.13, is based on State Agency performance and has a maximum of 100 performance points derived as follows.

¹ State Budget Amount = Calendar Year Budget Estimate Submitted by each State Agency with Grant Application.

² Annual State Performance Score Outlined in Section 9.8.3.

³ Percent Allocation – This is the maximum percentage of total program costs that can be applied to each grantee. There is an 80% maximum funding limited required by 49 U.S.C. 60107 of the Pipeline Safety Act. This formula provides for an equal distribution of available funds in the event appropriated funding is less than required for maximum funding.

⁴ Total Available Funding - This is the annual funding provided by congressional appropriation. This would also include any unexpended (carryover) funds available from previous fiscal years.

⁵ The combined sum of each State Performance Score multiplied by each State Budget Estimate for all Gas and Hazardous Liquid programs.

1. Fifty points¹ based on information provided in the state's annual progress report attachments which document its activities for the past year (see Appendix Q); and
2. Fifty points² based on the annual State Agency evaluation as described in Section 8.1. A State Agency will have one year from written notification to correct individual deficiencies found during an annual State Agency evaluation before a reduction is applied to its 50-point maximum*. Evaluation forms are included as Appendix I for gas programs and Appendix J for hazardous liquid programs.

(*Individual issues identified in CY2021 Program Evaluation (Conducted by OPS in CY2022 and Communicated to the States by end of CY2022) can also exist for the CY2022 Program Evaluation (Conducted by OPS in CY2023). If the issues are not corrected and are identified again in the **CY2023 Program Evaluation** (Conducted by OPS in CY2024) the respective point reduction will count toward grant funding score. This will impact CY2025 Grant Funding.)

The Administrator assigns weights to various performance factors reflecting program compliance, safety priorities, and national concerns identified by the Administrator and communicated to each State Agency. At a minimum, the Administrator considers the following performance factors in allocating funds:

1. Adequacy of state operating practices.
2. Quality of state inspections, investigations, and enforcement/Compliance Actions.
3. Adequacy of state recordkeeping.
4. Extent of state safety regulatory jurisdiction over pipeline facilities.
5. Qualifications of state inspectors (consideration will be given to qualification results impacted by inspection staff growth).
6. Number of state Inspection Person-Days.

7. State adoption of applicable federal pipeline safety standards; and,
8. Any other factor the Administrator deems necessary to measure performance.

For the first three years a pipeline safety program exists or for two years when a program reenters the state grant program, the program will be funded at a level agreed upon in advance by the State Agency and PHMSA. This amount is typically not over 90 percent of maximum funding. This is due to the inability to accurately judge program performance of the state in determining their evaluation score. In addition, programs will also be subject to point deductions for late submission of annual progress report document. Two points will be deducted on progress report score if document is submitted after due date, and four points if more than 30 days late.

Grants are limited to the appropriated funds available. If total state Agency requests for grants exceed the funds available, the Administrator prorates each state Agency's allocation. This prorated percentage will serve as the maximum funding level available to each state based on actual expenses.

Exhibit 9-1 – Grant Allocation Funding Example

Gas 2024	CY 2023 Progress Report Score	CY 2023 Modified Program Evaluation Score Conducted in CY 2022	State Score %	CY 2024 State Estimated Program Costs	Allocation (Payment Agreement - Total Grant Award)	Maximum Allocation Percentage
ALABAMA	50.00	100.00	100.00%	\$ 1,901,996	\$ 1,183,370	62.22%
ARIZONA	50.00	100.00	100.00%	\$ 2,675,426	\$ 1,664,578	62.22%
ARKANSAS PSC	50.00	100.00	100.00%	\$ 1,027,836	\$ 639,491	62.22%
CALIFORNIA_PUC	46.00	98.00	95.00%	\$ 11,315,075	\$ 6,687,937	59.11%
COLORADO	46.00	96.00	94.00%	\$ 2,313,089	\$ 1,352,793	58.48%
CONNECTICUT	50.00	100.00	100.00%	\$ 2,055,379	\$ 1,278,801	62.22%
DELAWARE	50.00	98.00	99.00%	\$ 374,900	\$ 230,920	61.60%
Totals				\$ 134,150,716	\$ 82,000,000	61.13%

Exhibit 9-2 – Grant Allocation Explanation

Progress Report Score – This is the score of progress report activities as outlined in Appendix Q.
Modified Program Evaluation Score – This is the state performance score, as outlined in 9.8.3 (2).
State Score % – Total score as outlined in 9.8.3.
Estimated Program Costs – This is the estimated program funding or budget; each state submits with the grant application for the respective calendar year.
Allocation - This is the maximum amount, prorated as necessary, that a state can expect to receive in federal funding if actual program costs are equal to or exceed program budget. The maximum allocation is capped at 80%.
Maximum Allocation Percentage – This is the maximum percentage of actual program costs that a State Agency can expect to receive. The allocated amount is only received if actual expenditures meet or exceed the original budget estimate. If actual costs of the State Agency exceed the original estimate, PHMSA will pay additional amounts pending availability of funding (from overestimates of other programs) and the State Agency adequately explains the budget variance.

9.9 Assistance Agreement

The purpose of the *Assistance Agreement* is to notify the State Agency of the allocated amount of the Federal grant for the calendar year. PHMSA will reimburse the State Agency up to the amount specified in this agreement, or up to the state specific maximum percentage of actual program expenses noted in the grant allocation document, whichever is less. Exhibit 9-1 is an actual example from the 2024 gas grant allocation with an explanation of what a State Agency can expect for funding following in Exhibit 9-2. The *Assistance Agreement* will be sent to the State Agency, between April and July of each year (date is subject to appropriation availability). An authorized State official must sign the agreement and return it to PHMSA (via email to the contact indicated on the cover letter). A State Agency receiving grant funds for both gas and hazardous liquid pipeline safety programs will receive a separate Assistance Agreement for each program type.

The Assistance Agreement includes a comprehensive listing of “Award Terms and Conditions”, which must be reviewed thoroughly and complied with as a condition of receiving financial assistance.

In support of the Assistance Agreement PHMSA provides the following information to all programs:

1. *Grant Funding Score* – This document is sent to each state which outlines expected funding score used for each calendar year. This document outlines progress report scoring along with specific

funding deductions from the annual evaluations as outlined in 9.8.3 (2) and is sent in advance of Grant Allocation document.

2. *Pipeline Safety Grant Allocation*. This attachment lists the gas or hazardous liquid budget estimates, State points, allocations, and percentages of total program funding. An example of this document is provided in Exhibit 9-1 and is also provided as part of the Assistance Agreement.

9.10 Certification Regarding Lobbying and Disclosure of Lobbying Activities

Section 319 of Public Law 101-121 prohibits recipients of Federal grants from using appropriated funds for lobbying the Executive or Legislative branches of the Federal government about a specific grant. PHMSA will provide the State Agency a copy of the *Certification Regarding Lobbying and Disclosure of Lobbying Activities* form and a copy of the *New Restrictions on Lobbying; Interim Final Rule*. The certification form must be completed by the State Agency and returned to PHMSA with the Notice of Grant Award. If applicable, a State Agency must also complete and submit a disclosure form.

9.11 Mid-Year Request for Reimbursement

Federal reimbursement is based on **actual** cash expenditures, which can be substantiated with auditable receipts, incurred by the State Agency in support of its pipeline safety program between January 1 and December 31 of each year. Each June (or after Assistance Agreements have been executed), PHMSA will make available *OMB Standard Form 270 - Request for Advance or Reimbursement* to each State Agency for submission of mid-year reimbursement requests. If a State Agency desires mid-year payment, it may complete the online process in the Federal-State Tracking and Reporting tool which will provide the SF-270 form based on the costs entered. The form must be signed by an authorized official and submitted to the electronic invoicing system for approval and payment. Program expenses included on this form may only be for the six-month period between January 1 and June 30. If a State Agency prefers to be reimbursed for expenses only at year-end, it may disregard the mid-year request form and include all program costs on the year-end request.

9.12 Year-end Request for Reimbursement and Cost Summary

At the beginning of each year, PHMSA will make available in FedSTAR the Pipeline Program Cost Summary to each State Agency for submission of total program costs for the previous calendar year. This summary includes a

comparison of the estimated budget figures submitted with the original Grant Application and final expenses incurred for the program. In completing the year-end request, the State Agency should include all costs incurred in the pipeline safety program for the entire previous calendar year (January 1 - December 31) regardless of whether a mid-year request was submitted or whether the actual costs exceed the amount specified in the Assistance Agreement. The cost summary must be submitted electronically in FedSTAR by the due date.

Requests for reimbursement submitted by each State Agency are reviewed and approved by PHMSA before being forwarded to the DOT accounting office for payment. Variances of more than 10% or \$10,000 in each cost category require a written explanation as to the reasons for the differential. After reviewing and approving the submitted costs, the State Agency will be notified of the final reimbursement amount and provided with an OMB approved SF-270 Form. This form must be signed by a state authority and then an invoice request submitted in the e-invoicing system. When the request has been paid by the accounting office, PHMSA will electronically notify the State Agency/Program manager of the amount of the payment and date paid. Payments are made electronically through an automatic clearinghouse. If the State Agency has any questions or problems with receipt of payment, it should contact PHMSA immediately.

It is important to note that PHMSA presumes that the mid-year and year-end reimbursement requests are complete and accurate and include all eligible costs for the entire grant period. All expenses filed with both the mid-year and year-end payment processes must be from auditable receipts and accounted for on a cash basis. *In addition, the year-end reimbursement is considered the grant close-out for the applicable period. Once the final request for reimbursement is received and processed, PHMSA is not obligated to make any additional payments for costs which were incurred by the State but not claimed on the request.*

9.13 Withholding of Grant Funds - Suspension and/or Termination of Grants

In accordance with 49 U.S.C. 601, PHMSA may withhold all or part of a grant when it determines that the State Agency is not satisfactorily administering a safety program under a Certification/Agreement or is not satisfactorily acting as an Interstate Agent. Part or all of the grant payment may be withheld, or the grant may be suspended and/or terminated if PHMSA determines that a State Agency has failed to comply with program requirements. These actions will be taken by PHMSA only after notice to and consultation with the affected State

Agency. Payments made to State Agencies or recoveries by PHMSA will be in accordance with the legal rights and liabilities of both parties.

PHMSA or the State Agency may also terminate all or part of the *Assistance Agreement* when both parties agree that the continuation of the project would not be commensurate with the further expenditure of funds. The two parties must agree upon the termination conditions including the effective date and, in all cases of partial termination, the portion to be terminated.

9.14 Deposit of Grant Funds

Pipeline safety grant funds do not need to be separately accounted for as Federal funds. A State Agency is not required to deposit these funds in a separate bank account apart from other funds administered by the State. Any bank account established for receipt of Federal funds must hold insurance coverage from the Federal Deposit Insurance Corporation (FDIC) and the balance exceeding the FDIC coverage must be collaterally secured.

9.15 Eligibility of Program Costs

Program costs shall clearly relate to the program budget submitted with the grant application. Program costs shall also be consistent with 2 CFR 200: Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Care shall be exercised in incurring costs to assure that all expenditures are authorized in accordance with these general standards and meet the following criteria of eligible costs.

9.15.1 Direct Costs

Direct costs are those that can be identified specifically with the State's pipeline safety inspection and compliance program. Costs which are shared with other organization programs or other agencies cannot be assigned directly to the pipeline safety grant program, (i.e., costs calculated on a pro-rata basis) should not be assigned as a direct cost but may qualify as part of an indirect cost plan. The following direct cost categories are typical to a pipeline safety program.

- **Compensation, including benefits, of employees for time and effort specifically devoted to the pipeline safety program (2CFR 200.430/ 200.431).**
 - Cost for Supervisory personnel shall be for individuals listed on annual progress report and costs applied to program should correspond with percentage of time allocated. Any supervisory cost above that of the Program Manager can only be included as a direct cost if actual time and work performed is documented toward a program activity and approved by PHMSA Director of State Programs otherwise it can be included as an indirect cost.
 - Cost for Inspection/Investigation personnel shall only be for individuals listed on annual progress report and costs applied to program should correspond with percentage of time allocated. This would include the inspection activity

costs of a qualified inspector who may be employed on a contractual basis. This might be an individual who previously retired from the program or another state program. There is no pre-approval requirement if the individual has met applicable training requirements as outlined in Chapter 4.

- Cost for Damage Prevention/Technical personnel shall be only for individuals listed on annual progress report and costs applied to program should correspond with percentage of time allocated. This can include damage prevention personnel, GIS personnel and others ***directly*** related to the pipeline safety program. Cost for personnel devoting time to things other than pipeline safety such as electric, water or telephone issues should not be applied to the pipeline safety program. ***(For example, cost for damage prevention personnel investigating underground facilities other than gas or hazardous liquid pipelines should not be included but can be applied for under State Damage Prevention (SDP) or One-Call Grant applications.)***
- Cost for Administrative (clerical) personnel shall be for individuals listed on annual progress report and costs applied to program should correspond with percentage of time allocated. If applicable, costs for personnel who might solely supervise administrative personnel should be included in this category.
- In support of salaries and wages, each program must comply with requirements listed in 2 CFR 200. Where direct time of an employee is applied to the pipeline safety base grant, this must be supported by periodic certification that the employee worked solely in the program. These certifications must be prepared at least semi-annually and will be signed by the employee or supervisory official having firsthand knowledge of the work performed by the employee. When employees work on multiple activities or cost objectives, a distribution of their salaries or wages will be supported by personnel activity reports (PARs) or equivalent documentation. A PAR is a timesheet or log maintained by the employee that accounts for 100% of their time and prepared, signed and dated at least monthly.
- **Cost of materials and supplies acquired, consumed, or expended specifically for the purpose of the grant. (less than \$10,000 individual value)**
 - Supplies (**2CFR 200.453/ 200.314**) - General office supplies such as paper, file folders and other office organizing items.
 - Safety Clothing (**2 CFR 200.453/ 200.314**) - Any Personal Protective Equipment (PPE) for conducting field inspections. Eye protection, hard hats, ear protection, flame retardant clothing for field use, safety boots, rain gear etc. Normal clothing for time spent in office environment should not be included.
 - Testing/Inspection Equipment (**2 CFR 200.439**) - Materials such as volt meters, half cells, pipe locator, pyrometers, current interrupter, Flame Ionization (FI) units, Combustible Gas Indicators (CGI's), odorometers, cameras etc.
 - Office Equipment (**2 CFR 200.439**) - Computer equipment (laptops), fax machine, printers, desks, copiers/printers etc. for use by pipeline safety program **only**. This category would also include any computer software used

for pipeline program. Note – if the program shares equipment costs with other agency departments for things such as printers, the costs applied must be billed based on actual usage. Any estimated proration of charges would have to be charged as an indirect cost and placed in the indirect cost category. In addition, computer network hardware or software such as servers, data storage units and system software maintenance contracts are inherently indirect costs as they benefit entire agency “networks” and may not be recovered as a direct cost unless preapproved in advance.

- **Equipment and other approved capital expenditures used directly in the pipeline safety program.**

Any equipment purchased with a value of over \$10,000 shall be itemized and noted on grant application and itemized on the year-end reimbursement document submitted. The year-end itemization shall include an inventory listing of all equipment purchased in current and prior periods and still in use. All equipment purchases must be accounted for and safeguarded against loss. PHMSA reserves the right to review and accept or reject any equipment purchases not deemed necessary or reasonable.

- Motor Vehicles (**2 CFR 200.439**) – actual cost of vehicles purchased. Tangible property having a useful life of more than one year and an acquisition cost which equals or exceeds the lesser of the capitalization level established by the governmental unit for financial statement purposes, or \$10,000. When replacing equipment purchased in whole or in part with Federal funds, the governmental unit may use the equipment to be replaced as a trade-in or sell the property and use the proceeds to offset the cost of the replacement property. This is applicable if the value remains greater than \$10,000.
- Any other capital equipment with a value over \$10,000 will be included in this category and must have prior approval before purchase.
- Grant expenditures are on a cash basis and the expenditures should only be included in the grant year that the equipment was actually paid for.

- **Travel expenses incurred specifically to carry out the award.**

- Travel (**2 CFR 200.475**) - Travel costs are for expenses for transportation, lodging, subsistence, and related items incurred by employees who are in travel status on official business of the pipeline safety program.
- Out-of-state travel, other than travel to inspections, the State's NAPSR region meeting, NAPSR national meeting, and PHMSA sponsored training, should be outlined in the annual grant application of the program or pre-approved by PHMSA.
- This would include automobile general maintenance of tires, oil changes and gasoline. This can include insurance costs and costs of automobiles used

through state motor pools. Eligible costs also include commercial air fare travel. Charges for any foreign travel costs are allowable only when the travel has been approved by PHMSA (see 2 CFR 200).

- **Pipeline Safety Program Activity Costs**

- Training and Education (**2 CFR 200.473**) - This would include costs for registration and training materials acquired for pipeline safety personnel. This is for employee training and development.
- Rental Cost of Building and Equipment (**2 CFR 200.465**) – Rental costs of office space, equipment, maintenance, insurance, janitorial, utilities, operations, and repairs. Rent recovered as a direct cost must be calculated on an “actual” basis, or pro-rated based on actual square footage occupied by the Pipeline Safety Program staff.
- Communication (2 CFR 200 Basic Considerations) - Local and long-distance telephone calls, postage, computer transmittal services, internet charges, cell phone charges, emergency phone answering services, etc.
- Publication and Printing (**2 CFR 200.461**) - Costs of printing, distribution, promotion, mailing and general handling. Newsletters or other articles printed and sent to pipeline stakeholders
- Memberships, Subscriptions, and professional activities (**2 CFR 200.454**) - Costs for business, technical and professional organization memberships. Costs for subscriptions to business, professional and technical periodicals.
- Professional Service Costs (i.e., Studies and Research) (**2 CFR 200.459**) – Any costs for professional and consulting services. Any contract for consulting services must be approved by OPS in advance or charges may not be allowed to be recovered in base grant. The State Agency must send an email requesting preapproval to Rex.Evans@dot.gov. The proposed contract should be attached to the email and the body of the email must provide an explanation of the reason for the contract and the deliverables expected from the vendor. OPS will send a reply email stating its decision of approval or disapproval. The email correspondence will be documented in FedSTAR. Copies of any approved final contract should be forwarded to PHMSA State Programs within 30 days of execution.
- Maintenance, operations, and repairs (**2 CFR 200.452**) – costs of utilities, insurance, security, janitorial services, etc. If the State Agency is unable to directly assign these costs to the pipeline safety program any cost must be submitted through an indirect method.
- Other (Specify) – These costs should be detailed and described appropriately.

9.15.2 Indirect Costs

Indirect costs chargeable to the pipeline safety grant are limited to no more than 25% of direct cost of the program. Indirect costs are those: (a) incurred for a common or joint purpose benefiting more than one cost objective, and (b) not readily assignable to the cost objectives specifically benefited, without effort disproportionate to the results achieved. See Appendix O for further detailed guidance on indirect costs.

Since most state agencies have several major functions which benefit from its indirect costs in varying degrees, the allocation of indirect costs may require the accumulation of such costs into separate cost groupings which are then allocated individually to benefit functions by means of a base which best measures the relative degree of benefit. The indirect costs allocated to each function are then distributed to individual awards and other activities included in that function by means of an indirect cost rate (IDR).

Indirect costs are normally charged to Federal awards using an IDR. A separate IDR(s) is usually necessary for each department or agency of a governmental unit claiming indirect costs. All programs should refer to 2 CFR 200 for indirect cost plan requirements and it is recommended that a program consult their state grant office, if applicable. In addition, guidelines and illustrations of indirect costs proposals are provided in a brochure published by the Department of Health and Human Services entitled "Cost Principles and Procedures for Establishing Cost Allocation Plans and Indirect Cost Rates for Agreements with the Federal Government" or ASMB C-10. (See Appendix N)

9.15.3 Standards for Documentation of Personnel Expenses

Charges to the pipeline safety grant for salaries and wages must be based on records that accurately reflect the work performed. These records must be supported by a system of internal control which provides reasonable assurance that the charges are accurate, allowable, and properly allocated. The records must also be incorporated into the official records of the State Agency and reasonably reflect the total activity for which the employee is compensated and not exceeding 100% of the compensated activities. (See 200.430 (i))

9.15.4 Unallowable Costs

Any cost specifically outlined in 2 CFR 200 as being unallowable is automatically excluded from the pipeline safety grant program. PHMSA State Programs also reserves the right to exclude certain costs deemed to be inappropriately applied to pipeline safety grants. Examples would include the following:

- Certain Damage Prevention Costs (Personnel and other) – These would be all costs for damage prevention activities other than pipeline safety. (i.e., damage prevention activities for telephone, water, electric, cable or other underground facilities shall not be

included but can be applied for under State Damage Prevention (SDP) or One-Call Grant applications)

- Any promotional items such as shirts, hats, visors, water bottles, portfolios and any other item purchased to promote the pipeline safety program other than an item that may have an educational benefit from its use, are not an allowable cost.
- As described in 2 CFR 200.426, bad debts (debts which have been determined to be uncollectable), including losses (whether actual or estimated) arising from uncollectable accounts and other claims, are unallowable. Related collection costs, and related legal costs, arising from such debts after they have been determined to be uncollectable are also unallowable. See also 2 CFR 200.428 Collections of improper payments.
- Sponsorships or fees paid to outside organizations for organizing meetings or to offset overall meeting costs are unallowable.
- Any capital improvements to leased buildings are unallowable.
- Indemnification claims for casualty losses that should be covered by state self-insurance plans (See 2 CFR 200.447(c)) are unallowable. This includes expenses to repair damage to state owned vehicles.
- Expenses related to travel, registration, attendance, and/or presenting at pipeline conferences (or industry seminars/meetings) are unallowable except for participating members in formal working groups supported by PHMSA. (Examples of meetings where travel expenses are allowable would be CGA, GPTC, IBR Standard Committees, State Pipeline Safety Seminars, Pipeline Safety Trust, NARUC, and PHMSA/NAPSR Task Teams).

9.16 Pipeline Safety Grant Program Financial Review

The purpose of the grant program review is to ensure costs submitted to PHMSA for reimbursement are appropriate and conform with all policies as outlined in “Guidelines for States Participating in the Pipeline Safety Program” and 2 CFR 200 – “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards”. This is to promote efficient and effective administration of the State Pipeline Safety Grant Program and to ensure consistent and fair treatment of all grant applicants to maximize the grant funds available to this program.

At intervals not exceeding three years, PHMSA State Programs may conduct an in-depth review of costs applied to the Pipeline Safety Program Grant. The program review can consist of up to at least the previous three calendar years. This review shall consist of an analysis of the appropriateness of costs applied to the Pipeline Safety Program and its activities as submitted in the annual progress report. One-Call and State Damage Prevention grant expenditures will also be reviewed in conjunction with base grant review, if applicable.

All programs should be prepared for this grant review with adequate working papers and source documentation to substantiate the reimbursed amounts of program expenditures.

9.16.1 Pre-Review

Advance notice will be given for the Program Manager to prepare any financial information needed for the grant review. In addition, this should allow time for the necessary state personnel to be available to answer questions that might not be known by state pipeline safety staff during the on-site review.

9.16.2 Grant Review

A review will be conducted of program costs which shall clearly relate to the program budget submitted with the grant application. Program costs shall also be consistent with 2 CFR 200: Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Care shall be exercised in incurring costs to assure that all expenditures are authorized in accordance with these general standards and meet the criteria of eligible costs. State agencies should be capable of providing enough source documentation during the grant review to ensure OPS that amounts submitted for reimbursement are accurate, necessary, and reasonable costs. This may include detailed invoice or billing reviews and enough documentation to insure items submitted for reimbursement were used by the pipeline safety program and that the items submitted were not used for the benefit any other state program.

9.16.3 Post-Review

Following the review of the State Pipeline Safety Program costs, PHMSA State Programs will prepare a report with recommendations, if necessary, outlining any areas of concern on cost items believed to be unacceptable, unallowable or any cause for concern as to the reasonableness in being applied to their Pipeline Safety Grant Program. Notification of findings will be sent to the Program Manager from the PHMSA Director of State Programs.

9.16.4 Adjustments and Penalties

Should any costs submitted in the State Pipeline Safety Grant be found to be unsubstantiated, unallowable, or unreasonable the State Pipeline Program will have those costs deducted from the current year grant reimbursement and be required to adjust their practices accordingly. The program review may consist of up to the previous three calendar years.

If any One-Call Grant expenditures are found to be unsubstantiated, unallowable, unspent, or unreasonable the State Pipeline Program will have to initiate repayment of applicable funds to PHMSA. That process will be communicated to each program on an individual basis.

9.16.5 Appeal of Findings

Should the State Pipeline Program appeal any decision of PHMSA Director of State Programs to deduct costs previously submitted, it shall be made to the PHMSA

Associate Administrator of Pipeline Safety. The Associate Administrator shall have the final word in any decision made on these matters.

9.17 Procurement Standards

Procurement standards must be followed by the State Agency to ensure that supplies, equipment, and other services are obtained efficiently and economically. State agencies shall use their own procurement procedures which reflect applicable State laws and regulations in the pipeline safety grant program, provided that procurements made with Federal grant funds conform to the applicable Federal laws and regulations. (49 CFR 1201.317)

9.18 Procurement Procedures

The State Agency shall establish procurement procedures that:

- avoid the purchase of unnecessary or duplicative items
- apply analyses to determine the most economical approach
- foster economy and efficiency
- encourage intergovernmental agreements for procurement, or use of common goods and services

9.19 Contracts Management

The State Agency shall maintain a contracts management system that ensures contractors comply with the terms, conditions, and specifications of their contracts or purchase orders.

9.20 Internal Controls

Each program must establish and maintain effective internal control over the Federal award that provides reasonable assurance that the State Agency is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award. (See 2 CFR 200.62 and 2 CFR 200.303)

9.21 Real Property

Real Property is defined in 2 CFR 200.85 as land, including land improvements, structures, and appurtenances, but excludes moveable machinery and equipment. Real property purchases are not allowed in the pipeline safety grant.

9.22 Personal Property

The State Agency will retain property acquired with pipeline safety grant funds if there is a need for the property to accomplish the purpose of the grant program, and accurate property records shall be maintained. Personal property shall be available for use on other projects or programs if such other use will not interfere with the work on the pipeline safety program. When the State Agency no longer needs the property in any of its federally sponsored programs, the State Agency shall request disposition instructions from PHMSA, for all personal property with a current per unit fair market value more than \$5,000. Personal property is defined in 2 CFR 200.78.

9.23 Code of Conduct

The State Agency shall maintain a written code, or standards of conduct, to govern the performance of its officers, employees, or agents in the award and administration of contracts supported by Federal grant funds. No State employee, officer, or agent shall participate in the selection, award, or administration of a contract supported by Federal funds if a conflict of interest, real or implied, would be involved.

9.24 Conflict of Interest and Mandatory Disclosures

Each state Agency must disclose in writing any potential conflict of interest to PHMSA Director of State Programs any instances of conflicts of interest or relevant violations of Federal criminal law. (2 CFR 200.112 and 200.113)

9.25 Audit Requirements (2 CFR 200 Subpart F)

Non-Federal entities that expend \$1,000,000 or more in a year in Federal awards, must arrange for an independent audit to perform a single or program specific audit. All audits are to comply with Federal requirement stated in 2 CFR 200 Subpart F and conducted annually. (See Appendix G) Failure to comply with the single audit requirement may result in loss of federal financial assistance.

In the event there are program-specific audit findings uncovered during this process, a State Agency must contact (as soon as practical) the PHMSA Director of State Programs and communicate a plan for resolution of these findings. PHMSA State Programs will monitor these findings and work with the affected program until resolution is completed, if applicable.

Note: State governments, in their entirety, are typically considered an “entity” therefore the Pipeline Safety Program is generally considered a part of that entity. To ensure compliance with this audit requirement, each State Agency must make sure the Pipeline Safety Grant (Base Grant listed under CFDA 20.700 or 20.721 for One-Call) is included in their state-wide single audit

conducted annually in each respective state. Past audit information can be found on-line at the Federal Audit Clearinghouse. (<https://www.fac.gov/>)

9.26 PHMSA Office of Civil Rights Review – Title VI

The PHMSA Office of Civil Rights may conduct an on-site review of the State Agency if compliance with Title VI requirements cannot be determined from the assurances alone. It will also conduct regular on-site, or desk audit compliance reviews as required by DOT directives. An on-site review will include personal interviews with persons in the State Agency's organization and in the community likely to have relevant information or views. The review will also include the collection of all statistical and documentary materials needed to determine compliance. A desk audit will include a review of all material and information concerning the State Agency's performance but will not include a visit to the State Agency. A copy of the written results of the review will be provided to the State Agency.

9.27 Grant-in-Aid Program Calendar of Events

Grant-in-Aid Program CALENDAR OF EVENTS (Tentative only – Actual dates vary based on Federal Funding Availability)			
Activity	General Open Dates	General Closing Dates	Notification
Base Grant Application for upcoming year and Certification/Agreement	August	September 30	E-mail sent to states alerting them of opening date for the Base Grant in FedSTAR
One Call Application (optional)	TBD	TBD	E-mail sent to states alerting them of opening date for the Base Grant in FedSTAR
Base Grant Year End Payment Process	January	March – April	E-mail is sent to the states alerting them of the opening date for the Year End Payment Request in FedSTAR
One-Call Progress Report	TBD	TBD	E-mail is sent to states alerting them of opening date in FedSTAR
One-Call Allocation	After GAC meeting and OPS review	After final approval from official designated by Secretary of Transportation	Notification to states after GAC meeting and OPS review.
Base Grant Progress Report	January	Late February - March	E-mail is sent to states alerting them of opening date in FedSTAR
Base Grant Allocation	Based on Progress Report Closing Date	Late March to April	Forwarded to states via email after analysis completed by OPS and confirmation of total state grant appropriation
Mid-Year Base Grant Reimbursement Request (optional)	June – pending funding release	Late July to August – pending funding release	E-mail is sent to states alerting them of opening date in FedSTAR
Program Evaluation	Late February - March	Late December	Conducted during annual visit from State Liaison
State Inspection Calculation Tool (SICT)	January 1	July 31	E-mail reminders are sent to state agency program manager alerting

			them to access PHMSA portal to enter data

10 FedSTAR

10.1 Purpose

FedSTAR is an internet accessible web application that aids the States in meeting the requirements for participating in and in the preparation of the various forms necessary for participation in the Federal Grant program. FedSTAR collects information and constructs official program documents listed in the guidelines for program performance analysis and grant management. It also standardizes these various submissions that are required to participate in the State Grant Program. FedSTAR is provided by PHMSA to modernize the submission and reporting process for States participating in the State Grant Program.

10.2 Location and Procedures

FedSTAR can be found in the PHMSA Portal at <https://portal.phmsa.dot.gov>. To access the FedSTAR program, the user must be issued a username as well as a password. Each user has a tailored profile which allows each user access to only those modules required for their job. The user is unable to access any of the features of FedSTAR without obtaining this login information:

User Account Creation: A User Access Request form (this form can be found on the NAPSRS website or by contacting carrie.winslow@dot.gov) is submitted via email to UserAccessRequests@napsr.net by a Program Manager. The requestor shall indicate in the request the level of access required for the individual.

Modification of user privileges and roles: The modification of user privileges and roles will be done in a similar manner to the initial request to create a user – the request must come from a Program Manager.

Disabling of a user account. When the Program Manager, PHMSA Director of State Programs or any of the State Evaluators (PHP-50) becomes aware that one of the employees under their organization is no longer employed by the State, the FedSTAR Manager shall be notified of the date of termination or employment. The FedSTAR Manager shall schedule a time to disable the user that coincides with their last day with State or shall disable the user immediately upon receiving the notification the user has already been terminated. Additionally, if the FedSTAR Manager becomes aware of a terminated employee (typically through email rejection notice), the FedSTAR Manager will contact the Program Manager of the employee to determine employment status and then take appropriate action to disable the user.

Quarterly User Account Audit. A quarterly audit of active user accounts shall be performed. A report will be run through a database query to examine all active accounts and the date of last access. Any State user account found to be 365 days from the last login will be disabled.

10.3 Facilitating Various Program Documentation

FedSTAR reduces the time spent filling out the various State Grant Program submittals -- Grant applications, Progress and Performance Reports, and Payment Requests. Each of the programs consists of several steps that the user must work through to successfully complete each document. The first step of each interface asks the user to verify their contact information. This ensures that the FedSTAR database stays up to date which allows PHMSA to better assist each individual State. Currently scanned versions of the printed and signed documents are being accepted in lieu of hard copy documents being mailed to PHMSA HQ.

Base Grant Application - This program consists of the steps required to produce a Base Grant application document. The State describes their pipeline safety program, provides an estimated budget, and agrees to the general assurances.

Progress Report - This program provides data input screens to complete each of the required nine attachments as listed in Chapter 9.

10.4 Facilitating Grant Financials

Grant Assistance Agreements and payment requests (SF-270) are created in FedSTAR to facilitate the submissions in the electronic invoicing system.

Allocation – This document publishes the award information for each State by program (Gas, Hazardous Liquid). The PHMSA Director of State Programs and his staff review and score the Progress Report submitted by each State. The Program Evaluation score is combined with the Progress Report score to produce the overall score for the State. This score is then calculated as a percent of funding, which then determines the States grant funding award for that grant period.

Assistance Agreement - This is a document that must be submitted by each State which indicates they agree to the score they received through the Allocation process and provides the State with a grant award amount. The Assistance Agreement is signed by the State authorized signatory, emailed back to PHMSA and then PHMSA electronically signs the agreements and returns the fully executed agreement to the State.

Certification Regarding Lobbying Document - This document applies to States that receive funding from the Federal government. These States must print out the form and sign it, signifying that they agree to use the money for legitimate purposes. The Certification Regarding Lobbying forms are included with the Assistance Agreement.

Payment Requests - There are two payment request programs – the Mid-Year Payment Request and the Year End Payment Request.

The Mid Year Payment Request is an optional program where the State can request reimbursement of their Allocated percentage of actual expenses at the 6-month mark. A series of steps collects the information and then produces the SF-270 for signature. The form is then scanned in and uploaded to the elnvoicing system. Additional fields are then completed, and the request is submitted electronically via iSupplier for review and approval by PHMSA. (Note: a separate username/password is required for the iSupplier system).

The Year-end Payment Request is mandatory for all states who receive funding and is based on actual expenses for the calendar year.

A series of steps collects the information and then produces the report is electronically submitted Costs are reviewed in-depth and then a final amount is determined and a SF-270 provided to the State. The SF-270 is signed and then scanned in and uploaded to the elnvoicing system (iSupplier). Additional fields are then completed, and the request is submitted electronically via iSupplier for review and approval by PHMSA. (Note: a separate username/password is required for the iSupplier system).

10.5 Other FedSTAR Functions

Program Evaluations - The OPS PHP50 State Evaluators use this feature of FedSTAR when they fill out their program evaluations for each state. Evaluations from previous years along with associated information will also be available in the SUDS section.

SUDS– for each state a set of ‘completed documents’ exists for each program and each year (back to approximately 2005). These completed documents are the .pdf documents for each of the programs completed in FedSTAR.

FORMS LIBRARY – form sets ‘with considerations’ and ‘without considerations’ are posted twice a year.

Appendix Summary

Appendix A: 49 U.S.C. 601 and 49 U.S.C. 61 (One-Call)

Appendix B: Interstate Agent Agreement Form and Guidance Policy and Sample Letter for Time Defined Agreement

Appendix C: PHMSA Training and Qualification Course Listing and Training Requirement Tables

Appendix D: DOT-NTSB Memorandum of Understanding

Appendix E: Federal/State Cooperation in Case of Accident (Content removed temporarily. (PHMSA's Accident Investigation Policy is outdated and under review)

Appendix F: State Program Certification Agreement Status

Appendix G: 2 CFR 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

Appendix H: State Inspector Mentoring Program

Appendix I: State Gas Evaluation Form

Appendix J: State Hazardous Liquid Evaluation Form

Appendix K: Standards Library Policy

Appendix L: Notifications Policies

Appendix M: Grant Review Checklist

Appendix N: ASMB C-10 – Cost Principles and Procedures for Developing Cost Allocation Plans and Indirect Cost Rates with the Federal Government

Appendix O: PHMSA State Pipeline Safety Grants Guidance for Indirect Cost Recovery

Appendix P: Procedure to Monitor, Evaluate and Reject Certification

Appendix Q: Pipeline Safety Grant Progress Report Scoring

Appendix R: NTSB Recommendations Referenced in “Guidelines for States Participating in the Pipeline Safety Program”

Appendix S: Examples of State Pipeline Safety Program Plan, Procedures and Risk Based Inspection Prioritization Model

Appendix T: WMS Training Links and Resources

Appendix U: SICT Instructions

Appendix V: State Pipeline Metrics Summary

Guidelines for States Participating in the Pipeline Safety Program

Appendix A

The Federal Pipeline Safety Statutes

49 U.S.C. § 60101 et seq.

showing amendments enacted by:

Red: Pipeline Inspection, Protection, Enforcement and Safety Act of 2006
Public Law No: 109-468
Dec. 29, 2006

Green: Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011
Public Law No: 112-90
Jan. 3, 2012

Blue: Protecting our Infrastructure of Pipelines and Enhancing
Safety Act of 2016, Public Law No. 114-183
Jun. 22, 2016

Purple: Protecting our Infrastructure of Pipelines and Enhancing Safety Act
of 2020, Public Law No. 116-260, Division R
December 27, 2020

Compiled by
Office of Chief Counsel, PHMSA
January 2021

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Federal Pipeline Safety Statutes (49 U.S.C. § 60101 et seq.)

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§ 60101. Definitions

(a) General.--In this chapter--

(1) "existing liquefied natural gas facility"--

(A) means a liquefied natural gas facility for which an application to approve the site, construction, or operation of the facility was filed before March 1, 1978, with--

- (i) the Federal Energy Regulatory Commission (or any predecessor); or
- (ii) the appropriate State or local authority, if the facility is not subject to the jurisdiction of the Commission under the Natural Gas Act (15 U.S.C. 717 et seq.); but

(B) does not include a facility on which construction is begun after November 29, 1979, without the approval;

(2) "gas" means natural gas, flammable gas, or toxic or corrosive gas;

(3) "gas pipeline facility" includes a pipeline, a right of way, a facility, a building, or equipment used in transporting gas or treating gas during its transportation;

(4) "hazardous liquid" means--

(A) petroleum or a petroleum product; ~~and~~

(B) nonpetroleum fuel, including biofuel, that is flammable, toxic, or corrosive or would be harmful to the environment if released in significant quantities; and

~~(B)(C)~~ a substance the Secretary of Transportation decides may pose an unreasonable risk to life or property when transported by a hazardous liquid pipeline facility in a liquid state (except for liquefied natural gas);

(5) "hazardous liquid pipeline facility" includes a pipeline, a right of way, a facility, a building, or equipment used or intended to be used in transporting hazardous liquid;

~~(6) "interstate gas pipeline facility"--~~

~~(A) means a gas pipeline facility--~~

~~(i) used to transport gas; and~~

~~(ii) subject to the jurisdiction of the Commission under the Natural Gas Act (15 U.S.C. 717 et seq.); but~~

~~(B) does not include a gas pipeline facility transporting gas from an interstate gas pipeline in a State to a direct sales customer in that State buying gas for its own consumption;~~

(6) "interstate gas pipeline facility" means a gas pipeline facility--

(A) used to transport gas; and

(B) subject to the jurisdiction of the Commission under the Natural Gas Act (15 U.S.C. 717 et seq.);

(7) "interstate hazardous liquid pipeline facility" means a hazardous liquid pipeline facility used to transport hazardous liquid in interstate or foreign commerce;

(8) "interstate or foreign commerce"--

(A) related to gas, means commerce--

(i) between a place in a State and a place outside that State; or

(ii) that affects any commerce described in subclause (A)(i) of this clause; and

(B) related to hazardous liquid, means commerce between--

(i) a place in a State and a place outside that State; or

(ii) places in the same State through a place outside the State;

~~(9) "intrastate gas pipeline facility" means--~~

~~(A) a gas pipeline facility and transportation of gas within a State not subject to the jurisdiction of the Commission under the Natural Gas Act (15 U.S.C. 717 et seq.); and~~

~~(B) a gas pipeline facility transporting gas from an interstate gas pipeline in a State to a direct sales customer in that State buying gas for its own consumption;~~

(9) "intrastate gas pipeline facility" means a gas pipeline facility and transportation of gas within a State not subject to the jurisdiction of the Commission under the Natural Gas Act (15 U.S.C. 717 et seq.);

(10) "intrastate hazardous liquid pipeline facility" means a hazardous liquid pipeline facility that is not an interstate hazardous liquid pipeline facility;

(11) "liquefied natural gas" means natural gas in a liquid or semisolid state;

- (12) "liquefied natural gas accident" means a release, burning, or explosion of liquefied natural gas from any cause, except a release, burning, or explosion that, under regulations prescribed by the Secretary, does not pose a threat to public health or safety, property, or the environment;
- (13) "liquefied natural gas conversion" means conversion of natural gas into liquefied natural gas or conversion of liquefied natural gas into natural gas;
- (14) "liquefied natural gas pipeline facility"--
- (A) means a gas pipeline facility used for transporting or storing liquefied natural gas, or for liquefied natural gas conversion, in interstate or foreign commerce; but
 - (B) does not include any part of a structure or equipment located in navigable waters (as defined in section 3 of the Federal Power Act (16 U.S.C. 796));
- (15) "municipality" means a political subdivision of a State;
- (16) "new liquefied natural gas pipeline facility" means a liquefied natural gas pipeline facility except an existing liquefied natural gas pipeline facility;
- (17) "person", in addition to its meaning under section 1 of title 1 (except as to societies), includes a State, a municipality, and a trustee, receiver, assignee, or personal representative of a person;
- (18) "pipeline facility" means a gas pipeline facility and a hazardous liquid pipeline facility;
- (19) "pipeline transportation" means transporting gas and transporting hazardous liquid;
- (20) "State" means a State of the United States, the District of Columbia, and Puerto Rico;
- (21) "transporting gas"--
- (A) means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas, in interstate or foreign commerce; but
 - (B) does not include the gathering of gas, other than gathering through regulated gathering lines, in those rural locations that are located outside the limits of any incorporated or unincorporated city, town, or village, or any other designated residential or commercial area (including a subdivision, business, shopping center, or community development) or any similar populated area that the Secretary of Transportation determines to be a nonrural area, except that the term "transporting gas" includes the movement of gas through regulated gathering lines--
- (22) "transporting hazardous liquid"--
- (A) means the movement of hazardous liquid by pipeline, or the storage of hazardous liquid incidental to the movement of hazardous liquid by pipeline, in or affecting interstate or foreign commerce; but
 - (B) does not include moving hazardous liquid through--
 - (i) gathering lines in a rural area;
 - (ii) onshore production, refining, or manufacturing facilities; or
 - (iii) storage or in-plant piping systems associated with onshore production, refining, or manufacturing facilities--
- (23) "risk management" means the systematic application, by the owner or operator of a pipeline facility, of management policies, procedures, finite resources, and practices to the tasks of identifying, analyzing, assessing, reducing, and controlling risk in order to protect employees, the general public, the environment, and pipeline facilities;
- (24) "risk management plan" means a management plan utilized by a gas or hazardous liquid pipeline facility owner or operator that encompasses risk management; ~~and~~
- (25) "Secretary" means the Secretary of Transportation--; ~~and~~
- (26) "underground natural gas storage facility" means a gas pipeline facility that stores natural gas in an underground facility, including--
- (A) a depleted hydrocarbon reservoir;
 - (B) an aquifer reservoir; or
 - (C) a solution-mined salt cavern reservoir.

(b) Gathering lines.--(1)(A) Not later than October 24, 1994, the Secretary shall prescribe standards defining the term "gathering line".

(B) In defining "gathering line" for gas, the Secretary--

- (i) shall consider functional and operational characteristics of the lines to be included in the definition; and

- (ii) is not bound by a classification the Commission establishes under the Natural Gas Act (15 U.S.C. 717 et seq.).
- (2)(A) Not later than October 24, 1995, the Secretary, if appropriate, shall prescribe standards defining the term "regulated gathering line". In defining the term, the Secretary shall consider factors such as location, length of line from the well site, operating pressure, throughput, and the composition of the transported gas or hazardous liquid, as appropriate, in deciding on the types of lines that functionally are gathering but should be regulated under this chapter because of specific physical characteristics.
- (B)(i) The Secretary also shall consider diameter when defining "regulated gathering line" for hazardous liquid.
- (ii) The definition of "regulated gathering line" for hazardous liquid may not include a crude oil gathering line that has a nominal diameter of not more than 6 inches, is operated at low pressure, and is located in a rural area that is not unusually sensitive to environmental damage.

§ 60102. Purpose and general authority

- (a) Purpose and minimum safety standards.--
 - (1) Purpose.--The purpose of this chapter is to provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities by improving the regulatory and enforcement authority of the Secretary of Transportation.
 - (2) Minimum safety standards.--The Secretary shall prescribe minimum safety standards for pipeline transportation and for pipeline facilities. The standards--
 - (A) apply to ~~owners and operators~~ any or all of the owners and operators of pipeline facilities;
 - (B) may apply to the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities; and
 - (C) shall include a requirement that all individuals who operate and maintain pipeline facilities shall be qualified to operate and maintain the pipeline facilities.
 - (3) Qualifications of pipeline operators.-- The qualifications applicable to an individual who operates and maintains a pipeline facility shall address the ability to recognize and react appropriately to abnormal operating conditions that may indicate a dangerous situation or a condition exceeding design limits. The operator of a pipeline facility shall ensure that employees who operate and maintain the facility are qualified to operate and maintain the pipeline facilities.
- (b) Practicability and safety needs standards.--
 - (1) In general.--A standard prescribed under subsection (a) shall be--
 - (A) practicable; and
 - (B) designed to meet the need for--
 - (i) gas pipeline safety, or safely transporting hazardous liquids, as appropriate; and
 - (ii) protecting the environment.
 - (2) Factors for consideration.--When prescribing any standard under this section or section 60101(b), 60103, 60108, 60109, 60110, or 60113, the Secretary shall consider--
 - (A) relevant available--
 - (i) gas pipeline safety information;
 - (ii) hazardous liquid pipeline safety information; and
 - (iii) environmental information;
 - (B) the appropriateness of the standard for the particular type of pipeline transportation or facility;
 - (C) the reasonableness of the standard;
 - (D) based on a risk assessment, the reasonably identifiable or estimated benefits expected to result from implementation or compliance with the standard;
 - (E) based on a risk assessment, the reasonably identifiable or estimated costs expected to result from implementation or compliance with the standard;
 - (F) comments and information received from the public; and
 - (G) the comments and recommendations of the Technical Pipeline Safety Standards

- Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, or both, as appropriate.
- (3) Risk assessment.--In conducting a risk assessment referred to in subparagraphs (D) and (E) of paragraph (2), the Secretary shall--
- (A) identify the regulatory and nonregulatory options that the Secretary considered in prescribing a proposed standard;
 - (B) identify the costs and benefits associated with the proposed standard;
 - (C) include--
 - (i) an explanation of the reasons for the selection of the proposed standard in lieu of the other options identified; and
 - (ii) with respect to each of those other options, a brief explanation of the reasons that the Secretary did not select the option; and
 - (D) identify technical data or other information upon which the risk assessment information and proposed standard is based.
- (4) Review.--
- (A) In general.--The Secretary shall--
 - (i) submit any risk assessment information prepared under paragraph (3) of this subsection to the Technical Pipeline Safety Standards Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, or both, as appropriate; and
 - (ii) make that risk assessment information available to the general public.
 - (B) Peer review panels.--The committees referred to in subparagraph (A) shall serve as peer review panels to review risk assessment information prepared under this section. Not later than 90 days after receiving risk assessment information for review pursuant to subparagraph (A), each committee that receives that risk assessment information shall prepare and submit to the Secretary a report that includes--
 - (i) an evaluation of the merit of the data and methods used; and
 - (ii) any recommended options relating to that risk assessment information and the associated standard that the committee determines to be appropriate.
 - (C) Review by Secretary.--Not later than 90 days after receiving a report submitted by a committee under subparagraph (B), the Secretary--
 - (i) shall review the report;
 - (ii) shall provide a written response to the committee that is the author of the report concerning all significant peer review comments and recommended alternatives contained in the report; and
 - (iii) may revise the risk assessment and the proposed standard before promulgating the final standard.
- (5) Secretarial decisionmaking.--Except where otherwise required by statute, the Secretary shall propose or issue a standard under this ~~Chapter~~ chapter only upon a reasoned determination that the benefits, including safety and environmental benefits, of the intended standard justify its costs.
- (6) Exceptions from application.--The requirements of subparagraphs (D) and (E) of paragraph (2) do not apply when--
- (A) the standard is the product of a negotiated rulemaking, or other rulemaking including the adoption of industry standards that receives no significant adverse comment within 60 days of notice in the Federal Register;
 - (B) based on a recommendation (in which three-fourths of the members voting concur) by the Technical Pipeline Safety Standards Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, or both, as applicable, the Secretary waives the requirements; or
 - (C) the Secretary finds, pursuant to section 553(b)(3)(B) of title 5, United States Code, that notice and public procedure are not required.
- (7) Report.--Not later than March 31, 2000, the Secretary shall transmit to the Congress a report that--
- (A) describes the implementation of the risk assessment requirements of this section, including the extent to which those requirements have affected regulatory decisionmaking and pipeline safety; and
 - (B) includes any recommendations that the Secretary determines would make the risk assessment process conducted pursuant to the requirements under this chapter a more

effective means of assessing the benefits and costs associated with alternative regulatory and nonregulatory options in prescribing standards under the Federal pipeline safety regulatory program under this chapter.

(c) Public safety program requirements.--(1) The Secretary shall include in the standards prescribed under subsection (a) of this section a requirement that an operator of a gas pipeline facility participate in a public safety program that--

(A) notifies an operator of proposed demolition, excavation, tunneling, or construction near or affecting the facility;

(B) requires an operator to identify a pipeline facility that may be affected by the proposed demolition, excavation, tunneling, or construction, to prevent damaging the facility; and

(C) the Secretary decides will protect a facility adequately against a hazard caused by demolition, excavation, tunneling, or construction.

(2) To the extent a public safety program referred to in paragraph (1) of this subsection is not available, the Secretary shall prescribe standards requiring an operator to take action the Secretary prescribes to provide services comparable to services that would be available under a public safety program.

(3) The Secretary may include in the standards prescribed under subsection (a) of this section a requirement that an operator of a hazardous liquid pipeline facility participate in a public safety program meeting the requirements of paragraph (1) of this subsection or maintain and carry out a damage prevention program that provides services comparable to services that would be available under a public safety program.

(4) Promoting public awareness.--

(A) Not later than one year after the date of enactment of the Accountable Pipeline Safety and Accountability Act of 1996, and annually thereafter, the owner or operator of each interstate gas pipeline facility shall provide to the governing body of each municipality in which the interstate gas pipeline facility is located, a map identifying the location of such facility.

(B)(i) Not later than June 1, 1998, the Secretary shall survey and assess the public education programs under section 60116 and the public safety programs under section 60102(c) and determine their effectiveness and applicability as components of a model program. In particular, the survey shall include the methods by which operators notify residents of the location of the facility and its right of way, public information regarding existing One-Call programs, and appropriate procedures to be followed by residents of affected municipalities in the event of accidents involving interstate gas pipeline facilities.

(ii) Not later than one year after the survey and assessment are completed, the Secretary shall institute a rulemaking to determine the most effective public safety and education program components and promulgate if appropriate, standards implementing those components on a nationwide basis. In the event that the Secretary finds that promulgation of such standards are not appropriate, the Secretary shall report to Congress the reasons for that finding.

(d) Facility operation information standards.--The Secretary shall prescribe minimum standards requiring an operator of a pipeline facility subject to this chapter to maintain, to the extent practicable, information related to operating the facility as required by the standards prescribed under this chapter and, when requested, to make the information available to the Secretary and an appropriate State official as determined by the Secretary. The information shall include--

(1) the business name, address, and telephone number, including an operations emergency telephone number, of the operator;

(2) accurate maps and a supplementary geographic description, including an identification of areas described in regulations prescribed under section 60109 of this title, that show the location in the State of--

(A) major gas pipeline facilities of the operator, including transmission lines and significant distribution lines; and

(B) major hazardous liquid pipeline facilities of the operator;

(3) a description of--

(A) the characteristics of the operator's pipelines in the State; and

- (B) products transported through the operator's pipelines in the State;
- (4) the manual that governs operating and maintaining pipeline facilities in the State;
- (5) an emergency response plan describing the operator's procedures for responding to and containing releases, including--
 - (A) identifying specific action the operator will take on discovering a release;
 - (B) liaison procedures with State and local authorities for emergency response; and
 - (C) communication and alert procedures for immediately notifying State and local officials at the time of a release; and
- (6) other information the Secretary considers useful to inform a State of the presence of pipeline facilities and operations in the State.

(e) Pipe inventory standards.--The Secretary shall prescribe minimum standards requiring an operator of a pipeline facility subject to this chapter to maintain for the Secretary, to the extent practicable, an inventory with appropriate information about the types of pipe used for the transportation of gas or hazardous liquid, as appropriate, in the operator's system and additional information, including the material's history and the leak history of the pipe. The inventory--

- (1) for a gas pipeline facility, shall include an identification of each facility passing through an area described in regulations prescribed under section 60109 of this title but shall exclude equipment used with the compression of gas; and
- (2) for a hazardous liquid pipeline facility, shall include an identification of each facility and gathering line passing through an area described in regulations prescribed under section 60109 of this title, whether the facility or gathering line otherwise is subject to this chapter, but shall exclude equipment associated only with the pipeline pumps or storage facilities.

(f) Standards as accommodating "smart pigs".--

(1) Minimum safety standards.--The Secretary shall prescribe minimum safety standards requiring that-

- (A) the design and construction of new natural gas transmission pipeline or hazardous liquid pipeline facilities, and
- (B) when the replacement of existing natural gas transmission pipeline or hazardous liquid pipeline facilities or equipment is required, the replacement of such existing facilities be carried out, to the extent practicable, in a manner so as to accommodate the passage through such natural gas transmission pipeline or hazardous liquid pipeline facilities of instrumented internal inspection devices (commonly referred to as "smart pigs"). The Secretary may extend such standards to require existing natural gas transmission pipeline or hazardous liquid pipeline facilities, whose basic construction would accommodate an instrumented internal inspection device to be modified to permit the inspection of such facilities with instrumented internal inspection devices.

(2) Periodic inspections.--Not later than October 24, 1995, the Secretary shall prescribe, if necessary, additional standards requiring the periodic inspection of each pipeline the operator of the pipeline identifies under section 60109 of this title. The standards shall include any circumstances under which an inspection shall be conducted with an instrumented internal inspection device and, if the device is not required, use of an inspection method that is at least as effective as using the device in providing for the safety of the pipeline.

(g) Effective dates.--A standard prescribed under this section and section 60110 of this title is effective on the 30th day after the Secretary prescribes the standard. However, the Secretary for good cause may prescribe a different effective date when required because of the time reasonably necessary to comply with the standard. The different date must be specified in the regulation prescribing the standard.

(h) Safety condition reports.--(1) The Secretary shall prescribe regulations requiring each operator of a pipeline facility (except a master meter) to submit to the Secretary a written report on any--

- (A) condition that is a hazard to life, property, or the environment; and
- (B) safety-related condition that causes or has caused a significant change or restriction in the operation of a pipeline facility.

~~(2) The Secretary must receive the report not later than 5 working days after a representative of a person to which this section applies first establishes that the condition exists. Notice of the condition shall be given concurrently to appropriate State authorities.~~

(2) Submission of report.—As soon as practicable, but not later than 5 business days, after a representative of a person to whom this section applies first establishes that a condition described in paragraph (1) exists, the operator shall submit the report required under that paragraph to—

(A) the Secretary;

(B) the appropriate State authority or, where no appropriate State authority exists, to the Governor of a State where the subject of the Safety Related Condition report occurred; and

(C) the appropriate Tribe where the subject of the Safety Related Condition report occurred.

(3) Submission of report to other entities.—Upon request, a State authority or a Governor that receives a report submitted under this subsection may submit the report to any relevant emergency response or planning entity, including any—

(A) State emergency response commission established pursuant to section 301 of the Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. 11001);

(B) Tribal emergency response commission or emergency planning committee (as defined in part 355 of title 40, Code of Federal Regulations (or a successor regulation));

(C) local emergency planning committee established pursuant to section 301 of the Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. 11001); or

(D) other public agency responsible for emergency response.

(i) Carbon dioxide regulation.--

(1) Transportation in liquid state.—The Secretary shall regulate carbon dioxide transported by a hazardous liquid pipeline facility. The Secretary shall prescribe standards related to hazardous liquid to ensure the safe transportation of carbon dioxide by such a facility.

(2) Transportation in gaseous state.—

(A) Minimum safety standards.—The Secretary shall prescribe minimum safety standards for the transportation of carbon dioxide by pipeline in a gaseous state.

(B) Considerations.—In establishing the standards, the Secretary shall consider whether applying the minimum safety standards in part 195 of title 49, Code of Federal Regulations, as in effect on the date of enactment of this paragraph, for the transportation of carbon dioxide in a liquid state to the transportation of carbon dioxide in a gaseous state would ensure safety.

(3) Limitation of statutory construction.—Nothing in this subsection authorizes the Secretary to regulate piping or equipment used in the production, extraction, recovery, lifting, stabilization, separation, or treatment of carbon dioxide or the preparation of carbon dioxide for transportation by pipeline at production, refining, or manufacturing facilities.

(j) Emergency flow restricting devices.--(1) Not later than October 24, 1994, the Secretary shall survey and assess the effectiveness of emergency flow restricting devices (including remotely controlled valves and check valves) and other procedures, systems, and equipment used to detect and locate hazardous liquid pipeline ruptures and minimize product releases from hazardous liquid pipeline facilities.

(2) Not later than 2 years after the survey and assessment are completed, the Secretary shall prescribe standards on the circumstances under which an operator of a hazardous liquid pipeline facility must use an emergency flow restricting device or other procedure, system, or equipment described in paragraph (1) of this subsection on the facility.

~~(3) Remotely controlled valves.—(A) Not later than June 1, 1998, the Secretary shall survey and assess the effectiveness of remotely controlled valves to shut off the flow of natural gas in the event of a rupture of an interstate natural gas pipeline facility and shall make a determination about whether the use of remotely controlled valves is technically and economically feasible and would reduce risks associated with a rupture of an interstate natural gas pipeline facility.~~

~~(B) Not later than one year after the survey and assessment are completed, if the Secretary has determined that the use of remotely controlled valves is technically and economically feasible and would reduce risks associated with a rupture of an interstate natural gas pipeline facility, the Secretary shall prescribe standards under which an operator of an interstate natural gas pipeline facility must use a remotely controlled valve. These standards shall include, but not be limited to, requirements for high density population areas.~~

~~(k) Prohibition against low internal stress exception.—The Secretary may not provide an exception to this chapter for a hazardous liquid pipeline facility only because the facility operates at low internal stress.~~

(k) Low-stress hazardous liquid pipelines.—

(1) Minimum standards.—Not later than December 31, 2007, the Secretary shall issue regulations subjecting low-stress hazardous liquid pipelines to the same standards and regulations as other hazardous liquid pipelines, except as provided in paragraph (3). The implementation of the applicable standards and regulatory requirements may be phased in. The regulations issued under this paragraph shall not apply to gathering lines.

(2) General prohibition against low internal stress exception.—Except as provided in paragraph (3), the Secretary may not provide an exception to the requirements of this chapter for a hazardous liquid pipeline because the pipeline operates at low internal stress.

(3) Limited exceptions.—The Secretary shall provide or continue in force exceptions to this subsection for low-stress hazardous liquid pipelines that—

(A) are subject to safety regulations of the United States Coast Guard; or

(B) serve refining, manufacturing, or truck, rail, or vessel terminal facilities if the pipeline is less than 1 mile long (measured outside the facility grounds) and does not cross an offshore area or a waterway currently used for commercial navigation,

until regulations issued under paragraph (1) become effective. After such regulations become effective, the Secretary may retain or remove those exceptions as appropriate.

(4) Relationship to other laws.—Nothing in this subsection shall be construed to prohibit or otherwise affect the applicability of any other statutory or regulatory exemption to any hazardous liquid pipeline.

(5) Definition.—For purposes of this subsection, the term ‘low-stress hazardous liquid pipeline’ means a hazardous liquid pipeline that is operated in its entirety at a stress level of 20 percent or less of the specified minimum yield strength of the line pipe.

(6) Effective date.—The requirements of this subsection shall not take effect as to low-stress hazardous liquid pipeline operators before the effective date of the rules promulgated by the Secretary under this subsection.

(l) Updating standards.—The Secretary shall, to the extent appropriate and practicable, update incorporated industry standards that have been adopted as part of the Federal pipeline safety regulatory program under this chapter.

(m) Inspections by direct assessment.—Not later than 1 year after the date of the enactment of this subsection, the Secretary shall issue regulations prescribing standards for inspection of a pipeline facility by direct assessment.

(n) Automatic and Remote-Controlled Shut-off Valves for New Transmission Pipelines.—

(1) In general.—Not later than 2 years after the date of enactment of this subsection, and after considering the factors specified in subsection (b)(2), the Secretary, if appropriate, shall require by regulation the use of automatic or remote-controlled shut-off valves, or equivalent technology, where economically, technically, and operationally feasible on transmission pipeline facilities constructed or entirely replaced after the date on which the Secretary issues the final rule containing such requirement.

(2) High-consequence area study.—

(A) Study.—The Comptroller General of the United States shall conduct a study on the ability of transmission pipeline facility operators to respond to a hazardous liquid or gas release from a pipeline segment located in a high-consequence area.

(B) Considerations.—In conducting the study, the Comptroller General shall consider the swiftness of leak detection and pipeline shutdown capabilities, the location of the nearest response personnel, and the costs, risks, and benefits of installing automatic and remote-controlled shut-off valves.

(C) Report.—Not later than 1 year after the date of enactment of this subsection, the Comptroller General shall submit to the Committee on Transportation and Infrastructure and

the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the study.

(o) Transportation-Related Oil Flow Lines.—

(1) Data collection.—The Secretary may collect geospatial or technical data on transportation-related oil flow lines, including unregulated transportation-related oil flow lines.

(2) Transportation-related oil flow line defined.—

In this subsection, the term “transportation-related oil flow line” means a pipeline transporting oil off of the grounds of the well where it originated and across areas not owned by the producer, regardless of the extent to which the oil has been processed, if at all.

(3) Limitation.—Nothing in this subsection authorizes the Secretary to prescribe standards for the movement of oil through production, refining, or manufacturing facilities or through oil production flow lines located on the grounds of wells.

(p) Limitation on Incorporation of Documents by Reference.—Beginning ~~1 year~~ 3 years after the date of enactment of this subsection, the Secretary may not issue ~~guidance or~~ a regulation pursuant to this chapter that incorporates by reference any documents or portions thereof unless the documents or portions thereof are made available to the public, free of charge, ~~on an Internet Web site.~~

(q) Gas Pipeline Leak Detection and Repair.—

(1) In general.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall promulgate final regulations that require operators of regulated gathering lines (as defined pursuant to subsection (b) of section 60101 for purposes of subsection (a)(21) of that section) in a Class 2 location, Class 3 location, or Class 4 location, as determined under section 192.5 of title 49, Code of Federal Regulations, operators of new and existing gas transmission pipeline facilities, and operators of new and existing gas distribution pipeline facilities to conduct leak detection and repair programs—

(A) to meet the need for gas pipeline safety, as determined by the Secretary; and

(B) to protect the environment.

(2) Leak detection and repair programs.—

(A) Minimum performance standards.—The final regulations promulgated under paragraph (1) shall include, for the leak detection and repair programs described in that paragraph, minimum performance standards that reflect the capabilities of commercially available advanced technologies that, with respect to each pipeline covered by the programs, are appropriate for—

(i) the type of pipeline;

(ii) the location of the pipeline;

(iii) the material of which the pipeline is constructed; and

(iv) the materials transported by the pipeline.

(B) Requirement.—The leak detection and repair programs described in paragraph (1) shall be able to identify, locate, and categorize all leaks that—

(i) are hazardous to human safety or the environment; or

(ii) have the potential to become explosive or otherwise hazardous to human safety.

(3) Advanced leak detection technologies and practices.—

(A) In general.—The final regulations promulgated under paragraph (1) shall—

(i) require the use of advanced leak detection technologies and practices described in subparagraph (B);

(ii) identify any scenarios where operators may use leak detection practices that depend on human senses; and

(iii) include a schedule for repairing or replacing each leaking pipe, except a pipe with a leak so small that it poses no potential hazard, with appropriate deadlines.

(B) Advanced leak detection technologies and practices described.—The advanced leak detection technologies and practices referred to in subparagraph (A)(i) include—

(i) for new and existing gas distribution pipeline facilities, technologies and practices to detect pipeline leaks—

(I) through continuous monitoring on or along the pipeline; or

- (II) through periodic surveys with handheld equipment, equipment mounted on mobile platforms, or other means using commercially available technology;
 - (ii) for new and existing gas transmission pipeline facilities, technologies and practices to detect pipeline leaks through—
 - (I) equipment that is capable of continuous monitoring; or
 - (II) periodic surveys with handheld equipment, equipment mounted on mobile platforms, or other means using commercially available technology; and
 - (iii) for regulated gathering lines in Class 2 locations, Class 3 locations, or Class 4 locations, technologies and practices to detect pipeline leaks through—
 - (I) equipment that is capable of continuous monitoring; or
 - (II) periodic surveys with handheld equipment, equipment mounted on mobile platforms, or other means using commercially available technology.
- (4) Rules of construction.—
 - (A) Surveys and timelines.—In promulgating regulations under this subsection, the Secretary—
 - (i) may not reduce the frequency of surveys required under any other provision of this chapter or stipulated by regulation as of the date of enactment of this subsection; and
 - (ii) may not extend the duration of any timelines for the repair or remediation of leaks that are stipulated by regulation as of the date of enactment of this subsection.
 - (B) Application.—The limitations in this paragraph do not restrict the Secretary's ability to modify any regulations through proceedings separate from or subsequent to the final regulations required under paragraph (1).
 - (C) Existing authority.—Nothing in this subsection may be construed to alter the authority of the Secretary to regulate gathering lines as defined pursuant to section 60101.
- (r) Emergency Response Plans.—Not later than 2 years after the date of enactment of this subsection, the Secretary shall update regulations to ensure that each emergency response plan developed by an operator of a distribution system under subsection (d)(5), includes written procedures for—
 - (1) establishing communication with first responders and other relevant public officials, as soon as practicable, beginning from the time of confirmed discovery, as determined by the Secretary, by the operator of a gas pipeline emergency involving a release of gas from a distribution system of that operator that results in—
 - (A) a fire related to an unintended release of gas;
 - (B) an explosion;
 - (C) 1 or more fatalities; or
 - (D) the unscheduled release of gas and shutdown of gas service to a significant number of customers, as determined by the Secretary;
 - (2) establishing general public communication through an appropriate channel—
 - (A) as soon as practicable, as determined by the Secretary, after a gas pipeline emergency described in paragraph (1); and
 - (B) that provides information regarding—
 - (i) the emergency described in subparagraph (A); and
 - (ii) the status of public safety; and
 - (3) the development and implementation of a voluntary, opt-in system that would allow operators of distribution systems to rapidly communicate with customers in the event of an emergency.
- (s) Operations and Maintenance Manuals.—Not later than 2 years after the date of enactment of this subsection, the Secretary shall update regulations to ensure that each procedural manual for operations, maintenance, and emergencies developed by an operator of a distribution pipeline under subsection (d)(4), includes written procedures for—
 - (1) responding to overpressurization indications, including specific actions and an order of operations for immediately reducing pressure in or shutting down portions of the gas distribution system, if necessary; and
 - (2) a detailed procedure for the management of the change process, which shall—
 - (A) be applied to significant technology, equipment, procedural, and organizational changes to the distribution system; and
 - (B) ensure that relevant qualified personnel, such as an engineer with a professional engineer

licensure, subject matter expert, or other employee who possesses the necessary knowledge, experience, and skills regarding natural gas distribution systems, review and certify construction plans for accuracy, completeness, and correctness.

(t) Other Pipeline Safety Practices.—

(1) Records.—Not later than 2 years after the date of enactment of this subsection, the Secretary shall promulgate regulations to require an operator of a distribution system—

(A) to identify and manage traceable, reliable, and complete records, including maps and other drawings, critical to ensuring proper pressure controls for a gas distribution system, and updating these records as needed, while collecting and identifying other records necessary for risk analysis on an opportunistic basis; and

(B) to ensure that the records required under subparagraph (A) are—

(i) accessible to all personnel responsible for performing or overseeing relevant construction or engineering work; and

(ii) submitted to, or made available for inspection by, the Secretary or the relevant State authority with a certification in effect under section 60105.

(2) Presence of qualified employees.—

(A) In general.—Not later than 180 days after the date of enactment of this subsection, the Secretary shall promulgate regulations to require that not less than 1 agent of an operator of a distribution system who is qualified to perform relevant covered tasks, as determined by the Secretary, shall monitor gas pressure at the district regulator station or at an alternative site with equipment capable of ensuring proper pressure controls and have the capability to promptly shut down the flow of gas or control over pressurization at a district regulator station during any construction project that has the potential to cause a hazardous overpressurization at that station, including tie-ins and abandonment of distribution lines and mains, based on an evaluation, conducted by the operator, of threats that could result in unsafe operation.

(B) Exclusion.—In promulgating regulations under subparagraph (A), the Secretary shall ensure that those regulations do not apply to a district regulating station that has a monitoring system and the capability for remote or automatic shutoff.

(3) District regulator stations.—

(A) In general.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall promulgate regulations to require that each operator of a distribution system assesses and upgrades, as appropriate, each district regulator station of the operator to ensure that—

(i) the risk of the gas pressure in the distribution system exceeding, by a common mode of failure, the maximum allowable operating pressure (as described in section 192.623 of title 49, Code of Federal Regulations (or a successor regulation)) allowed under Federal law (including regulations) is minimized;

(ii) the gas pressure of a low-pressure distribution system is monitored, particularly at or near the location of critical pressure-control equipment;

(iii) the regulator station has secondary or backup pressure-relieving or overpressure-protection safety technology, such as a relief valve or automatic shutoff valve, or other pressure-limiting devices appropriate for the configuration and siting of the station and, in the case of a regulator station that employs the primary and monitor regulator design, the operator shall eliminate the common mode of failure or provide backup protection capable of either shutting the flow of gas, relieving gas to the atmosphere to fully protect the distribution system from overpressurization events, or there must be technology in place to eliminate a common mode of failure; and

(iv) if the Secretary determines that it is not operationally possible for an operator to implement the requirements under clause (iii), the Secretary shall require such operator to identify actions in their plan that minimize the risk of an overpressurization event.

§ 60103. Standards for liquefied natural gas pipeline facilities

(a) Location standards.--The Secretary of Transportation shall prescribe minimum safety standards for deciding on the location of a new liquefied natural gas pipeline facility. In prescribing a standard, the Secretary shall consider the--

- (1) kind and use of the facility;
- (2) existing and projected population and demographic characteristics of the location;
- (3) existing and proposed land use near the location;
- (4) natural physical aspects of the location;
- (5) medical, law enforcement, and fire prevention capabilities near the location that can cope with a risk caused by the facility; ~~and~~
- (6) need to encourage remote siting; and
- (7) national security.

(b) Design, installation, construction, inspection, and testing standards.--The Secretary of Transportation shall prescribe minimum safety standards for designing, installing, constructing, initially inspecting, and initially testing a new liquefied natural gas pipeline facility. When prescribing a standard, the Secretary shall consider--

- (1) the characteristics of material to be used in constructing the facility and of alternative material;
- (2) design factors;
- (3) the characteristics of the liquefied natural gas to be stored or converted at, or transported by, the facility; and
- (4) the public safety factors of the design and of alternative designs, particularly the ability to prevent and contain a liquefied natural gas spill.

(c) Nonapplication.--(1) Except as provided in paragraph (2) of this subsection, a design, location, installation, construction, initial inspection, or initial testing standard prescribed under this chapter after March 1, 1978, does not apply to an existing liquefied natural gas pipeline facility if the standard is to be applied because of authority given--

- (A) under this chapter; or
 - (B) under another law, and the standard is not prescribed at the time the authority is applied.
- (2)(A) Any design, installation, construction, initial inspection, or initial testing standard prescribed under this chapter after March 1, 1978, may provide that the standard applies to any part of a replacement component of a liquefied natural gas pipeline facility if the component or part is placed in service after the standard is prescribed and application of the standard--
- (i) does not make the component or part incompatible with other components or parts; or
 - (ii) is not impracticable otherwise.
- (B) Any location standard prescribed under this chapter after March 1, 1978, does not apply to any part of a replacement component of an existing liquefied natural gas pipeline facility.
- (3) A design, installation, construction, initial inspection, or initial testing standard does not apply to a liquefied natural gas pipeline facility existing when the standard is adopted.

(d) Operation and maintenance standards.--The Secretary of Transportation shall prescribe minimum operating and maintenance standards for a liquefied natural gas pipeline facility. In prescribing a standard, the Secretary shall consider--

- (1) the conditions, features, and type of equipment and structures that make up or are used in connection with the facility;
- (2) the fire prevention and containment equipment at the facility;
- (3) security measures to prevent an intentional act that could cause a liquefied natural gas accident;
- (4) maintenance procedures and equipment;
- (5) the training of personnel in matters specified by this subsection; and
- (6) other factors and conditions related to the safe handling of liquefied natural gas.

(e) Effective dates.--A standard prescribed under this section is effective on the 30th day after the Secretary of Transportation prescribes the standard. However, the Secretary for good cause may

prescribe a different effective date when required because of the time reasonably necessary to comply with the standard. The different date must be specified in the regulation prescribing the standard.

(f) Contingency plans.--A new liquefied natural gas pipeline facility may be operated only after the operator submits an adequate contingency plan that states the action to be taken if a liquefied natural gas accident occurs. The Secretary of Energy or appropriate State or local authority shall decide if the plan is adequate.

(g) Effect on other standards.--This section does not preclude applying a standard prescribed under section 60102 of this title to a gas pipeline facility (except a liquefied natural gas pipeline facility) associated with a liquefied natural gas pipeline facility.

§ 60104. Requirements and limitations

(a) Opportunity to present views.--The Secretary of Transportation shall give an interested person an opportunity to make oral and written presentations of information, views, and arguments when prescribing a standard under this chapter.

(b) Nonapplication.--A design, installation, construction, initial inspection, or initial testing standard does not apply to a pipeline facility existing when the standard is adopted.

(c) Preemption.--A State authority that has submitted a current certification under section 60105(a) of this title may adopt additional or more stringent safety standards for intrastate pipeline facilities and intrastate pipeline transportation only if those standards are compatible with the minimum standards prescribed under this chapter. A State authority may not adopt or continue in force safety standards for interstate pipeline facilities or interstate pipeline transportation. Notwithstanding the preceding sentence, a State authority may enforce a requirement of a one-call notification program of the State if the program meets the requirements for one-call notification programs under this chapter or chapter 61.

(d) Consultation.--(1) When continuity of gas service is affected by prescribing a standard or waiving compliance with standards under this chapter, the Secretary of Transportation shall consult with and advise the Federal Energy Regulatory Commission or a State authority having jurisdiction over the affected gas pipeline facility before prescribing the standard or waiving compliance. The Secretary shall delay the effective date of the standard or waiver until the Commission or State authority has a reasonable opportunity to grant an authorization it considers necessary.

(2) In a proceeding under section 3 or 7 of the Natural Gas Act (15 U.S.C. 717b or 717f), each applicant for authority to import natural gas or to establish, construct, operate, or extend a gas pipeline facility subject to an applicable safety standard shall certify that it will design, install, inspect, test, construct, operate, replace, and maintain a gas pipeline facility under those standards and plans for inspection and maintenance under section 60108 of this title. The certification is binding on the Secretary of Energy and the Commission except when an appropriate enforcement agency has given timely written notice to the Commission that the applicant has violated a standard prescribed under this chapter.

(e) Location and routing of facilities.--This chapter does not authorize the Secretary of Transportation to prescribe the location or routing of a pipeline facility.

§ 60105. State pipeline safety program certifications

(a) General requirements and submission.--Except as provided in this section and sections 60114 and 60121 of this title, the Secretary of Transportation may not prescribe or enforce safety standards and practices for an intrastate pipeline facility or intrastate pipeline transportation to the extent that the safety standards and practices are regulated by a State authority (including a municipality if the standards and practices apply to intrastate gas pipeline transportation) that submits to the Secretary

annually a certification for the facilities and transportation that complies with subsections (b) and (c) of this section.

(b) Contents.--Each certification submitted under subsection (a) of this section shall state that the State authority--

- (1) has regulatory jurisdiction over the standards and practices to which the certification applies;
- (2) has adopted, by the date of certification, each applicable standard prescribed under this chapter or, if a standard under this chapter was prescribed not later than 120 days before certification, is taking steps to adopt that standard;
- (3) is enforcing each adopted standard through ways that include inspections conducted by State employees meeting the qualifications the Secretary prescribes under section 60107(d)(1)(C) of this title;
- ~~(4) is encouraging and promoting programs designed to prevent damage by demolition, excavation, tunneling, or construction activity to the pipeline facilities to which the certification applies;~~
(4) is encouraging and promoting the establishment of a program designed to prevent damage by demolition, excavation, tunneling, or construction activity to the pipeline facilities to which the certification applies that subjects persons who violate the applicable requirements of that program to civil penalties and other enforcement actions that are substantially the same as are provided under this chapter, and addresses the elements in section 60134(b);
- (5) may require record maintenance, reporting, and inspection substantially the same as provided under section 60117 of this title;
- (6) may require that plans for inspection and maintenance under section 60108 (a) and (b) of this title be filed for approval; ~~and~~
- (7) may enforce safety standards of the authority under a law of the State by injunctive relief and civil penalties substantially the same as provided under sections 60120 and 60122(a)(1) and (b)-(f) of this title;
- (8) has the capability to sufficiently review and evaluate the adequacy of the plans and manuals described in section 60109(e)(7)(C)(i); and
- (9) has a sufficient number of employees described in paragraph (3) to ensure safe operations of pipeline facilities, updating the State Inspection Calculation Tool to take into account factors including--
 - (A) the number of miles of natural gas and hazardous liquid pipelines in the State, including the number of miles of cast iron and bare steel pipelines;
 - (B) the number of services in the State;
 - (C) the age of the gas distribution system in the State; and
 - (D) environmental factors that could impact the integrity of the pipeline, including relevant geological issues.

(c) Reports.--(1) Each certification submitted under subsection (a) of this section shall include a report that contains--

- (A) the name and address of each person to whom the certification applies that is subject to the safety jurisdiction of the State authority;
 - (B) each accident or incident reported during the prior 12 months by that person involving a fatality, personal injury requiring hospitalization, or property damage or loss of more than an amount the Secretary establishes (even if the person sustaining the fatality, personal injury, or property damage or loss is not subject to the safety jurisdiction of the authority), any other accident the authority considers significant, and a summary of the investigation by the authority of the cause and circumstances surrounding the accident or incident;
 - (C) the record maintenance, reporting, and inspection practices conducted by the authority to enforce compliance with safety standards prescribed under this chapter to which the certification applies, including the number of inspections of pipeline facilities the authority made during the prior 12 months; and
 - (D) any other information the Secretary requires.
- (2) The report included in the first certification submitted under subsection (a) of this section is only required to state information available at the time of certification.

(d) Application.--A certification in effect under this section does not apply to safety standards prescribed under this chapter after the date of certification. This chapter applies to each applicable safety standard prescribed after the date of certification until the State authority adopts the standard and submits the appropriate certification to the Secretary under subsection (a) of this section.

(e) Monitoring.--The Secretary may monitor a safety program established under this section to ensure that the program complies with the certification. A State authority shall cooperate with the Secretary under this subsection.

(f) Rejections of certification.--If after receiving a certification the Secretary decides the State authority is not enforcing satisfactorily compliance with applicable safety standards prescribed under this chapter, the Secretary may reject the certification, assert United States Government jurisdiction, or take other appropriate action to achieve adequate enforcement. The Secretary shall give the authority notice and an opportunity for a hearing before taking final action under this subsection. When notice is given, the burden of proof is on the authority to demonstrate that it is enforcing satisfactorily compliance with the prescribed standards.

§ 60106. State pipeline safety agreements

(a) Agreements without certification.--If the Secretary of Transportation does not receive a certification under section 60105 of this title, the Secretary may make an agreement with a State authority (including a municipality if the agreement applies to intrastate gas pipeline transportation) authorizing it to take necessary action. Each agreement shall--

- (1) establish an adequate program for record maintenance, reporting, and inspection designed to assist compliance with applicable safety standards prescribed under this chapter; and
- (2) prescribe procedures for approval of plans of inspection and maintenance substantially the same as required under section 60108 (a) and (b) of this title.

(b) Agreements with certification.--

(1) In general.--If the Secretary accepts a certification under section 60105 and makes the determination required under this subsection, the Secretary may make an agreement with a State authority authorizing it to participate in the oversight of interstate pipeline transportation. Each such agreement shall include a plan for the State authority to participate in special investigations involving incidents or new construction and allow the State authority to participate in other activities overseeing interstate pipeline transportation or to assume additional inspection or investigatory duties. Nothing in this section modifies section 60104(c) or authorizes the Secretary to delegate the enforcement of safety standards for interstate pipeline facilities prescribed under this chapter to a State authority.

(2) Determinations required.--The Secretary may not enter into an agreement under this subsection, unless the Secretary determines in writing that--

- (A) the agreement allowing participation of the State authority is consistent with the Secretary's program for inspection and consistent with the safety policies and provisions provided under this chapter;
- (B) the interstate participation agreement would not adversely affect the oversight responsibilities of intrastate pipeline transportation by the State authority;
- (C) the State is carrying out a program demonstrated to promote preparedness and risk prevention activities that enable communities to live safely with pipelines;
- (D) the State meets the minimum standards for State one-call notification set forth in chapter 61; and
- (E) the actions planned under the agreement would not impede interstate commerce or jeopardize public safety.

(3) Existing agreements.--If requested by the State authority, the Secretary shall authorize a State authority which had an interstate agreement in effect after January 31, 1999, to oversee interstate pipeline transportation pursuant to the terms of that agreement until the Secretary determines that the State meets the requirements of paragraph (2) and executes a new agreement, or until

December 31, 2003, whichever is sooner. Nothing in this paragraph shall prevent the Secretary, after affording the State notice, hearing, and an opportunity to correct any alleged deficiencies, from terminating an agreement that was in effect before enactment of the Pipeline Safety Improvement Act of 2002 if--

- (A) the State authority fails to comply with the terms of the agreement;
- (B) implementation of the agreement has resulted in a gap in the oversight responsibilities of intrastate pipeline transportation by the State authority; or
- (C) continued participation by the State authority in the oversight of interstate pipeline transportation has had an adverse impact on pipeline safety.

(4) Notice Upon Denial.—If a State authority requests an interstate agreement under this section and the Secretary denies such request, the Secretary shall provide written notification to the State authority of the denial that includes an explanation of the reasons for such denial.

(c) Notification.--

(1) In general.--Each agreement shall require the State authority to notify the Secretary promptly of a violation or probable violation of an applicable safety standard discovered as a result of action taken in carrying out an agreement under this section.

(2) Response by Secretary.--If a State authority notifies the Secretary under paragraph (1) of a violation or probable violation of an applicable safety standard, the Secretary, not later than 60 days after the date of receipt of the notification, shall--

- (A) issue an order under section 60118(b) or take other appropriate enforcement actions to ensure compliance with this chapter; or
- (B) provide the State authority with a written explanation as to why the Secretary has determined not to take such actions.

(d) Monitoring.--The Secretary may monitor a safety program established under this section to ensure that the program complies with the agreement. A State authority shall cooperate with the Secretary under this subsection.

(e) Ending agreements.--

(1) Permissive termination.--The Secretary may end an agreement under this section when the Secretary finds that the State authority has not complied with any provision of the agreement.

(2) Mandatory termination of agreement.--The Secretary shall end an agreement for the oversight of interstate pipeline transportation if the Secretary finds that--

- (A) implementation of such agreement has resulted in a gap in the oversight responsibilities of intrastate pipeline transportation by the State authority;
- (B) the State actions under the agreement have failed to meet the requirements under subsection (b); or
- (C) continued participation by the State authority in the oversight of interstate pipeline transportation would not promote pipeline safety.

(3) Procedural requirements.--The Secretary shall give notice and an opportunity for a hearing to a State authority before ending an agreement under this section. The Secretary may provide a State an opportunity to correct any deficiencies before ending an agreement. The finding and decision to end the agreement shall be published in the Federal Register and may not become effective for at least 15 days after the date of publication unless the Secretary finds that continuation of an agreement poses an imminent hazard.

(f) Joint Inspectors.—At the request of a State authority, the Secretary shall allow for a certified State authority under section 60105 to participate in the inspection of an interstate pipeline facility.

§ 60107. State pipeline safety grants

(a) General authority.--If a State authority files an application not later than September 30 of a calendar year, the Secretary of Transportation shall pay ~~not more than 50 percent~~ **not more than 80 percent** of

the cost of the personnel, equipment, and activities the authority reasonably requires during the next calendar year--

- (1) to carry out a safety program under a certification under section 60105 of this title or an agreement under section 60106 of this title; or
- (2) to act as an agent of the Secretary on interstate gas pipeline facilities or interstate hazardous liquid pipeline facilities.

~~(b) Payments.—After notifying and consulting with a State authority, the Secretary may withhold any part of a payment when the Secretary decides that the authority is not carrying out satisfactorily a safety program or not acting satisfactorily as an agent. The Secretary may pay an authority under this section only when the authority ensures the Secretary that it will provide the remaining costs of a safety program and that the total State amount spent for a safety program (excluding grants of the United States Government) will at least equal the average amount spent—~~

- ~~(1) for a gas safety program, for the fiscal years that ended June 30, 1967, and June 30, 1968; and~~
- ~~(2) for a hazardous liquid safety program, for the fiscal years that ended September 30, 1978, and September 30, 1979. spent for gas and hazardous liquid safety programs for the 3 fiscal years prior to the fiscal year in which the Secretary makes the payment, except when the Secretary waives this requirement. For each of fiscal years 2012 and 2013, the Secretary shall grant such a waiver to a State if the State can demonstrate an inability to maintain or increase the required funding share of its safety program at or above the level required by this subsection due to economic hardship in that State. For fiscal year 2014, and each fiscal year thereafter, the Secretary may grant such a waiver to a State if the State can make the demonstration described in the preceding sentence.~~

(b) Payments.—After notifying and consulting with a State authority, the Secretary may withhold any part of a payment when the Secretary decides that the authority is not carrying out satisfactorily a safety program or not acting satisfactorily as an agent. The Secretary may pay an authority under this section only when the authority ensures the Secretary that it will provide the remaining costs of a safety program, except when the Secretary waives this requirement.

(c) Apportionment and method of payment.--The Secretary shall apportion the amount appropriated to carry out this section among the States. A payment may be made under this section in installments, in advance, or on a reimbursable basis.

(d) Additional authority and considerations.--(1) The Secretary may prescribe--

- (A) the form of, and way of filing, an application under this section;
- (B) reporting and fiscal procedures the Secretary considers necessary to ensure the proper accounting of money of the Government; and
- (C) qualifications for a State to meet to receive a payment under this section, including qualifications for State employees who perform inspection activities under section 60105 or 60106 of this title.

(2) The qualifications prescribed under paragraph (1)(C) of this subsection may--

- (A) consider the experience and training of the employee;
- (B) order training or other requirements; and
- (C) provide for approval of qualifications on a conditional basis until specified requirements are met.

(e) Repurposing of funds.—If a State program's certification is rejected under section 60105(f) or such program is otherwise suspended or interrupted, the Secretary may use any undistributed, deobligated, or recovered funds authorized under this section to carry out pipeline safety activities for that State within the period of availability for such funds.

§ 60108. Inspection and maintenance

(a) Plans.--(1) Each person owning or operating ~~an intrastate~~ a gas pipeline facility or hazardous liquid pipeline facility shall carry out a current written plan (including any changes) for inspection and

maintenance of each facility used in the transportation and owned or operated by the person. A copy of the plan shall be kept at any office of the person the Secretary of Transportation considers appropriate. The Secretary also may require a person owning or operating a pipeline facility subject to this chapter to file a plan for inspection and maintenance for approval.

(2) If the Secretary or a State authority responsible for enforcing standards prescribed under this chapter decides that a plan required under paragraph (1) of this subsection is inadequate for safe operation, the Secretary or authority shall require the person to revise the plan. Revision may be required only after giving notice and an opportunity for a hearing. A plan required under paragraph (1) must be practicable and designed to meet the need for pipeline safety, must meet the requirements of any regulations promulgated under section 60102(g), and must include terms designed to enhance the ability to discover safety-related conditions described in section 60102(h)(1) of this title. In deciding on the adequacy of a plan, the Secretary or authority shall consider--

- (A) relevant available pipeline safety information;
- (B) the appropriateness of the plan for the particular kind of pipeline transportation or facility;
- (C) the reasonableness of the plan; ~~and~~
- ~~(D) the extent to which the plan will contribute to public safety and the protection of the environment.~~

(D) the extent to which the plan will contribute to—

- (i) public safety;
- (ii) eliminating hazardous leaks and minimizing releases of natural gas from pipeline facilities; and
- (iii) the protection of the environment; and

(E) the extent to which the plan addresses the replacement or remediation of pipelines that are known to leak based on the material (including cast iron, unprotected steel, wrought iron, and historic plastics with known issues), design, or past operating and maintenance history of the pipeline.

~~(3) A plan required under this subsection shall be made available to the Secretary or State authority on request under section 60117 of this title.~~

(3) Review of plans.—

(A) In general.—Not later than 2 years after the date of enactment of this subparagraph, and not less frequently than once every 5 years thereafter, the Secretary or relevant State authority with a certification in effect under section 60105 shall review each plan described in this subsection.

(B) Context of review.—The Secretary may conduct a review under this paragraph as an element of the inspection of the operator carried out by the Secretary under subsection (b).

(C) Inadequate programs.—If the Secretary determines that a plan reviewed under this paragraph does not comply with the requirements of this chapter (including any regulations promulgated under this chapter), has not been adequately implemented, is inadequate for the safe operation of a pipeline facility, or is other inadequate, the Secretary may conduct enforcement proceedings under this chapter.

(b) Inspection and testing.--(1) The Secretary shall inspect and require appropriate testing of a pipeline facility subject to this chapter that is not covered by a certification under section 60105 of this title or an agreement under section 60106 of this title. The Secretary shall decide on the frequency and type of inspection and testing under this subsection on a case-by-case basis after considering the following:

- (A) the location of the pipeline facility.
- (B) the type, size, age, manufacturer, method of construction, construction material, and condition of the pipeline facility.
- (C) the nature and volume of material transported through the pipeline facility.
- (D) the pressure at which that material is transported.
- (E) climatic, geologic, and seismic characteristics (including soil characteristics) and conditions of the area in which the pipeline facility is located.
- (F) existing and projected population and demographic characteristics of the area in which the pipeline facility is located.

- (G) for a hazardous liquid pipeline facility, the proximity of the area in which the facility is located to an area that is unusually sensitive to environmental damage.
 - (H) the frequency of leaks.
 - (I) other factors the Secretary decides are relevant to the safety of pipeline facilities.
 - (2) To the extent and in amounts provided in advance in an appropriation law, the Secretary shall decide on the frequency of inspection under paragraph (1) of this subsection. The Secretary may reduce the frequency of an inspection of a master meter system.
 - (3) Testing under this subsection shall use the most appropriate technology practicable.
- (c) Pipeline facilities offshore and in other waters.--(1) In this subsection--
- (A) "abandoned" means permanently removed from service.
 - (B) "pipeline facility" includes an underwater abandoned pipeline facility.
 - (C) if a pipeline facility has no operator, the most recent operator of the facility is deemed to be the operator of the facility.
- (2)(A) Not later than May 16, 1993, on the basis of experience with the inspections under section 3(h)(1)(A) of the Natural Gas Pipeline Safety Act of 1968 or section 203(l)(1)(A) of the Hazardous Liquid Pipeline Safety Act of 1979, as appropriate, and any other information available to the Secretary, the Secretary shall establish a mandatory, systematic, and, where appropriate, periodic inspection program of--
- (i) all offshore pipeline facilities; and
 - (ii) any other pipeline facility crossing under, over, or through waters where a substantial likelihood of commercial navigation exists, if the Secretary decides that the location of the facility in those waters could pose a hazard to navigation or public safety.
- (B) In prescribing standards to carry out subparagraph (A) of this paragraph--
- (i) the Secretary shall identify what is a hazard to navigation with respect to an underwater abandoned pipeline facility; and
 - (ii) for an underwater pipeline facility abandoned after October 24, 1992, the Secretary shall include requirements that will lessen the potential that the facility will pose a hazard to navigation and shall consider the relationship between water depth and navigational safety and factors relevant to the local marine environment.
- (3)(A) The Secretary shall establish by regulation a program requiring an operator of a pipeline facility described in paragraph (2) of this subsection to report a potential or existing navigational hazard involving that pipeline facility to the Secretary through the appropriate Coast Guard office.
- (B) The operator of a pipeline facility described in paragraph (2) of this subsection that discovers any part of the pipeline facility that is a hazard to navigation shall mark the location of the hazardous part with a Coast-Guard-approved marine buoy or marker and immediately shall notify the Secretary as provided by the Secretary under subparagraph (A) of this paragraph. A marine buoy or marker used under this subparagraph is deemed a pipeline sign or right-of-way marker under section 60123(c) of this title.
- (4)(A) The Secretary shall establish a standard that each pipeline facility described in paragraph (2) of this subsection that is a hazard to navigation is buried not later than 6 months after the date the condition of the facility is reported to the Secretary. The Secretary may extend that 6-month period for a reasonable period to ensure compliance with this paragraph.
- (B) In prescribing standards for subparagraph (A) of this paragraph for an underwater pipeline facility abandoned after October 24, 1992, the Secretary shall include requirements that will lessen the potential that the facility will pose a hazard to navigation and shall consider the relationship between water depth and navigational safety and factors relevant to the local marine environment.
- (5)(A) Not later than October 24, 1994, the Secretary shall establish standards on what is an exposed offshore pipeline facility and what is a hazard to navigation under this subsection.
- (B) Not later than 6 months after the Secretary establishes standards under subparagraph (A) of this paragraph, or October 24, 1995, whichever occurs first, the operator of each offshore pipeline facility not described in section 3(h)(1)(A) of the Natural Gas Pipeline Safety Act of 1968 or section 203(l)(1)(A) of the Hazardous Liquid Pipeline Safety Act of 1979, as appropriate, shall inspect the facility and report to the Secretary on any part of the facility that is exposed or is a hazard to navigation. This subparagraph applies only to a facility that is

between the high water mark and the point at which the subsurface is under 15 feet of water, as measured from mean low water. An inspection that occurred after October 3, 1989, may be used for compliance with this subparagraph if the inspection conforms to the requirements of this subparagraph.

(C) The Secretary may extend the time period specified in subparagraph (B) of this paragraph for not more than 6 months if the operator of a facility satisfies the Secretary that the operator has made a good faith effort, with reasonable diligence, but has been unable to comply by the end of that period.

(6)(A) The operator of a pipeline facility abandoned after October 24, 1992, shall report the abandonment to the Secretary in a way that specifies whether the facility has been abandoned properly according to applicable United States Government and State requirements.

(B) Not later than October 24, 1995, the operator of a pipeline facility abandoned before October 24, 1992, shall report to the Secretary reasonably available information related to the facility, including information that a third party possesses. The information shall include the location, size, date, and method of abandonment, whether the facility has been abandoned properly under applicable law, and other relevant information the Secretary may require. Not later than April 24, 1994, the Secretary shall specify how the information shall be reported. The Secretary shall ensure that the Government maintains the information in a way accessible to appropriate Government agencies and State authorities.

(C) The Secretary shall request that a State authority having information on a collision between a vessel and an underwater pipeline facility report the information to the Secretary in a timely way and make a reasonable effort to specify the location, date, and severity of the collision.

Chapter 35 of title 44 does not apply to this subparagraph.

(7) The Secretary may not exempt from this chapter an offshore hazardous liquid pipeline facility only because the pipeline facility transfers hazardous liquid in an underwater pipeline between a vessel and an onshore facility.

(8) If, after reviewing existing Federal and State regulations for hazardous liquid gathering lines located offshore in the United States, including within the inlets of the Gulf of Mexico, the Secretary determines it is appropriate, the Secretary shall issue regulations, after notice and an opportunity for a hearing, subjecting offshore hazardous liquid gathering lines and hazardous liquid gathering lines located within the inlets of the Gulf of Mexico to the same standards and regulations as other hazardous liquid gathering lines. The regulations issued under this paragraph shall not apply to production pipelines or flow lines.

(d) Replacing cast iron gas pipelines.--(1) The Secretary shall publish a notice on the availability of industry guidelines, developed by the Gas Piping Technology Committee, for replacing cast iron pipelines. Not later than 2 years after the guidelines become available, the Secretary shall conduct a survey of gas pipeline operators with cast iron pipe in their systems to establish--

(A) the extent to which each operator has adopted a plan for the safe management and replacement of cast iron;

(B) the elements of the plan, including the anticipated rate of replacement; and

(C) the progress that has been made.

(2) Chapter 35 of title 44 does not apply to the conduct of the survey.

(3) This subsection does not prevent the Secretary from developing Government guidelines or standards for cast iron gas pipelines as the Secretary considers appropriate.

(4) Not later than December 31, 2012, and every 2 years thereafter, the Secretary shall conduct a follow-up survey to measure the progress that owners and operators of pipeline facilities have made in adopting and implementing their plans for the safe management and replacement of cast iron gas pipelines.

(e) In general.—After the completion of a Pipeline and Hazardous Materials Safety Administration pipeline safety inspection, the Administrator of such Administration, or the State authority certified under section 60105 of title 49, United States Code, to conduct such inspection, shall—

(1) within 30 days, conduct a post-inspection briefing with the owner or operator of the gas or hazardous liquid pipeline facility inspected outlining any concerns; and

(2) within 90 days, to the extent practicable, provide the owner or operator with written preliminary findings of the inspection.

§ 60109. High-density population areas and environmentally sensitive areas

(a) Identification requirements.--Not later than October 24, 1994, the Secretary of Transportation shall prescribe standards that--

(1) establish criteria for identifying--

(A) by operators of gas pipeline facilities, each gas pipeline facility (except a natural gas distribution line) located in a high-density population area; and

(B) by operators of hazardous liquid pipeline facilities and gathering lines--

(i) each hazardous liquid pipeline facility, whether otherwise subject to this chapter, that crosses waters where a substantial likelihood of commercial navigation exists or that is located in an area described in the criteria as a high-density population area; and

(ii) each hazardous liquid pipeline facility and gathering line, whether otherwise subject to this chapter, located in an area that the Secretary, in consultation with the Administrator of the Environmental Protection Agency, describes as unusually sensitive to environmental damage if there is a hazardous liquid pipeline accident; and

(2) provide that the identification be carried out through the inventory required under section 60102(e) of this title.

(b) Areas to be included as unusually sensitive.--When describing areas that are unusually sensitive to environmental damage if there is a hazardous liquid pipeline accident, the Secretary shall consider areas where a pipeline rupture would likely cause permanent or long-term environmental damage, including--

(1) locations near pipeline rights-of-way that are critical to drinking water, including intake locations for community water systems and critical sole source aquifer protection areas; and

(2) locations near pipeline rights-of-way that have been identified as are part of the Great Lakes or have been identified as coastal beaches, marine coastal waters, certain coastal waters, critical wetlands, riverine or estuarine systems, national parks, wilderness areas, wildlife preservation areas or refuges, wild and scenic rivers, or critical habitat areas for threatened and endangered species.

(c) Risk analysis and integrity management programs.--

(1) Requirement.--Each operator of a gas pipeline facility shall conduct an analysis of the risks to each facility of the operator located in an area identified pursuant to subsection (a)(1) and defined in chapter 192 of title 49, Code of Federal Regulations, including any subsequent modifications, and shall adopt and implement a written integrity management program for such facility to reduce the risks.

(2) Regulations.--

(A) In general.--Not later than 12 months after the date of enactment of this subsection, the Secretary shall issue regulations prescribing standards to direct an operator's conduct of a risk analysis and adoption and implementation of an integrity management program under this subsection. The regulations shall require an operator to conduct a risk analysis and adopt an integrity management program within a time period prescribed by the Secretary, ending not later than 24 months after such date of enactment. Not later than 18 months after such date of enactment, each operator of a gas pipeline facility shall begin a baseline integrity assessment described in paragraph (3).

(B) Authority to issue regulations.--The Secretary may satisfy the requirements of this paragraph through the issuance of regulations under this paragraph or under other authority of law.

(3) Minimum requirements of integrity management programs.--An integrity management program required under paragraph (1) shall include, at a minimum, the following requirements:

(A) A baseline integrity assessment of each of the operator's facilities in areas identified pursuant to subsection (a)(1) and defined in chapter 192 of title 49, Code of Federal

Regulations, including any subsequent modifications, by internal inspection device, pressure testing, direct assessment, or an alternative method that the Secretary determines would provide an equal or greater level of safety. The operator shall complete such assessment not later than 10 years after the date of enactment of this subsection. At least 50 percent of such facilities shall be assessed not later than 5 years after such date of enactment. The operator shall prioritize such facilities for assessment based on all risk factors, including any previously discovered defects or anomalies and any history of leaks, repairs, or failures. The operator shall ensure that assessments of facilities with the highest risks are given priority for completion and that such assessments will be completed not later than 5 years after such date of enactment.

~~(B) Subject to paragraph (5), periodic reassessment of the facility, at a minimum of once every 7 years, using methods described in subparagraph (A).~~

(B) Subject to paragraph (5), periodic reassessments of the facility, at a minimum of once every 7 calendar years, using methods described in subparagraph (A). The Secretary may extend such deadline for an additional 6 months if the operator submits written notice to the Secretary with sufficient justification of the need for the extension.

(C) Clearly defined criteria for evaluating the results of assessments conducted under subparagraphs (A) and (B) and for taking actions based on such results.

(D) A method for conducting an analysis on a continuing basis that integrates all available information about the integrity of the facility and the consequences of releases from the facility.

(E) A description of actions to be taken by the operator to promptly address any integrity issue raised by an evaluation conducted under subparagraph (C) or the analysis conducted under subparagraph (D).

(F) A description of measures to prevent and mitigate the consequences of releases from the facility.

(G) A method for monitoring cathodic protection systems throughout the pipeline system of the operator to the extent not addressed by other regulations.

(H) If the Secretary raises a safety concern relating to the facility, a description of the actions to be taken by the operator to address the safety concern, including issues raised with the Secretary by States and local authorities under an agreement entered into under section 60106.

(4) Treatment of baseline integrity assessments.--In the case of a baseline integrity assessment conducted by an operator in the period beginning on the date of enactment of this subsection and ending on the date of issuance of regulations under this subsection, the Secretary shall accept the assessment as complete, and shall not require the operator to repeat any portion of the assessment, if the Secretary determines that the assessment was conducted in accordance with the requirements of this subsection.

(5) Waivers and modifications.--In accordance with section 60118(c), the Secretary may waive or modify any requirement for reassessment of a facility under paragraph (3)(B) for reasons that may include the need to maintain local product supply or the lack of internal inspection devices if the Secretary determines that such waiver is not inconsistent with pipeline safety.

(6) Standards.--The standards prescribed by the Secretary under paragraph (2) shall address each of the following factors:

(A) The minimum requirements described in paragraph (3).

(B) The type or frequency of inspections or testing of pipeline facilities, in addition to the minimum requirements of paragraph (3)(B).

(C) The manner in which the inspections or testing are conducted.

(D) The criteria used in analyzing results of the inspections or testing.

(E) The types of information sources that must be integrated in assessing the integrity of a pipeline facility as well as the manner of integration.

(F) The nature and timing of actions selected to address the integrity of a pipeline facility.

(G) Such other factors as the Secretary determines appropriate to ensure that the integrity of a pipeline facility is addressed and that appropriate mitigative measures are adopted to protect areas identified under subsection (a)(1).

In prescribing those standards, the Secretary shall ensure that all inspections required are conducted in a manner that minimizes environmental and safety risks, and shall take into account

the applicable level of protection established by national consensus standards organizations.

(7) Additional optional standards.--The Secretary may also prescribe standards requiring an operator of a pipeline facility to include in an integrity management program under this subsection--

(A) changes to valves or the establishment or modification of systems that monitor pressure and detect leaks based on the operator's risk analysis; and

(B) the use of emergency flow restricting devices.

(8) Lack of regulations.--In the absence of regulations addressing the elements of an integrity management program described in this subsection, the operator of a pipeline facility shall conduct a risk analysis and adopt and implement an integrity management program described in this subsection not later than 24 months after the date of enactment of this subsection and shall complete the baseline integrity assessment described in this subsection not later than 10 years after such date of enactment. At least 50 percent of such facilities shall be assessed not later than 5 years after such date of enactment. The operator shall prioritize such facilities for assessment based on all risk factors, including any previously discovered defects or anomalies and any history of leaks, repairs, or failures. The operator shall ensure that assessments of facilities with the highest risks are given priority for completion and that such assessments will be completed not later than 5 years after such date of enactment.

(9) Review of integrity management programs.--

(A) Review of programs.--

(i) In general.--The Secretary shall review a risk analysis and integrity management program under paragraph (1) and record the results of that review for use in the next review of an operator's program.

(ii) Context of review.--The Secretary may conduct a review under clause (i) as an element of the Secretary's inspection of an operator.

~~(iii) Inadequate programs.--If the Secretary determines that a risk analysis or integrity management program does not comply with the requirements of this subsection or regulations issued as described in paragraph (2), or is inadequate for the safe operation of a pipeline facility, the Secretary shall act under section 60108(a)(2) to require the operator to revise the risk analysis or integrity management program.~~

(iii) Inadequate programs.--If the Secretary determines that a risk analysis or integrity management program does not comply with the requirements of this subsection or regulations issued as described in paragraph (2), has not been adequately implemented, or is inadequate for the safe operation of a pipeline facility, the Secretary may conduct proceedings under this chapter.

(B) Amendments to programs.--In order to facilitate reviews under this paragraph, an operator of a pipeline facility shall notify the Secretary of any amendment made to the operator's integrity management program not later than 30 days after the date of adoption of the amendment. The Secretary shall review any such amendment in accordance with this paragraph.

(C) Transmittal of programs to State authorities.--The Secretary shall provide a copy of each risk analysis and integrity management program reviewed by the Secretary under this paragraph to any appropriate State authority with which the Secretary has entered into an agreement under section 60106.

(10) State review of integrity management plans.--A State authority that enters into an agreement pursuant to section 60106, permitting the State authority to review the risk analysis and integrity management program pursuant to paragraph (9), may provide the Secretary with a written assessment of the risk analysis and integrity management program, make recommendations, as appropriate, to address safety concerns not adequately addressed by the operator's risk analysis or integrity management program, and submit documentation explaining the State-proposed revisions. The Secretary shall consider carefully the State's proposals and work in consultation with the States and operators to address safety concerns.

(11) Application of standards.--Section 60104(b) shall not apply to this section.

(12) Distribution pipelines.--

(A) Study.--The Secretary shall conduct a study of methods that may be used under paragraph (3), other than direct assessment, to assess distribution pipelines to determine whether any such method--

(i) would provide a greater level of safety than direct assessment of the pipelines; and

(ii) is feasible.

(B) Report.—Not later than 2 years after the date of enactment of this paragraph, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Energy and Commerce and Transportation and Infrastructure of the House of Representatives a report describing—

(i) the results of the study under subparagraph (A); and

(ii) recommendations based on that study, if any.

(d) Evaluation of integrity management regulations.--Not later than 4 years after the date of enactment of this subsection, the Comptroller General shall complete an assessment and evaluation of the effects on public safety and the environment of the requirements for the implementation of integrity management programs contained in the standards prescribed as described in subsection (c)(2).

(e) Distribution integrity management programs.—

(1) Minimum standards.—Not later than December 31, 2007, the Secretary shall prescribe minimum standards for integrity management programs for distribution pipelines.

(2) Additional authority of Secretary.—In carrying out this subsection, the Secretary may require operators of distribution pipelines to continually identify and assess risks on their distribution lines, to remediate conditions that present a potential threat to line integrity, and to monitor program effectiveness.

(3) Excess flow valves.—

(A) In general.—The minimum standards shall include a requirement for an operator of a natural gas distribution system to install an excess flow valve on each single family residence service line connected to such system if—

(i) the service line is installed or entirely replaced after June 1, 2008;

(ii) the service line operates continuously throughout the year at a pressure not less than 10 pounds per square inch gauge;

(iii) the service line is not connected to a gas stream with respect to which the operator has had prior experience with contaminants, the presence of which could interfere with the operation of an excess flow valve;

(iv) the installation of an excess flow valve on the service line is not likely to cause loss of service to the residence or interfere with necessary operation or maintenance activities, such as purging liquids from the service line; and

(v) an excess flow valve meeting performance standards developed under section 60110(e) of title 49, United States Code, is commercially available to the operator, as determined by the Secretary.

(B) Distribution branch services, multifamily facilities, and small commercial facilities.—Not later than 2 years after the date of enactment of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, and after issuing a final report on the evaluation of the National Transportation Safety Board's recommendation on excess flow valves in applications other than service lines serving one single family residence, the Secretary, if appropriate, shall by regulation require the use of excess flow valves, or equivalent technology, where economically, technically, and operationally feasible on new or entirely replaced distribution branch services, multifamily facilities, and small commercial facilities.

(C)(B) Reports.—Operators of natural gas distribution systems shall report annually to the Secretary on the number of excess flow valves installed on their systems under subparagraph (A).

(4) Applicability.—The Secretary shall determine which distribution pipelines will be subject to the minimum standards.

(5) Development and implementation.—Each operator of a distribution pipeline that the Secretary determines is subject to the minimum standards prescribed by the Secretary under this subsection shall develop and implement an integrity management program in accordance with those standards.

(6) Savings clause.—Subject to section 60104(c), a State authority having a current certification under section 60105 may adopt or continue in force additional integrity management requirements, including additional requirements for installation of excess flow valves, for gas distribution pipelines

within the boundaries of that State.

(7) Evaluation of risk.—

(A) In general.—Not later than 2 years after the date of enactment of this paragraph, the Secretary shall promulgate regulations to ensure that each distribution integrity management plan developed by an operator of a distribution system includes an evaluation of—

(i) the risks resulting from the presence of cast iron pipes and mains in the distribution system; and

(ii) the risks that could lead to or result from the operation of a low-pressure distribution system at a pressure that makes the operation of any connected and properly adjusted low-pressure gas burning equipment unsafe, as determined by the Secretary.

(B) Consideration.—In carrying out subparagraph (A)(ii), the Secretary shall ensure that an operator of a distribution system—

(i) considers factors other than past observed abnormal operating conditions (as defined in section 192.803 of title 49, Code of Federal Regulations (or a successor regulation)) in ranking risks and identifying measures to mitigate those risks; and

(ii) may not determine that there are no potential consequences associated with low probability events unless that determination is otherwise supported by engineering analysis or operational knowledge.

(C) Deadlines.—

(i) In general.—Not later than 2 years after the date of enactment of this paragraph, each operator of a distribution system shall make available to the Secretary or the relevant State authority with a certification in effect under section 60105, as applicable, a copy of—

(I) the distribution integrity management plan of the operator;

(II) the emergency response plan under section 60102(d)(5); and

(III) the procedural manual for operations, maintenance, and emergencies under section 60102(d)(4).

(ii) Updates.—Each operator of a distribution system shall make available to the Secretary or make available for inspection to the relevant State authority described in clause (i), if applicable, an updated plan or manual described in that clause by not later than 60 days after the date of a significant update, as determined by the Secretary.

(iii) Applicability of FOIA.—Nothing in this subsection shall be construed to authorize the disclosure of any information that is exempt from disclosure under section 552(b) of title 5.

(D) Review of plans and documents.—

(i) Timing.—

(I) In general.—Not later than 2 years after the date of promulgation of the regulations under subparagraph (A), and not less frequently than once every 5 years thereafter, the Secretary or relevant State authority with a certification in effect under section 60105 shall review the distribution integrity management plan, the emergency response plan, and the procedural manual for operations, maintenance, and emergencies of each operator of a distribution system and record the results of that review for use in the next review of the program of that operator.

(II) Grace period.—For the third, fourth, and fifth years after the date of promulgation of the regulations under subparagraph (A), the Secretary—

(aa) shall not use subclause (I) as justification to reduce funding, decertify, or penalize in any way under section 60105, 60106, or 60107 a State authority that has in effect a certification under section 60105 or an agreement under section 60106;

and

(bb) shall—

(AA) submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a list of States found to be noncompliant with subclause (I) during the annual program evaluation; and

(BB) Provide a written notice to each State authority described in item (aa) that is not in compliance with the requirements of subclause (I).

(ii) Review.—Each plan or procedural manual made available under subparagraph (C)(i) shall be reexamined—

- (I) on significant change to the plans or procedural manual, as applicable;
- (II) on significant change to the gas distribution system of the operator, as applicable;
- and
- (III) not less frequently than once every 5 years.

(iii) Context of review.—The Secretary may conduct a review under clause (i) or (ii) as an element of the inspection of the operator carried out by the Secretary.

(iv) Inadequate programs.—If the Secretary determines that the documents reviewed under clause (i) or (ii) do not comply with the requirements of this chapter (including regulations to implement this chapter), have not been adequately implemented, or are inadequate for the safe operation of a pipeline facility, the Secretary may conduct proceedings under this chapter

(f) Certification of pipeline integrity management program performance.—The Secretary shall establish procedures requiring certification of annual and semi-annual pipeline integrity management program performance reports by a senior executive officer of the company operating a pipeline subject to this chapter. The procedures shall require a signed statement, which may be effected electronically in accordance with the provisions of the Electronic Signatures in Global and National Commerce Act (15 U.S.C. 7001 et seq.), certifying that—

- (1) the signing officer has reviewed the report; and
- (2) to the best of such officer's knowledge and belief, the report is true and complete.

(g) Hazardous Liquid Pipeline Facilities.—

(1) Integrity Assessments.—Notwithstanding any pipeline integrity management program or integrity assessment schedule otherwise required by the Secretary, each operator of a pipeline facility to which this subsection applies shall ensure that pipeline integrity assessments—

(A) using internal inspection technology appropriate for the integrity threat are completed not less often than once every 12 months; and

(B) using pipeline route surveys, depth of cover surveys, pressure tests, external corrosion direct assessment, or other technology that the operator demonstrates can further the understanding of the condition of the pipeline facility are completed on a schedule based on the risk that the pipeline facility poses to the high consequence area in which the pipeline facility is located, but not less often than once every 12 months.

(2) Application.—This subsection shall apply to any underwater hazardous liquid pipeline facility located in a high consequence area—

(A) that is not an offshore pipeline facility; and

(B) any portion of which is located at depths greater than 150 feet under the surface of the water.

(3) High Consequence Area Defined.—For purposes of this subsection, the term 'high consequence area' has the meaning given that term in section 195.450 of title 49, Code of Federal Regulations.

(4) Inspection and Enforcement.—The Secretary shall conduct inspections under ~~section 60117(c)~~ section 60117(d) to determine whether each operator of a pipeline facility to which this subsection applies is complying with this section.

(5) Considerations.—In carrying out this subsection, each operator shall implement procedures that assess potential impacts by maritime equipment or other vessels, including anchors, anchor chains, or any other attached equipment.

§ 60110. Excess flow valves

(a) Application.—This section applies only to--

- (1) a natural gas distribution system installed after the effective date of regulations prescribed under this section; and
- (2) any other natural gas distribution system when repair to the system requires replacing a part to accommodate installing excess flow valves.

(b) Installation requirements and considerations.--Not later than April 24, 1994, the Secretary of Transportation shall prescribe standards on the circumstances, if any, under which an operator of a natural gas distribution system must install excess flow valves in the system. The Secretary shall consider--

- (1) the system design pressure;
- (2) the system operating pressure;
- (3) the types of customers to which the distribution system supplies gas, including hospitals, schools, and commercial enterprises;
- (4) the technical feasibility and cost of installing, operating, and maintaining the valve;
- (5) the public safety benefits of installing the valve;
- (6) the location of customer meters; and
- (7) other factors the Secretary considers relevant.

(c) Notification of availability.--(1) Not later than October 24, 1994, the Secretary shall prescribe standards requiring an operator of a natural gas distribution system to notify in writing its customers having lines in which excess flow valves are not required by law but can be installed according to the standards prescribed under subsection (e) of this section, of--

- (A) the availability of excess flow valves for installation in the system;
- (B) safety benefits to be derived from installation; and
- (C) costs associated with installation, maintenance, and replacement.

(2) The standards shall provide that, except when installation is required under subsection (b) of this section, excess flow valves shall be installed at the request of the customer if the customer will pay all costs associated with installation.

(d) Report.--If the Secretary decides under subsection (b) of this section that there are no circumstances under which an operator must install excess flow valves, the Secretary shall submit to Congress a report on the reasons for the decision not later than 30 days after the decision is made.

(e) Performance standards.--Not later than April 24, 1994, the Secretary shall develop standards for the performance of excess flow valves used to protect lines in a natural gas distribution system. The Secretary may adopt industry accepted performance standards in order to comply with the requirement under the preceding sentence. The standards shall be incorporated into regulations the Secretary prescribes under this section. All excess flow valves shall be installed according to the standards.

§ 60111. Financial responsibility for liquefied natural gas facilities

(a) Notice.--When the Secretary of Transportation believes that an operator of a liquefied natural gas facility does not have adequate financial responsibility for the facility, the Secretary may issue a notice to the operator about the inadequacy and the amount of financial responsibility the Secretary considers adequate.

(b) Hearings.--An operator receiving a notice under subsection (a) of this section may have a hearing on the record not later than 30 days after receiving the notice. The operator may show why the Secretary should not issue an order requiring the operator to demonstrate and maintain financial responsibility in at least the amount the Secretary considers adequate.

(c) Orders.--After an opportunity for a hearing on the record, the Secretary may issue the order if the Secretary decides it is justified in the public interest.

§ 60112. Pipeline facilities hazardous to life and property

(a) General authority.--After notice and an opportunity for a hearing, the Secretary of Transportation may decide that a pipeline facility is hazardous if the Secretary decides that--

- (1) operation of the facility is or would be hazardous to life, property, or the environment; or

(2) the facility is or would be constructed or operated, or a component of the facility is or would be constructed or operated, with equipment, material, or a technique that the Secretary decides is hazardous to life, property, or the environment.

(b) Considerations.--In making a decision under subsection (a) of this section, the Secretary shall consider, if relevant--

- (1) the characteristics of the pipe and other equipment used in the pipeline facility, including the age, manufacture, physical properties, and method of manufacturing, constructing, or assembling the equipment;
- (2) the nature of the material the pipeline facility transports, the corrosive and deteriorative qualities of the material, the sequence in which the material are transported, and the pressure required for transporting the material;
- (3) the aspects of the area in which the pipeline facility is located, including climatic and geologic conditions and soil characteristics;
- (4) the proximity of the area in which the hazardous liquid pipeline facility is located to environmentally sensitive areas;
- (5) the population density and population and growth patterns of the area in which the pipeline facility is located;
- (6) any recommendation of the National Transportation Safety Board made under another law; and
- (7) other factors the Secretary considers appropriate.

(c) Opportunity for State comment.--The Secretary shall provide, to any appropriate official of a State in which a pipeline facility is located and about which a proceeding has begun under this section, notice and an opportunity to comment on an agreement the Secretary proposes to make to resolve the proceeding. State comment shall incorporate comments of affected local officials.

(d) Corrective action orders.--

- (1) In general.--If the Secretary decides under subsection (a) of this section that a pipeline facility is or would be hazardous, the Secretary shall order the operator of the facility to take necessary corrective action, including suspended or restricted use of the facility, physical inspection, testing, repair, replacement, or other appropriate action.
- (2) Actions attributable to an employee.--If, in the case of a corrective action order issued following an accident, the Secretary determines that the actions of an employee carrying out an activity regulated under this chapter, including duties under section 60102(a), may have contributed substantially to the cause of the accident, the Secretary shall direct the operator to relieve the employee from performing those activities, reassign the employee, or place the employee on leave until the earlier of the date on which--
 - (A) the Secretary, after notice and an opportunity for a hearing, determines that the employee's actions did not contribute substantially to the cause of the accident; or
 - (B) the Secretary determines the employee has been re-qualified or re-trained as provided for in section 60131 and can safely perform those activities.
- (3) Effect of collective bargaining agreements.--An action taken by an operator under paragraph (2) shall be in accordance with the terms and conditions of any applicable collective bargaining agreement.

(e) Waiver of notice and hearing in emergency.--The Secretary may waive the requirements for notice and an opportunity for a hearing under this section and issue expeditiously an order under this section if the Secretary decides failure to issue the order expeditiously will result in likely serious harm to life, property, or the environment. An order under this subsection shall provide an opportunity for a hearing as soon as practicable after the order is issued.

§ 60113. Customer-owned natural gas service lines

Not later than October 24, 1993, the Secretary of Transportation shall prescribe standards requiring an operator of a natural gas distribution pipeline that does not maintain customer-owned natural gas service lines up to building walls to advise its customers of--

- (1) the requirements for maintaining those lines;
- (2) any resources known to the operator that could assist customers in carrying out the maintenance;
- (3) information the operator has on operating and maintaining its lines that could assist customers; and
- (4) the potential hazards of not maintaining the lines.

§ 60114. One-call notification systems

(a) Minimum requirements.--The Secretary of Transportation shall prescribe standards providing minimum requirements for establishing and operating a one-call notification system for a State to adopt that will notify an operator of a pipeline facility of activity in the vicinity of the facility that could threaten the safety of the facility. The regulations shall include the following:

- (1) a requirement that the system apply to all areas of the State containing underground pipeline facilities.
- (2) a requirement that a person, including a government employee or contractor, intending to engage in an activity the Secretary decides could cause physical damage to an underground facility must contact the appropriate system to establish if there are underground facilities present in the area of the intended activity.
- (3) a requirement that all operators of underground pipeline facilities participate in an appropriate one-call notification system.
- (4) qualifications for an operator of a facility, a private contractor, or a State or local authority to operate a system.
- (5) procedures for advertisement and notice of the availability of a system.
- (6) a requirement about the information to be provided by a person contacting the system under clause (2) of this subsection.
- (7) a requirement for the response of the operator of the system and of the facility after they are contacted by an individual under this subsection.
- (8) a requirement that each State decide whether the system will be toll free.
- (9) a requirement for sanctions substantially the same as provided under sections 60120 and 60122 of this title.

(b) Marking facilities.--On notification by an operator of a damage prevention program or by a person planning to carry out demolition, excavation, tunneling, or construction in the vicinity of a pipeline facility, the operator of the facility shall mark accurately, in a reasonable and timely way, the location of the pipeline facilities in the vicinity of the demolition, excavation, tunneling, or construction.

(c) Relationship to other laws.--This section and regulations prescribed under this section do not affect the liability established under a law of the United States or a State for damage caused by an activity described in subsection (a)(2) of this section.

(d) Prohibition applicable to excavators.—A person who engages in demolition, excavation, tunneling, or construction—

- (1) may not engage in a demolition, excavation, tunneling, or construction activity in a State that has adopted a one-call notification system with out first using that system to establish the location of underground facilities in the demolition, excavation, tunneling, or construction area;
- (2) may not engage in such demolition, excavation, tunneling, or construction activity in disregard of location information or markings established by a pipeline facility operator pursuant to subsection (b); and
- (3) and who causes damage to a pipeline facility that may endanger life or cause serious bodily

harm or damage to property—

(A) may not fail to promptly report the damage to the owner or operator of the facility; and
(B) if the damage results in the escape of any flammable, toxic, or corrosive gas or liquid, may not fail to promptly report to other appropriate authorities by calling the 911 emergency telephone number.

(e) Prohibition applicable to underground pipeline facility owners and operators.—Any owner or operator of a pipeline facility who fails to respond to a location request in order to prevent damage to the pipeline facility or who fails to take reasonable steps, in response to such a request, to ensure accurate marking of the location of the pipeline facility in order to prevent damage to the pipeline facility shall be subject to a civil action under section 60120 or assessment of a civil penalty under section 60122.

(f) Limitation.—The Secretary may not conduct an enforcement proceeding under subsection (d) for a violation within the boundaries of a State that has the authority to impose penalties described in section 60134(b)(7) against persons who violate that State's damage prevention laws, unless the Secretary has determined that the State's enforcement is inadequate to protect safety, consistent with this chapter, and until the Secretary issues, through a rulemaking proceeding, the procedures for determining inadequate State enforcement of penalties.

(g) Technology development grants.—The Secretary may make grants to any organization or entity (not including for-profit entities) for the development of technologies that will facilitate the prevention of pipeline damage caused by demolition, excavation, tunneling, or construction activities, with emphasis on wireless and global positioning technologies having potential for use in connection with notification systems and underground facility locating and marking services. Funds provided under this subsection may not be used for lobbying or in direct support of litigation. The Secretary may also support such technology development through cooperative agreements with trade associations, academic institutions, and other organizations.

§ 60115. Technical safety standards committees

(a) Organization.--The Technical Pipeline Safety Standards Committee and the Technical Hazardous Liquid Pipeline Safety Standards Committee are committees in the Department of Transportation. The committees referred to in the preceding sentence shall serve as peer review committees for carrying out this chapter. Peer reviews conducted by the committees shall be treated for purposes of all Federal laws relating to risk assessment and peer review (including laws that take effect after the date of the enactment of the Accountable Pipeline Safety and Partnership Act of 1996) as meeting any peer review requirements of such laws.

(b) Composition and appointment.--(1) The Technical Pipeline Safety Standards Committee is composed of 15 members appointed by the Secretary of Transportation after consulting with public and private agencies concerned with the technical aspect of transporting gas or operating a gas pipeline facility. Each member must be experienced in the safety regulation of transporting gas and of gas pipeline facilities or technically qualified, by training, experience, or knowledge in at least one field of engineering applicable to transporting gas or operating a gas pipeline facility, to evaluate gas pipeline safety standards or risk management principles.

(2) The Technical Hazardous Liquid Pipeline Safety Standards Committee is composed of 15 members appointed by the Secretary after consulting with public and private agencies concerned with the technical aspect of transporting hazardous liquid or operating a hazardous liquid pipeline facility. Each member must be experienced in the safety regulation of transporting hazardous liquid and of hazardous liquid pipeline facilities or technically qualified, by training, experience, or knowledge in at least one field of engineering applicable to transporting hazardous liquid or operating a hazardous liquid pipeline facility, to evaluate hazardous liquid pipeline safety standards or risk management principles.

(3) The members of each committee are appointed as follows:

- (A) 5 individuals selected from departments, agencies, and instrumentalities of the United States Government and of the States.
 - (B) 5 individuals selected from the natural gas or hazardous liquid industry, as appropriate, after consulting with industry representatives.
 - (C) 5 individuals selected from the general public.
- (4)(A) Two of the individuals selected for each committee under paragraph (3)(A) of this subsection must be State commissioners. The Secretary shall consult with the national organization of State commissions before selecting those 2 individuals. State officials. The Secretary shall consult with national organizations representing State commissioners or utility regulators before making a selection under this subparagraph.
- (B) At least 3 of the individuals selected for each committee under paragraph (3)(B) of this subsection must be currently in the active operation of natural gas pipelines or hazardous liquid pipeline facilities, as appropriate. At least 1 of the individuals selected for each committee under paragraph (3)(B) shall have education, background, or experience in risk assessment and cost-benefit analysis. The Secretary shall consult with the national organizations representing the owners and operators of pipeline facilities before selecting individuals under paragraph (3)(B).
 - (C) Two of the individuals selected for each committee under paragraph (3)(C) of this subsection must have education, background, or experience in environmental protection or public safety. At least 1 of the individuals selected for each committee under paragraph (3)(C) shall have education, background, or experience in risk assessment and cost-benefit analysis. At least one individual selected for each committee under paragraph (3)(C) may not have a financial interest in the pipeline, petroleum, or natural gas industries.
 - (D) None of the individuals selected for a committee under paragraph (3)(C) may have a significant financial interest in the pipeline, petroleum, or gas industry.
- (5) Within 90 days of the date of enactment of the PIPES Act of 2016, the Secretary shall fill all vacancies on the Technical Pipeline Safety Standards Committee, the Technical Hazardous Liquid Pipeline Safety Standards Committee, and any other committee established pursuant to this section. After that period, the Secretary shall fill a vacancy on any such committee not later than 60 days after the vacancy occurs.
- (c) Committee reports on proposed standards.--(1) The Secretary shall give to--
- (A) the Technical Pipeline Safety Standards Committee each standard proposed under this chapter for transporting gas and for gas pipeline facilities including the risk assessment information and other analyses supporting each proposed standard; and
 - (B) the Technical Hazardous Liquid Pipeline Safety Standards Committee each standard proposed under this chapter for transporting hazardous liquid and for hazardous liquid pipeline facilities including the risk assessment information and other analyses supporting each proposed standard.
- (2) Not later than 90 days after receiving the proposed standard and supporting analyses, the appropriate committee shall prepare and submit to the Secretary a report on the technical feasibility, reasonableness, cost-effectiveness, and practicability of the proposed standard and include in the report recommended actions. The Secretary shall publish each report, including any recommended actions and minority views. The report if timely made is part of the proceeding for prescribing the standard. The Secretary is not bound by the conclusions of the committee. However, if the Secretary rejects the conclusions of the committee, the Secretary shall publish the reasons.
- (3) The Secretary may prescribe a standard after the end of the 90-day period.
- (d) Proposed committee standards and policy development recommendations.--(1) The Technical Pipeline Safety Standards Committee may propose to the Secretary a safety standard for transporting gas and for gas pipeline facilities. The Technical Hazardous Liquid Pipeline Safety Standards Committee may propose to the Secretary a safety standard for transporting hazardous liquid and for hazardous liquid pipeline facilities.
- (2) If requested by the Secretary, a committee shall make policy development recommendations to the Secretary.

(e) Meetings.--Each committee shall meet with the Secretary at least up to 4 times annually. Each committee proceeding shall be recorded. The record of the proceeding shall be available to the public.

(f) Expenses.--A member of a committee under this section is entitled to expenses under section 5703 of title 5. A payment under this subsection does not make a member an officer or employee of the Government. This subsection does not apply to members regularly employed by the Government.

§ 60116. Public education programs

(a) In general.--Each owner or operator of a gas or hazardous liquid pipeline facility shall carry out a continuing program to educate the public on the use of a one-call notification system prior to excavation and other damage prevention activities, the possible hazards associated with unintended releases from the pipeline facility, the physical indications that such a release may have occurred, what steps should be taken for public safety in the event of a pipeline release, and how to report such an event.

(b) Modification of existing programs.--Not later than 12 months after the date of enactment of the Pipeline Safety Improvement Act of 2002, each owner or operator of a gas or hazardous liquid pipeline facility shall review its existing public education program for effectiveness and modify the program as necessary. The completed program shall include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations. The completed program shall be submitted to the Secretary or, in the case of an intrastate pipeline facility operator, the appropriate State agency, and shall be periodically reviewed by the Secretary or, in the case of an intrastate pipeline facility operator, the appropriate State agency.

(c) Standards.--The Secretary may issue standards prescribing the elements of an effective public education program. The Secretary may also develop material for use in the program.

§ 60117. Administrative

(a) General authority.--To carry out this chapter, the Secretary of Transportation may conduct investigations, make reports, issue subpoena, conduct hearings, require the production of records, take depositions, and conduct research, testing, development, demonstration, and training activities and promotional activities relating to prevention of damage to pipeline facilities. The Secretary may not charge a tuition-type fee for training State or local government personnel in the enforcement of regulations prescribed under this chapter.

(b) Enforcement Procedures.—

(1) Process.—In implementing enforcement procedures under this chapter and part 190 of title 49, Code of Federal Regulations (or successor regulations), the Secretary shall—

(A) allow the respondent to request the use of a consent agreement and consent order to resolve any matter of fact or law asserted;

(B) allow the respondent and the agency to convene 1 or more meetings—

(i) for settlement or simplification of the issues; or

(ii) to aid in the disposition of issues;

(C) require that the case file in an enforcement proceeding include all agency records pertinent to the matters of fact and law asserted;

(D) allow the respondent to reply to each post-hearing submission of the agency;

(E) allow the respondent to request that a hearing be held, and an order be issued, on an expedited basis;

(F) require that the agency have the burden of proof, presentation, and persuasion in any enforcement matter;

(G) require that any order contain findings of relevant fact and conclusions of law;

(H) require the Office of Pipeline Safety to file a post-hearing recommendation not later than 30

- days after the deadline for any post-hearing submission of a respondent;
(I) require an order on a petition for reconsideration to be issued not later than 120 days after the date on which the petition is filed; and
(J) allow an operator to request that an issue of controversy or uncertainty be addressed through a declaratory order in accordance with section 554(e) of title 5.
- (2) Open to the public.—A hearing under this section shall be—
(A) noticed to the public on the website of the Pipeline and Hazardous Materials Safety Administration; and
(B) in the case of a formal hearing (as defined in section 190.3 of title 49, Code of Federal Regulations (or a successor regulation)), open to the public.
- (3) Transparency.—
(A) Agreements, orders, and judgments open to the public.—With respect to each enforcement proceeding under this chapter, the Administrator of the Pipeline and Hazardous Materials Safety Administration shall make publicly available on the website of the Administration—
(i) the charging documents;
(ii) the written response of the respondent, if filed; and
(iii) any consent agreement, consent order, order, or judgment resulting from a hearing under this chapter.
(B) GAO report on pipeline safety program collection and transparency of enforcement proceedings.—
(i) In general.—Not later than 2 years after the date of enactment of the PIPES Act of 2020, the Comptroller General of the United States shall—
(I) review information on pipeline enforcement actions that the Pipeline and Hazardous Materials Safety Administration makes publicly available on the internet; and
(II) submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report on that review, including any recommendations under clause (iii).
(ii) Contents.—The report under clause (i)(II) shall include—
(I) a description of the process that the Pipeline and Hazardous Materials Safety Administration uses to collect and record enforcement information;
(II) an assessment of whether and, if so, how the Pipeline and Hazardous Materials Safety Administration ensures that enforcement information is made available to the public in an accessible manner; and
(III) an assessment of the information described in clause (i)(I).
(iii) Recommendations.—The report under clause (i)(II) may include recommendations regarding—
(I) any improvements that could be made to the accessibility of the information described in clause (i)(I);
(II) whether and, if so, how the information described in clause (i)(I) could be made more transparent; and
(III) any other recommendations that the Comptroller General of the United States considers appropriate.
- (4) Savings clause.—Nothing in this subsection alters the procedures applicable to—
(A) an emergency order under subsection (p);
(B) a safety order under subsection (m); or
(C) a corrective action order under section 60112.

~~(b)~~(c) Records, reports, and information.--To enable the Secretary to decide whether a person owning or operating a pipeline facility is complying with this chapter and standards prescribed or orders issued under this chapter, the person shall--

- (1) maintain records, make reports, and provide information the Secretary requires; and
- (2) make the records, reports, and information available when the Secretary requests.

The Secretary may require owners and operators of gathering lines to provide the Secretary information pertinent to the Secretary's ability to make a determination as to whether and to what extent to regulate gathering lines.

~~(c)~~(d) Entry and inspection.--An officer, employee, or agent of the Department of Transportation designated by the Secretary, on display of proper credentials to the individual in charge, may enter premises to inspect the records and property of a person at a reasonable time and in a reasonable way to decide whether a person is complying with this chapter and standards prescribed or orders issued under this chapter.

~~(d)~~(e) Confidentiality of information.--Information related to a confidential matter referred to in section 1905 of title 18 that is obtained by the Secretary or an officer, employee, or agent in carrying out this section may be disclosed only to another officer or employee concerned with carrying out this chapter or in a proceeding under this chapter.

~~(e)~~(f) Use of accident reports.--(1) Each accident report made by an officer, employee, or agent of the Department may be used in a judicial proceeding resulting from the accident. The officer, employee, or agent may be required to testify in the proceeding about the facts developed in investigating the accident. The report shall be made available to the public in a way that does not identify an individual.
(2) Each report related to research and demonstration projects and related activities is public information.

~~(f)~~(g) Testing facilities involved in accidents.--The Secretary may require testing of a part of a pipeline facility subject to this chapter that has been involved in or affected by an accident only after--
(1) notifying the appropriate State official in the State in which the facility is located; and
(2) attempting to negotiate a mutually acceptable plan for testing with the owner of the facility and, when the Secretary considers appropriate, the National Transportation Safety Board.

~~(g)~~(h) Providing safety information.--On request, the Secretary shall provide the Federal Energy Regulatory Commission or appropriate State authority with information the Secretary has on the safety of material, operations, devices, or processes related to pipeline transportation or operating a pipeline facility.

~~(h)~~(i) Cooperation.--The Secretary may--
(1) advise, assist, and cooperate with other departments, agencies, and instrumentalities of the United States Government, the States, and public and private agencies and persons in planning and developing safety standards and ways to inspect and test to decide whether those standards have been complied with;
(2) consult with and make recommendations to other departments, agencies, and instrumentalities of the Government, State and local governments, and public and private agencies and persons to develop and encourage activities, including the enactment of legislation, that will assist in carrying out this chapter and improve State and local pipeline safety programs; and
(3) participate in a proceeding involving safety requirements related to a liquefied natural gas facility before the Commission or a State authority.

~~(i)~~(j) Promoting coordination.--(1) After consulting with appropriate State officials, the Secretary shall establish procedures to promote more effective coordination between departments, agencies, and instrumentalities of the Government and State authorities with regulatory authority over pipeline facilities about responses to a pipeline accident.
(2) In consultation with the Occupational Safety and Health Administration, the Secretary shall establish procedures to notify the Administration of any pipeline accident in which an excavator that has caused damage to a pipeline may have violated a regulation of the Administration.

~~(j)~~(k) Withholding information from Congress.--This section does not authorize information to be withheld from a committee of Congress authorized to have the information.

~~(k)~~(l) Authority for cooperative agreements.--To carry out this chapter, the Secretary may enter into grants, cooperative agreements, and other transactions with any person, agency, or instrumentality of the United States, any unit of State or local government, any educational institution, or any other entity

to further the objectives of this chapter. The objectives of this chapter include the development, improvement, and promotion of one-call damage prevention programs, research, risk assessment, and mapping.

~~(l) Safety orders.—If the Secretary decides that a pipeline facility has a potential safety-related condition, the Secretary may order the operator of the facility to take necessary corrective action, including physical inspection, testing, repair, replacement, or other appropriate action to remedy the safety-related condition.~~

~~(H)(m) Safety orders.—~~

~~(1) In general.—Not later than December 31, 2007, the Secretary shall issue regulations providing that, after notice and opportunity for a hearing, if the Secretary determines that a pipeline facility has a condition that poses a pipeline integrity risk to public safety, property, or the environment, the Secretary may order the operator of the facility to take necessary corrective action, including physical inspection, testing, repair, or other appropriate action, to remedy that condition.~~

~~(2) Considerations.—In making a determination under paragraph (1), the Secretary, if relevant and pursuant to the regulations issued under paragraph (1), shall consider—~~

~~(A) the considerations specified in paragraphs (1) through (6) of section 60112(b);~~

~~(B) the likelihood that the condition will impair the serviceability of a pipeline;~~

~~(C) the likelihood that the condition will worsen over time; and~~

~~(D) the likelihood that the condition is present or could develop on other areas of the pipeline.~~

~~(m)(n) Restoration of operations.—~~

~~(1) In general.—The Secretary may advise, assist, and cooperate with the heads of other departments, agencies, and instrumentalities of the United States Government, the States, and public and private agencies and persons to facilitate the restoration of pipeline operations that have been or are anticipated to become disrupted by man-made or natural disasters.~~

~~(2) Savings clause.—Nothing in this section alters or amends the authorities and responsibilities of any department, agency, or instrumentality of the United States Government, other than the Department of Transportation.~~

~~(n) Cost recovery for design reviews.—~~

~~(1) In general.—If the Secretary conducts facility design safety reviews in connection with a proposal to construct, expand, or operate a liquefied natural gas pipeline facility, the Secretary may require the person requesting such reviews to pay the associated staff costs relating to such reviews incurred by the Secretary in section 60301(d). The Secretary may assess such costs in any reasonable manner.~~

~~(2) Deposit.—The Secretary shall deposit all funds paid to the Secretary under this subsection into the Department of Treasury account 69-5172-0-2-407 or its successor account.~~

~~(3) Authorization of appropriations.—Funds deposited pursuant to this subsection are authorized to be appropriated for the purposes set forth in section 60301(d).~~

~~(n)(o) Cost Recovery for Design Reviews.—~~

~~(1) In general.—~~

~~(A) Review costs.—For any project described in subparagraph (B), if the Secretary conducts facility design safety reviews in connection with a proposal to construct, expand, or operate a gas or hazardous liquid pipeline facility or liquefied natural gas pipeline facility, including construction inspections and oversight, the Secretary may require the person proposing the project to pay the costs incurred by the Secretary relating to such reviews. If the Secretary exercises the cost recovery authority described in this paragraph, the Secretary shall prescribe a fee structure and assessment methodology that is based on the costs of providing these reviews and shall prescribe procedures to collect fees under this paragraph. The Secretary may not collect design safety review fees under this paragraph and section 60301 for the same design safety review.~~

~~(B) Projects to which applicable.—Subparagraph (A) applies to any project that—~~

~~(i) has design and construction costs totaling at least \$2,500,000,000, as periodically adjusted by the Secretary to take into account increases in the Consumer Price Index for all-urban consumers published by the Department of Labor, based on—~~

(I) the cost estimate provided to the Federal Energy Regulatory Commission in an application for a certificate of public convenience and necessity for a gas pipeline facility or an application for authorization for a liquefied natural gas pipeline facility; or
(II) a good faith estimate developed by the person proposing a hazardous liquid pipeline facility and submitted to the Secretary; or

(ii) uses new or novel technologies or design, as determined by the Secretary.

(2) Notification.—For any new pipeline facility construction project in which the Secretary will conduct design reviews, the person proposing the project shall notify the Secretary and provide the design specifications, construction plans and procedures, and related materials at least 120 days prior to the commencement of construction. To the maximum extent practicable, not later than 90 days after receiving such design specifications, construction plans and procedures, and related materials, the Secretary shall provide written comments, feedback, and guidance on the project.

(3) Pipeline safety decision review fund.—

(A) Establishment.—There is established a Pipeline Safety Design Review Fund in the Treasury of the United States.

(B) Deposits.—The Secretary shall deposit funds paid under this subsection into the Fund.

(C) Use.—Amounts in the Fund shall be available to the Secretary, in amounts specified in appropriations Acts, to offset the costs of conducting facility design safety reviews under this subsection.

(4) No additional permitting authority.—Nothing in this subsection may be construed as authorizing the Secretary to require a person to obtain a permit before beginning design and construction in connection with a project described in paragraph (1)(B).

~~(e)~~(p) Emergency Order Authority.—

(1) In General.—If the Secretary determines that an unsafe condition or practice, or a combination of unsafe conditions and practices, constitutes or is causing an imminent hazard, the Secretary may issue an emergency order described in paragraph (3) imposing emergency restrictions, prohibitions, and safety measures on owners and operators of gas or hazardous liquid pipeline facilities without prior notice or an opportunity for a hearing, but only to the extent necessary to abate the imminent hazard.

(2) Considerations.—

(A) In General.—Before issuing an emergency order under paragraph (1), the Secretary shall consider, as appropriate, the following factors:

(i) The impact of the emergency order on public health and safety.

(ii) The impact, if any, of the emergency order on the national or regional economy or national security.

(iii) The impact of the emergency order on the ability of owners and operators of pipeline facilities to maintain reliability and continuity of service to customers.

(B) Consultation.—In considering the factors under subparagraph (A), the Secretary shall consult, as the Secretary determines appropriate, with appropriate Federal agencies, State agencies, and other entities knowledgeable in pipeline safety or operations.

(3) Written Order.—An emergency order issued by the Secretary pursuant to paragraph (1) with respect to an imminent hazard shall contain a written description of—

(A) the violation, condition, or practice that constitutes or is causing the imminent hazard;

(B) the entities subject to the order;

(C) the restrictions, prohibitions, or safety measures imposed;

(D) the standards and procedures for obtaining relief from the order;

(E) how the order is tailored to abate the imminent hazard and the reasons the authorities under section 60112 and ~~60117~~(4) subsection (m) are insufficient to do so; and

(F) how the considerations were taken into account pursuant to paragraph (2).

(4) Opportunity For Review.—Upon receipt of a petition for review from an entity subject to, and aggrieved by, an emergency order issued under this subsection, the Secretary shall provide an opportunity for a review of the order under section 554 of title 5 to determine whether the order should remain in effect, be modified, or be terminated.

(5) Expiration Of Effectiveness Order.—If a petition for review of an emergency order is filed under paragraph (4) and an agency decision with respect to the petition is not issued on or before the last

day of the 30-day period beginning on the date on which the petition is filed, the order shall cease to be effective on such day, unless the Secretary determines in writing on or before the last day of such period that the imminent hazard still exists.

(6) Judicial Review Of Orders.—

(A) In General.—After completion of the review process described in paragraph (4), or the issuance of a written determination by the Secretary pursuant to paragraph (5), an entity subject to, and aggrieved by, an emergency order issued under this subsection may seek judicial review of the order in a district court of the United States and shall be given expedited consideration.

(B) Limitation.—The filing of a petition for review under subparagraph (A) shall not stay or modify the force and effect of the agency's final decision under paragraph (4), or the written determination under paragraph (5), unless stayed or modified by the Secretary.

(7) Regulations.—

(A) Temporary Regulations.—Not later than 60 days after the date of enactment of the PIPES Act of 2016, the Secretary shall issue such temporary regulations as are necessary to carry out this subsection. The temporary regulations shall expire on the date of issuance of the final regulations required under subparagraph (B).

(B) Final Regulations.—Not later than 270 days after such date of enactment, the Secretary shall issue such regulations as are necessary to carry out this subsection. Such regulations shall ensure that the review process described in paragraph (4) contains the same procedures as subsections (d) and (g) of section 109.19 of title 49, Code of Federal Regulations, and is otherwise consistent with the review process developed under such section, to the greatest extent practicable and not inconsistent with this section.

(8) Imminent Hazard Defined.—In this subsection, the term ‘imminent hazard’ means the existence of a condition relating to a gas or hazardous liquid pipeline facility that presents a substantial likelihood that death, serious illness, severe personal injury, or a substantial endangerment to health, property, or the environment may occur before the reasonably foreseeable completion date of a formal proceeding begun to lessen the risk of such death, illness, injury, or endangerment.

(9) Limitation And Savings Clause.—An emergency order issued under this subsection may not be construed to—

(A) alter, amend, or limit the Secretary's obligations under, or the applicability of, section 553 of title 5; or

(B) provide the authority to amend the Code of Federal Regulations.

§ 60118. Compliance and waivers

(a) General requirements.--A person owning or operating a pipeline facility shall--

(1) comply with applicable safety standards prescribed under this chapter, except as provided in this section or in section 60126;

(2) prepare and carry out a plan for inspection and maintenance required under section 60108(a) and (b) of this title;

(3) allow access to or copying of records, make reports and provide information, and allow entry or inspection required under ~~section 60117(a) to (d)~~ subsections (a) through (e) of section 60117 of this title; and

(4) conduct a risk analysis, and adopt and implement an integrity management program, for pipeline facilities as required under section 60109(c).

(b) Compliance orders.--The Secretary of Transportation may issue orders directing compliance with this chapter, an order under section 60126, or a regulation prescribed under this chapter. An order shall state clearly the action a person must take to comply.

(c) Waivers by Secretary.--~~On application of a person owning or operating a pipeline facility, the Secretary by order may waive compliance with any part of an applicable standard prescribed under this chapter on terms the Secretary considers appropriate, if the waiver is not inconsistent with pipeline safety. The Secretary shall state the reasons for granting a waiver under this subsection. The Secretary may act on a waiver only after notice and an opportunity for a hearing.~~

(c) Waivers by Secretary.—

(1) Nonemergency waivers.—

(A) In general.—On application of an owner or operator of a pipeline facility, the Secretary by order may waive compliance with any part of an applicable standard prescribed under this chapter with respect to such facility on terms the Secretary considers appropriate if the Secretary determines that the waiver is not inconsistent with pipeline safety.

(B) Hearing.—The Secretary may act on a waiver under this paragraph only after notice and an opportunity for a hearing.

(2) Emergency waivers.—

(A) In general.—The Secretary by order may waive compliance with any part of an applicable standard prescribed under this chapter on terms the Secretary considers appropriate without prior notice and comment if the Secretary determines that—

(i) it is in the public interest to grant the waiver;

(ii) the waiver is not inconsistent with pipeline safety; and

(iii) the waiver is necessary to address an actual or impending emergency involving pipeline transportation, including an emergency caused by a natural or manmade disaster.

(B) Period of waiver.—A waiver under this paragraph may be issued for a period of not more than 60 days and may be renewed upon application to the Secretary only after notice and an opportunity for a hearing on the waiver. The Secretary shall immediately revoke the waiver if continuation of the waiver would not be consistent with the goals and objectives of this chapter.

(3) Statement of reasons.—The Secretary shall state in an order issued under this subsection the reasons for granting the waiver.

(d) Waivers by State authorities.--If a certification under section 60105 of this title or an agreement under section 60106 of this title is in effect, the State authority may waive compliance with a safety standard to which the certification or agreement applies in the same way and to the same extent the Secretary may waive compliance under subsection (c) of this section. However, the authority must give the Secretary written notice of the waiver at least 60 days before its effective date. If the Secretary makes a written objection before the effective date of the waiver, the waiver is stayed. After notifying the authority of the objection, the Secretary shall provide a prompt opportunity for a hearing. The Secretary shall make the final decision on granting the waiver.

~~(e) Operator assistance in investigations.—If the Secretary or the National Transportation Safety Board investigate an accident involving a pipeline facility, the operator of the facility shall make available to the Secretary or the Board all records and information that in any way pertain to the accident (including integrity management plans and test results), and shall afford all reasonable assistance in the investigation of the accident.~~

(1) Assistance and Access.— If the Secretary or the National Transportation Safety Board investigates an accident or incident involving a pipeline facility, the operator of the facility shall—

(A) make available to the Secretary or the Board all records and information that in any way pertain to the accident or incident, including integrity management plans and test results; and

(B) afford all reasonable assistance in the investigation of the accident or incident.

(2) Operator Assistance in Investigations.—

(A) In general.—The Secretary may impose a civil penalty under section 60122 on a person who obstructs or prevents the Secretary from carrying out inspections or investigations under this chapter.

(B) Obstructs Defined.—

(i) In General.—In this paragraph, the term “obstructs” includes actions that were known, or reasonably should have been known, to prevent, hinder, or impede an investigation without good cause.

(ii) Good cause.—In clause (i), the term “good cause” may include actions such as restricting access to facilities that are not secure or safe for nonpipeline personnel or visitors.

(f) Limitation on statutory construction.--Nothing in this section may be construed to infringe upon the constitutional rights of an operator or its employees.

§ 60119. Judicial review

(a) Review of Regulations ~~and waiver orders~~, Orders, and Other Final Agency Actions.--(1) Except as provided in subsection (b) of this section, a person adversely affected by a regulation prescribed under this chapter or an order issued ~~about an application for a waiver under section 60118(c) or (d) of this title~~ under this chapter may apply for review of the regulation or order by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit or in the court of appeals of the United States for the circuit in which the person resides or has its principal place of business. The petition must be filed not later than 89 days after the regulation is prescribed or order is issued. The clerk of the court immediately shall send a copy of the petition to the Secretary of Transportation.

(2) A judgment of a court under paragraph (1) of this subsection may be reviewed only by the Supreme Court under section 1254 of title 28. A remedy under paragraph (1) is in addition to any other remedies provided by law.

(3) A judicial review of agency action under this section shall apply the standards of review established in section 706 of title 5.

(b) Review of financial responsibility orders.--(1) A person adversely affected by an order issued under section 60111 of this title may apply for review of the order by filing a petition for review in the appropriate court of appeals of the United States. The petition must be filed not later than 60 days after the order is issued. Findings of fact the Secretary makes are conclusive if supported by substantial evidence.

(2) A judgment of a court under paragraph (1) of this subsection may be reviewed only by the Supreme Court under section 1254(1) of title 28.

§ 60120. Enforcement

(a) Civil actions

(1) Civil actions to enforce this chapter.--At the request of the Secretary of Transportation, the Attorney General may bring a civil action in an appropriate district court of the United States to enforce this chapter, including section 60112, or a regulation prescribed or order issued under this chapter. The court may award appropriate relief, including a temporary or permanent injunction, punitive damages, and assessment of civil penalties, considering the same factors as prescribed for the Secretary in an administrative case under section 60122. The maximum amount of civil penalties for administrative enforcement actions under section 60122 shall not apply to enforcement actions under this section.

(2) Civil actions to require compliance with subpoenas or allow for inspections.--At the request of the Secretary, the Attorney General may bring a civil action in a district court of the United States to require a person to comply immediately with a subpoena or to allow an officer, employee, or agent authorized by the Secretary to enter the premises, and inspect the records and property, of the person to decide whether the person is complying with this chapter. The action may be brought in the judicial district in which the defendant resides, is found, or does business. The court may punish a failure to obey the order as a contempt of court.

(b) Jury trial demand.--In a trial for criminal contempt for violating an injunction issued under this section, the violation of which is also a violation of this chapter, the defendant may demand a jury trial. The defendant shall be tried as provided in rule 42(b) of the Federal Rules of Criminal Procedure (18 App. U.S.C.).

(c) Effect on tort liability.--This chapter does not affect the tort liability of any person.

§ 60121. Actions by private persons

(a) General authority.--(1) A person may bring a civil action in an appropriate district court of the United States for an injunction against another person (including the United States Government and other governmental authorities to the extent permitted under the 11th amendment to the Constitution) for a violation of this chapter or a regulation prescribed or order issued under this chapter. However, the person—

(A) may bring the action only after 60 days after the person has given notice of the violation to the Secretary of Transportation or to the appropriate State authority (when the violation is alleged to have occurred in a State certified under section 60105 of this title) and to the person alleged to have committed the violation;

(B) may not bring the action if the Secretary or authority has begun and diligently is pursuing an administrative proceeding for the violation; and

(C) may not bring the action if the Attorney General of the United States, or the chief law enforcement officer of a State, has begun and diligently is pursuing a judicial proceeding for the violation.

(2) The Secretary shall prescribe the way in which notice is given under this subsection.

(3) The Secretary, with the approval of the Attorney General, or the Attorney General may intervene in an action under paragraph (1) of this subsection.

(b) Costs and fees.--The court may award costs, reasonable expert witness fees, and a reasonable attorney's fee to a prevailing plaintiff in a civil action under this section. The court may award costs to a prevailing defendant when the action is unreasonable, frivolous, or meritless. In this subsection, a reasonable attorney's fee is a fee--

(1) based on the actual time spent and the reasonable expenses of the attorney for legal services provided to a person under this section; and

(2) computed at the rate prevailing for providing similar services for actions brought in the court awarding the fee.

(c) State violations as violations of this chapter.--In this section, a violation of a safety standard or practice of a State is deemed to be a violation of this chapter or a regulation prescribed or order issued under this chapter only to the extent the standard or practice is not more stringent than a comparable minimum safety standard prescribed under this chapter.

(d) Additional remedies.--A remedy under this section is in addition to any other remedies provided by law. This section does not restrict a right to relief that a person or a class of persons may have under another law or at common law.

§ 60122. Civil penalties

(a) General penalties.--(1) A person that the Secretary of Transportation decides, after written notice and an opportunity for a hearing, has violated section ~~60114(b)~~ **60114(b), 60114(d)**, or 60118(a) of this title or a regulation prescribed or order issued under this chapter is liable to the United States Government for a civil penalty of not more than ~~\$100,000~~ **\$200,000** for each violation. A separate violation occurs for each day the violation continues. The maximum civil penalty under this paragraph for a related series of violations is ~~\$1,000,000~~ **\$2,000,000**.

(2) A person violating a standard or order under section 60103 or 60111 of this title is liable to the Government for a civil penalty of not more than \$50,000 for each violation. A penalty under this paragraph may be imposed in addition to penalties imposed under paragraph (1) of this subsection.

(3) A person violating section 60129, or an order issued thereunder, is liable to the Government for a civil penalty of not more than \$1,000 for each violation. The penalties provided by paragraph (1) do not apply to a violation of section 60129 or an order issued thereunder.

(b) Penalty considerations.--In determining the amount of a civil penalty under this section--

(1) the Secretary shall consider--

- (A) the nature, circumstances, and gravity of the violation, including adverse impact on the environment;
 - (B) with respect to the violator, the degree of culpability, any history of prior violations, the ability to pay, and any effect on ability to continue doing business; and
 - (C) good faith in attempting to comply; and
 - (D) self-disclosure and correction of violations, or actions to correct a violation, prior to discovery by the Pipeline and Hazardous Materials Safety Administration; and
- (2) the Secretary may consider--
- (A) the economic benefit gained from the violation without any reduction because of subsequent damages; and
 - (B) other matters that justice requires.
- (c) Collection and compromise.--(1) The Secretary may request the Attorney General to bring a civil action in an appropriate district court of the United States to collect a civil penalty imposed under this section.
- (2) The Secretary may compromise the amount of a civil penalty imposed under this section before referral to the Attorney General.
- (d) Setoff.--The Government may deduct the amount of a civil penalty imposed or compromised under this section from amounts it owes the person liable for the penalty.
- (e) Deposit in Treasury.--Amounts collected under this section shall be deposited in the Treasury as miscellaneous receipts.
- (f) Prohibition on multiple penalties for same act.--Separate penalties for violating a regulation prescribed under this chapter and for violating an order under section 60112 or 60118(b) of this title may not be imposed under this chapter if both violations are based on the same act.

§ 60123. Criminal penalties

- (a) General penalty.--A person knowingly and willfully violating section 60114(b), 60118(a), or 60128 of this title or a regulation prescribed or order issued under this chapter shall be fined under title 18, imprisoned for not more than 5 years, or both.
- (b) Penalty for damaging or destroying facility.--A person knowingly and willfully damaging or destroying an interstate gas pipeline facility, an interstate hazardous liquid pipeline facility, or either an intrastate gas pipeline facility or intrastate hazardous liquid pipeline facility that is used in interstate or foreign commerce or in any activity affecting interstate or foreign commerce, or attempting or conspiring to do such an act, shall be fined under title 18, imprisoned for not more than 20 years, or both, and, if death results to any person, shall be imprisoned for any term of years or for life.
- (c) Penalty for damaging or destroying sign.--A person knowingly and willfully defacing, damaging, removing, or destroying a pipeline sign or right-of-way marker required by a law or regulation of the United States shall be fined under title 18, imprisoned for not more than one year, or both.
- (d) Penalty for not using one-call notification system or not heeding location information or markings.--A person shall be fined under title 18, imprisoned for not more than 5 years, or both, if the person--
- (1) knowingly and willfully engages in an excavation activity--
 - (A) without first using an available one-call notification system to establish the location of underground facilities in the excavation area; or
 - (B) without paying attention to appropriate location information or markings the operator of a pipeline facility establishes; and
 - (2) subsequently damages--
 - (A) a pipeline facility that results in death, serious bodily harm, or actual damage to property of more than \$50,000;

- (B) a pipeline facility, and knows or has reason to know of the damage, but does not report the damage promptly to the operator of the pipeline facility and to other appropriate authorities; or
- (C) a hazardous liquid pipeline facility that results in the release of more than 50 barrels of product.

Penalties under this subsection may be reduced in the case of a violation that is promptly reported by the violator.

§ 60124. Biennial reports

(a) Submission and contents.--Not later than August 15, 1997, and every 2 years thereafter, the Secretary of Transportation shall submit to Congress a report on carrying out this chapter for the 2 immediately preceding calendar years for gas and a report on carrying out this chapter for such period for hazardous liquid. Each report shall include the following information about the prior year for gas or hazardous liquid, as appropriate:

- (1) a thorough compilation of the leak repairs, accidents, and casualties and a statement of cause when investigated and established by the National Transportation Safety Board.
- (2) a list of applicable pipeline safety standards prescribed under this chapter including identification of standards prescribed during the year.
- (3) a summary of the reasons for each waiver granted under section 60118(c) and (d) of this title.
- (4) an evaluation of the degree of compliance with applicable safety standards, including a list of enforcement actions and compromises of alleged violations by location and company name.
- (5) a summary of outstanding problems in carrying out this chapter, in order of priority.
- (6) an analysis and evaluation of--
 - (A) research activities, including their policy implications, completed as a result of the United States Government and private sponsorship; ~~and~~
 - (B) technological progress in safety achieved; ~~and~~
 - (C) a summary of each research and development project carried out with Federal and non-Federal entities pursuant to section 12 of the Pipeline Safety Improvement Act of 2002 and a review of how the project affects safety.
- (7) a list, with a brief statement of the issues, of completed or pending judicial actions under this chapter.
- (8) the extent to which technical information was distributed to the scientific community and consumer-oriented information was made available to the public.
- (9) a compilation of certifications filed under section 60105 of this title that were--
 - (A) in effect; or
 - (B) rejected in any part by the Secretary and a summary of the reasons for each rejection.
- (10) a compilation of agreements made under section 60106 of this title that were--
 - (A) in effect; or
 - (B) ended in any part by the Secretary and a summary of the reasons for ending each agreement.
- (11) a description of the number and qualifications of State pipeline safety inspectors in each State for which a certification under section 60105 of this title or an agreement under section 60106 of this title is in effect and the number and qualifications of inspectors the Secretary recommends for that State.
- (12) recommendations for legislation the Secretary considers necessary--
 - (A) to promote cooperation among the States in improving--
 - (i) gas pipeline safety; or
 - (ii) hazardous liquid pipeline safety programs; and
 - (B) to strengthen the national gas pipeline safety program.

(b) Submission of one report.--The Secretary may submit one report to carry out subsection (a) of this section.

§ 60125. Authorization of appropriations

(a) Gas and hazardous liquid. --

(1) In general.—From fees collected under section 60301, there are authorized to be appropriated to the Secretary to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355) and the provisions of this chapter relating to gas and hazardous liquid—

(A) \$156,400,000 for fiscal year 2021, of which--

(i) \$9,000,000 shall be used to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355); and

(ii) \$63,000,000 shall be used for making grants;

(B) \$158,500,000 for fiscal year 2022, of which—

(i) \$9,000,000 shall be used to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355); and

(ii) \$66,000,000 shall be used for making grants; and

(C) \$162,700,000 for fiscal year 2023, of which—

(i) \$9,000,000 shall be used to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355); and

(ii) \$69,000,000 shall be used for making grants.

(2) Trust fund amounts.—In addition to the amounts authorized to be appropriated under paragraph (1), there are authorized to be appropriated from the Oil Spill Liability Trust Fund established by section 9509(a) of the Internal Revenue Code of 1986 to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355) and the provisions of this chapter relating to hazardous liquid—

(A) \$27,000,000 for fiscal year 2021, of which--

(i) \$3,000,000 shall be used to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355); and

(ii) \$11,000,000 shall be used for making grants;

(B) \$27,650,000 for fiscal year 2022, of which—

(i) \$3,000,000 shall be used to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355); and

(ii) \$12,000,000 shall be used for making grants; and

(C) \$28,700,000 for fiscal year 2023, of which—

(i) \$3,000,000 shall be used to carry out section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355); and

(ii) \$13,000,000 shall be used for making grants.

(3) Underground natural gas storage facility safety account.—From fees collected under section 60302, there is authorized to be appropriated to the Secretary to carry out section 60141 \$8,000,000 for each of fiscal years 2021 through 2023.

(4) Recruitment and retention.—From amounts made available to the Secretary under paragraphs (1) and (2), the Secretary shall use—

(A) \$1,520,000 to carry out section 102(b)(1) of the PIPES Act of 2020, of which—

(i) \$1,292,000 shall be from amounts made available under paragraph (1)(A); and

(ii) \$228,000 shall be from amounts made available under paragraph (2)(A);

(B) \$2,300,000 to carry out section 102(b)(2)(A) of the PIPES Act of 2020, of which—

(i) \$1,955,000 shall be from amounts made available under paragraph (1)(A); and

(ii) \$345,000 shall be from amounts made available under paragraph (2)(A);

(C) \$1,600,000 to carry out section 102(b)(2)(B) of the PIPES Act of 2020, of which—

(i) \$1,360,000 shall be from amounts made available under paragraph (1)(B); and

(ii) \$240,000 shall be from amounts made available under paragraph (2)(B);

(D) \$1,800,000 to carry out section 102(b)(2)(C) of the PIPES Act of 2020, of which—

(i) \$1,530,000 shall be from amounts made available under paragraph (1)(C); and

(ii) \$270,000 shall be from amounts made available under paragraph (2)(C);

(E) \$2,455,000 to carry out section 102(c) of the PIPES Act of 2020 in fiscal year 2021, of which—

(i) \$2,086,750 shall be from amounts made available under paragraph (1)(A); and

(ii) \$368,250 shall be from amounts made available under paragraph (2)(A);
(F) \$2,455,000 to carry out section 102(c) of the PIPES Act of 2020 in fiscal year 2022, of
which—

(i) \$2,086,750 shall be from amounts made available under paragraph (1)(B); and

(ii) \$368,250 shall be from amounts made available under paragraph (2)(B); and

(G) \$2,455,000 to carry out section 102(c) of the PIPES Act of 2020 in fiscal year 2023, of
which—

(i) \$2,086,750 shall be from amounts made available under paragraph (1)(C); and

(ii) \$368,250 shall be from amounts made available under paragraph (2)(C).

~~(a) Gas and hazardous liquid.—To carry out this chapter (except for section 60107) related to gas and hazardous liquid, the following amounts are authorized to be appropriated to the Department of Transportation:~~

~~(1) \$45,800,000 for fiscal year 2003, of which \$31,900,000 is to be derived from user fees for fiscal year 2003 collected under section 60301 of this title.~~

~~(2) \$46,800,000 for fiscal year 2004, of which \$35,700,000 is to be derived from user fees for fiscal year 2004 collected under section 60301 of this title.~~

~~(3) \$47,100,000 for fiscal year 2005, of which \$41,100,000 is to be derived from user fees for fiscal year 2005 collected under section 60301 of this title.~~

~~(4) \$50,000,000 for fiscal year 2006, of which \$45,000,000 is to be derived from user fees for fiscal year 2006 collected under section 60301 of this title.~~

~~(a) Gas and hazardous liquid.—~~

~~(1) In general.—To carry out the provisions of this chapter related to gas and hazardous liquid and section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355), there is authorized to be appropriated to the Department of Transportation for each of fiscal years 2012 through 2015, from fees collected under section 60301, \$90,679,000, of which \$4,746,000 is for carrying out such section 12 and \$36,194,000 is for making grants. there is authorized to be appropriated to the Department of Transportation from fees collected under section 60301—~~

~~(A) \$124,500,000 for fiscal year 2016, of which \$9,000,000 shall be expended for carrying out such section 12 and \$39,385,000 shall be expended for making grants;~~

~~(B) \$128,000,000 for fiscal year 2017, of which \$9,000,000 shall be expended for carrying out such section 12 and \$41,885,000 shall be expended for making grants;~~

~~(C) \$131,000,000 for fiscal year 2018, of which \$9,000,000 shall be expended for carrying out such section 12 and \$44,885,000 shall be expended for making grants; and~~

~~(D) \$134,000,000 for fiscal year 2019, of which \$9,000,000 shall be expended for carrying out such section 12 and \$47,885,000 shall be expended for making grants.~~

~~the following amounts are authorized to be appropriated to the Department of Transportation from fees collected under section 60301 in each respective year:~~

~~(A) For fiscal year 2007, \$60,175,000 of which \$7,386,000 is for carrying out such section 12 and \$17,556,000 is for making grants;~~

~~(B) For fiscal year 2008, \$67,118,000 of which \$7,586,000 is for carrying out such section 12 and \$20,614,000 is for making grants;~~

~~(C) For fiscal year 2009, \$72,045,000 of which \$7,586,000 is for carrying out such section 12 and \$21,513,000 is for making grants;~~

~~(D) For fiscal year 2010, \$76,580,000 of which \$7,586,000 is for carrying out subsection 12 and \$22,252,000 is for making grants.~~

~~(2) Trust fund amounts.—In addition to the amounts authorized to be appropriated by paragraph (1) the following amounts are authorized from the Oil Spill Liability Trust Fund to carry out the provisions of this chapter related to hazardous liquid and section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107-355):~~

~~(A) For fiscal year 2007, \$18,810,000 of which \$4,207,000 is for carrying out such section 12 and \$2,682,000 is for making grants;~~

~~(B) For fiscal year 2008, \$19,000,000 of which \$4,207,000 is for carrying out such section 12 and \$2,682,000 is for making grants;~~

~~(C) For fiscal year 2009, \$19,500,000 of which \$4,207,000 is for carrying out such section 12 and \$3,103,000 is for making grants;~~

~~(D) For fiscal year 2010, \$20,000,000 of which \$4,207,000 is for carrying out such section 12 \$3,603,000 is for making grants.~~

~~(2) Trust fund amounts.—In addition to the amounts authorized to be appropriated by paragraph (1), there is authorized to be appropriated for each of fiscal years 2012 through 2015 from the Oil Spill Liability Trust Fund to carry out the provisions of this chapter related to hazardous liquid and section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107–355), \$18,573,000, of which \$2,174,000 is for carrying out such section 12 and \$4,558,000 is for making grants; there is authorized to be appropriated from the Oil Spill Liability Trust Fund to carry out the provisions of this chapter related to hazardous liquid and section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107–355)~~

~~(A) \$22,123,000 for fiscal year 2016, of which \$3,000,000 shall be expended for carrying out such section 12 and \$8,067,000 shall be expended for making grants;~~

~~(B) \$22,123,000 for fiscal year 2017, of which \$3,000,000 shall be expended for carrying out such section 12 and \$8,067,000 shall be expended for making grants;~~

~~(C) \$23,000,000 for fiscal year 2018, of which \$3,000,000 shall be expended for carrying out such section 12 and \$8,067,000 shall be expended for making grants; and~~

~~(D) \$23,000,000 for fiscal year 2019, of which \$3,000,000 shall be expended for carrying out such section 12 and \$8,067,000 shall be expended for making grants.~~

~~(3) Underground natural gas storage facility safety account.—To carry out section 60141, there is authorized to be appropriated to the Department of Transportation from fees collected under section 60302 \$8,000,000 for each of fiscal years 2017 through 2019.~~

~~(b) State grants.—(1) Not more than the following amounts may be appropriated to the Secretary to carry out section 60107 of this title:~~

~~(A) \$19,800,000 for fiscal year 2003, of which \$14,800,000 is to be derived from user fees for fiscal year 2003 collected under section 60301 of this title.~~

~~(B) \$21,700,000 for fiscal year 2004, of which \$16,700,000 is to be derived from user fees for fiscal year 2004 collected under section 60301 of this title.~~

~~(C) \$24,600,000 for fiscal year 2005, of which \$19,600,000 is to be derived from user fees for fiscal year 2005 collected under section 60301 of this title.~~

~~(D) \$26,500,000 for fiscal year 2006, of which \$21,500,000 is to be derived from user fees for fiscal year 2006 collected under section 60301 of this title.~~

~~(2) At least 5 percent of amounts appropriated to carry out United States Government grants-in-aid programs for a fiscal year are available only to carry out section 60107 of this title related to hazardous liquid.~~

~~(3) Not more than 20 percent of a pipeline safety program grant under section 60107 of this title may be allocated to indirect expenses.~~

~~(c) Oil Spill Liability Trust Fund.—Of the amounts available in the Oil Spill Liability Trust Fund, \$8,000,000 shall be transferred to the Secretary of Transportation, as provided in appropriation Acts, to carry out programs authorized in this chapter for each of fiscal years 2003 through 2006.~~

~~(d)~~ **(b)** Emergency response grants.--

(1) In general.--The Secretary may establish a program for making grants to State, county, and local governments in high consequence areas, as defined by the Secretary, for emergency response management, training, and technical assistance. To the extent that such grants are used to train emergency responders, such training shall ensure that emergency responders have the ability to protect nearby persons, property and the environment from the effects of accidents or incidents involving gas or hazardous liquid pipelines, in accordance with existing regulations.

(2) Authorization of appropriations.--There is authorized to be appropriated \$6,000,000 \$10,000,000 for each of ~~fiscal years 2003 through 2006~~ 2007 through 2010 2012 through 2015 fiscal years 2021 through 2023 to carry out this subsection.

~~(e)~~ **(c)** Crediting appropriations for expenditures for training.--The Secretary may credit to an appropriation authorized under subsection (a) amounts received from sources other than the Government for reimbursement for expenses incurred by the Secretary in providing training.

§ 60126. Risk management

- (a) Risk management program demonstration projects.--
 - (1) In general.--The Secretary shall establish risk management demonstration projects--
 - (A) to demonstrate, through the voluntary participation by owners and operators of gas pipeline facilities and hazardous liquid pipeline facilities, the application of risk management; and
 - (B) to evaluate the safety and cost-effectiveness of the program.
 - (2) Exemptions.--In carrying out a demonstration project under this subsection, the Secretary, by order--
 - (A) may exempt an owner or operator of the pipeline facility covered under the project (referred to in this subsection as a "covered pipeline facility"), from the applicability of all or a portion of the requirements under this chapter that would otherwise apply to the covered pipeline facility; and
 - (B) shall exempt, for the period of the project, an owner or operator of the covered pipeline facility, from the applicability of any new standard that the Secretary promulgates under this chapter during the period of that participation, with respect to the covered facility.
- (b) Requirements.--In carrying out a demonstration project under this section, the Secretary shall--
 - (1) invite owners and operators of pipeline facilities to submit risk management plans for timely approval by the Secretary;
 - (2) require, as a condition of approval, that a risk management plan submitted under this subsection contain measures that are designed to achieve an equivalent or greater overall level of safety than would otherwise be achieved through compliance with the standards contained in this chapter or promulgated by the Secretary under this chapter;
 - (3) provide for--
 - (A) collaborative government and industry training;
 - (B) methods to measure the safety performance of risk management plans;
 - (C) the development and application of new technologies;
 - (D) the promotion of community awareness concerning how the overall level of safety will be maintained or enhanced by the demonstration project;
 - (E) the development of models that categorize the risks inherent to each covered pipeline facility, taking into consideration the location, volume, pressure, and material transported or stored by that pipeline facility;
 - (F) the application of risk assessment and risk management methodologies that are suitable to the inherent risks that are determined to exist through the use of models developed under subparagraph (E);
 - (G) the development of project elements that are necessary to ensure that--
 - (i) the owners and operators that participate in the demonstration project demonstrate that they are effectively managing the risks referred to in subparagraph (E); and
 - (ii) the risk management plans carried out under the demonstration project under this subsection can be audited;
 - (H) a process whereby an owner or operator of a pipeline facility is able to terminate a risk management plan or, with the approval of the Secretary, to amend, modify, or otherwise adjust a risk management plan referred to in paragraph (1) that has been approved by the Secretary pursuant to that paragraph to respond to--
 - (i) changed circumstances; or
 - (ii) a determination by the Secretary that the owner or operator is not achieving an overall level of safety that is at least equivalent to the level that would otherwise be achieved through compliance with the standards contained in this chapter or promulgated by the Secretary under this chapter;
 - (I) such other elements as the Secretary, with the agreement of the owners and operators that participate in the demonstration project under this section, determines to further the purposes of this section; and
 - (J) an opportunity for public comment in the approval process; and

(4) in selecting participants for the demonstration project, take into consideration the past safety and regulatory performance of each applicant who submits a risk management plan pursuant to paragraph (1).

(c) Emergencies and revocations.--Nothing in this section diminishes or modifies the Secretary's authority under this title to act in case of an emergency. The Secretary may revoke any exemption granted under this section for substantial noncompliance with the terms and conditions of an approved risk management plan.

(d) Participation by State authority.--In carrying out this section, the Secretary may provide for consultation by a State that has in effect a certification under section 60105. To the extent that a demonstration project comprises an intrastate natural gas pipeline or an intrastate hazardous liquid pipeline facility, the Secretary may make an agreement with the State agency to carry out the duties of the Secretary for approval and administration of the project.

(e) Report.--Not later than March 31, 2000, the Secretary shall transmit to the Congress a report on the results of the demonstration projects carried out under this section that includes--

- (1) an evaluation of each such demonstration project, including an evaluation of the performance of each participant in that project with respect to safety and environmental protection; and
- (2) recommendations concerning whether the applications of risk management demonstrated under the demonstration project should be incorporated into the Federal pipeline safety program under this chapter on a permanent basis.

§ 60127. Population encroachment and rights-of-way

(a) Study.--The Secretary of Transportation, in conjunction with the Federal Energy Regulatory Commission and in consultation with appropriate Federal agencies and State and local governments, shall undertake a study of land use practices, zoning ordinances, and preservation of environmental resources with regard to pipeline rights-of-way and their maintenance.

(b) Purpose of study.--The purpose of the study shall be to gather information on land use practices, zoning ordinances, and preservation of environmental resources--

- (1) to determine effective practices to limit encroachment on existing pipeline rights-of-way;
- (2) to address and prevent the hazards and risks to the public, pipeline workers, and the environment associated with encroachment on pipeline rights-of-way;
- (3) to raise the awareness of the risks and hazards of encroachment on pipeline rights-of-way; and
- (4) to address how to best preserve environmental resources in conjunction with maintaining pipeline rights-of-way, recognizing pipeline operators' regulatory obligations to maintain rights-of-way and to protect public safety.

(c) Considerations.--In conducting the study, the Secretary shall consider, at a minimum, the following:

- (1) The legal authority of Federal agencies and State and local governments in controlling land use and the limitations on such authority.
- (2) The current practices of Federal agencies and State and local governments in addressing land use issues involving a pipeline easement.
- (3) The most effective way to encourage Federal agencies and State and local governments to monitor and reduce encroachment upon pipeline rights-of-way.

(d) Report.--

- (1) In general.--Not later than 1 year after the date of enactment of this subsection, the Secretary shall publish a report identifying practices, laws, and ordinances that are most successful in addressing issues of encroachment and maintenance on pipeline rights-of-way so as to more effectively protect public safety, pipeline workers, and the environment.
- (2) Distribution of report.--The Secretary shall provide a copy of the report to--

(A) Congress and appropriate Federal agencies; and

(B) States for further distribution to appropriate local authorities.

(3) Adoption of practices, laws, and ordinances.--The Secretary shall encourage Federal agencies and State and local governments to adopt and implement appropriate practices, laws, and ordinances, as identified in the report, to address the risks and hazards associated with encroachment upon pipeline rights-of-way and to address the potential methods of preserving environmental resources while maintaining pipeline rights-of-way, consistent with pipeline safety.

§ 60128. Dumping within pipeline rights-of-way

(a) Prohibition.--No person shall excavate for the purpose of unauthorized disposal within the right-of-way of an interstate gas pipeline facility or interstate hazardous liquid pipeline facility, or any other limited area in the vicinity of any such interstate pipeline facility established by the Secretary of Transportation, and dispose solid waste therein.

(b) Definition.--For purposes of this section, the term "solid waste" has the meaning given that term in section 1004(27) of the Solid Waste Disposal Act (42 U.S.C. 6903(27)).

§ 60129. Protection of employees providing pipeline safety information

(a) Discrimination against employee.--

(1) In general.--No employer may discharge any employee or otherwise discriminate against any employee with **current or former employee with** respect to his compensation, terms, conditions, or privileges of employment because the employee (or any person acting pursuant to a request of the employee)--

(A) provided, caused to be provided, or is about to provide or cause to be provided, to the employer or the Federal Government information relating to any violation or alleged violation of any order, regulation, or standard under this chapter or any other Federal law relating to pipeline safety;

(B) refused to engage in any practice made unlawful by this chapter or any other Federal law relating to pipeline safety, if the employee has identified the alleged illegality to the employer;

(C) provided, caused to be provided, or is about to provide or cause to be provided, testimony before Congress or at any Federal or State proceeding regarding any provision (or proposed provision) of this chapter or any other Federal law relating to pipeline safety;

(D) commenced, caused to be commenced, or is about to commence or cause to be commenced a proceeding under this chapter or any other Federal law relating to pipeline safety, or a proceeding for the administration or enforcement of any requirement imposed under this chapter or any other Federal law relating to pipeline safety;

(E) provided, caused to be provided, or is about to provide or cause to be provided, testimony in any proceeding described in subparagraph (D); or

(F) assisted or participated or is about to assist or participate in any manner in such a proceeding or in any other manner in such a proceeding or in any other action to carry out the purposes of this chapter or any other Federal law relating to pipeline safety.

(2) Employer defined.--In this section, the term "employer" means--

(A) a person owning or operating a pipeline facility; or

(B) a contractor or subcontractor of such a person.

(b) Department of labor complaint procedure.--

(1) Filing and notification.--A person who believes that he or she has been discharged or otherwise discriminated against by any person in violation of subsection (a) may, not later than 180 days after the date on which such violation occurs, file (or have any person file on his or her behalf) a complaint with the Secretary of Labor alleging such discharge or discrimination. Upon receipt of such a complaint, the Secretary of Labor shall notify, in writing, the person or persons named in the complaint and the Secretary of Transportation of the filing of the complaint, of the allegations

contained in the complaint, of the substance of evidence supporting the complaint, and of the opportunities that will be afforded to such person or persons under paragraph (2).

(2) Investigation; preliminary order.--

(A) In general.--Not later than 60 days after the date of receipt of a complaint filed under paragraph (1) and after affording the person or persons named in the complaint an opportunity to submit to the Secretary of Labor a written response to the complaint and an opportunity to meet with a representative of the Secretary of Labor to present statements from witnesses, the Secretary of Labor shall conduct an investigation and determine whether there is reasonable cause to believe that the complaint has merit and notify in writing the complainant and the person or persons alleged to have committed a violation of subsection (a) of the Secretary of Labor's findings. If the Secretary of Labor concludes that there is reasonable cause to believe that a violation of subsection (a) has occurred, the Secretary of Labor shall include with the Secretary of Labor's findings with a preliminary order providing the relief prescribed by paragraph (3)(B). Not later than 60 days after the date of notification of findings under this subparagraph, any person alleged to have committed a violation or the complainant may file objections to the findings or preliminary order, or both, and request a hearing on the record. The filing of such objections shall not operate to stay any reinstatement remedy contained in the preliminary order. Such hearings shall be conducted expeditiously. If a hearing is not requested in such 60-day period, the preliminary order shall be deemed a final order that is not subject to judicial review.

(B) Requirements.--

- (i) Required showing by complainant.--The Secretary of Labor shall dismiss a complaint filed under this subsection and shall not conduct an investigation otherwise required under subparagraph (A) unless the complainant makes a prima facie showing that any behavior described in subsection (a) was a contributing factor in the unfavorable personnel action alleged in the complaint.
- (ii) Showing by employer.--Notwithstanding a finding by the Secretary of Labor that the complainant has made the showing required under clause (i), no investigation otherwise required under subparagraph (A) shall be conducted if the employer demonstrates, by clear and convincing evidence, that the employer would have taken the same unfavorable personnel action in the absence of that behavior.
- (iii) Criteria for determination by Secretary.--The Secretary of Labor may determine that a violation of subsection (a) has occurred only if the complainant demonstrates that any behavior described in subsection (a) was a contributing factor in the unfavorable personnel action alleged in the complaint.
- (iv) Prohibition.--Relief may not be ordered under subparagraph (A) if the employer demonstrates by clear and convincing evidence that the employer would have taken the same unfavorable personnel action in the absence of that behavior.

(3) Final order.--

(A) Deadline for issuance; settlement agreements.--Not later than 90 days after the date of conclusion of a hearing under paragraph (2), the Secretary of Labor shall issue a final order providing the relief prescribed by this paragraph or denying the complaint. At any time before issuance of a final order, a proceeding under this subsection may be terminated on the basis of a settlement agreement entered into by the Secretary of Labor, the complainant, and the person or persons alleged to have committed the violation.

(B) Remedy.--If, in response to a complaint filed under paragraph (1), the Secretary of Labor determines that a violation of subsection (a) has occurred, the Secretary of Labor shall order the person or persons who committed such violation to--

- (i) take affirmative action to abate the violation;
- (ii) reinstate the complainant to his or her former position together with the compensation (including back pay) and restore the terms, conditions, and privileges associated with his or her employment; and
- (iii) provide compensatory damages to the complainant.

If such an order is issued under this paragraph, the Secretary of Labor, at the request of the complainant, shall assess against the person or persons against whom the order is issued a sum equal to the aggregate amount of all costs and expenses (including attorney's and expert

witness fees) reasonably incurred, as determined by the Secretary of Labor, by the complainant for, or in connection with, the bringing the complaint upon which the order was issued.

(C) Frivolous complaints.--If the Secretary of Labor finds that a complaint under paragraph (1) is frivolous or has been brought in bad faith, the Secretary of Labor may award to the prevailing employer a reasonable attorney's fee not exceeding \$1,000.

(D) De novo review.—

(i) In general.—With respect to a complaint under paragraph (1), if the Secretary of Labor has not issued a final decision by the date that is 210 days after the date on which the complaint was filed, and if the delay is not due to the bad faith of the employee who filed the complaint, that employee may bring an original action at law or equity for de novo review in the appropriate district court of the United States, which shall have jurisdiction over such action without regard to the amount in controversy, and which action shall, at the request of either party to the action, be tried by the court with a jury.

(ii) Burdens of proof.—An original action described in clause (i) shall be governed by the same legal burdens of proof specified in paragraph (2)(B) for review by the Secretary of Labor.

(4) Review.--

(A) Appeal to court of appeals.--Any person adversely affected or aggrieved by an order issued under paragraph (3) may obtain review of the order in the United States Court of Appeals for the circuit in which the violation, with respect to which the order was issued, allegedly occurred or the circuit in which the complainant resided on the date of such violation. The petition for review must be filed not later than 60 days after the date of issuance of the final order of the Secretary of Labor. Review shall conform to chapter 7 of title 5, United States Code. The commencement of proceedings under this subparagraph shall not, unless ordered by the court, operate as a stay of the order.

(B) Limitation on collateral attack.--An order of the Secretary of Labor with respect to which review could have been obtained under subparagraph (A) shall not be subject to judicial review in any criminal or other civil proceeding.

(5) Enforcement of order by Secretary of labor.--Whenever any person has failed to comply with an order issued under paragraph (3), the Secretary of Labor may file a civil action in the United States district court for the district in which the violation was found to occur to enforce such order. In actions brought under this paragraph, the district courts shall have jurisdiction to grant all appropriate relief, including, but not to be limited to, injunctive relief and compensatory damages.

(6) Enforcement of order by parties.--

(A) Commencement of action.--A person on whose behalf an order was issued under paragraph (3) may commence a civil action against the person or persons to whom such order was issued to require compliance with such order. The appropriate United States district court shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce such order.

(B) Attorney fees.--The court, in issuing any final order under this paragraph, may award costs of litigation (including reasonable attorney and expert witness fees) to any party whenever the court determines such award of costs is appropriate.

(c) Mandamus.--Any nondiscretionary duty imposed by this section shall be enforceable in a mandamus proceeding brought under section 1361 of title 28, United States Code.

(d) Nonapplicability to deliberate violations.--Subsection (a) shall not apply with respect to an action of an employee of an employer who, acting without direction from the employer (or such employer's agent), deliberately causes a violation of any requirement relating to pipeline safety under this chapter or any other law of the United States.

(e) Nonenforceability of Certain Provisions Waiving Rights and Remedies or Requiring Arbitration of Disputes.—

(1) Waiver of rights and remedies.—The rights and remedies provided under this section may not be waived by any agreement, policy, form, or condition of employment, including by a predispute arbitration agreement.

(2) Predispute arbitration agreements.—No provision of a predispute arbitration agreement shall be valid or enforceable if the provision requires arbitration of a dispute arising under subsection (a)(1).

§ 60130. Pipeline safety information grants to communities

(a) Grant authority.--

(1) In general.--The Secretary of Transportation may make grants for technical assistance to local communities, Indian Tribes, and groups of individuals (not including for-profit entities) to local communities and groups of individuals (not including for-profit entities) relating to the safety of pipeline facilities in local communities, other than facilities regulated under Public Law 93-153 (43 U.S.C. 1651 et seq.). ~~The Secretary shall establish competitive~~ No grants may be awarded under section 60114(g) until the Secretary has established competitive procedures for awarding grants under this section and criteria for selecting grant recipients. ~~The amount~~ Except as provided in subsection (c)(2), the amount of any grant under this section may not exceed ~~\$50,000~~ \$100,000 for a single grant recipient. The Secretary shall establish appropriate procedures to ensure the proper use of funds provided under this section.

(2) Demonstration grants.—At least the first 3 grants awarded under this section shall be demonstration grants for the purpose of demonstrating and evaluating the utility of grants under this section. Each such demonstration grant shall not exceed \$25,000.

(3) Dissemination of technical findings.—Each recipient of a grant under this section shall ensure that—

(A) the technical findings made possible by the grants are made available to the relevant operators; and

(B) open communication between the grant recipients, local operators, local communities, and other interested parties is encouraged.

~~(24) Technical assistance defined.—In this subsection, the term "technical assistance" means engineering and other scientific analysis of pipeline safety issues, including the promotion of public participation on technical pipeline safety issues in official proceedings conducted under this chapter.~~

(b) Prohibited uses.--Funds provided under this section to grant recipients and their contractors may not be used for lobbying, for direct advocacy for or against a pipeline construction or expansion project, or in direct support of litigation.

(c) Annual report.--

(1) In general.—~~Not later than 90 days after the last day of each fiscal year for which grants are made by the Secretary under this section, the Secretary shall report to the Committees on Commerce, Science, and Transportation and Energy and Natural Resources of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives on grants made under this section in the preceding fiscal year.~~

~~(2) Contents.—The report shall include—~~

~~(A) a listing of the identity and location of each recipient of a grant under this section in the preceding fiscal year and the amount received by the recipient;~~

~~(B) a description of the purpose for which each grant was made; and~~

~~(C) a description of how each grant was used by the recipient.~~

~~(cd) Authorization of appropriations.—Of the amounts made available under section 2(b) of the PIPES Act of 2016, the Secretary shall expend \$1,500,000 for each fiscal years 2016 through 2019 to carry out this section. There is authorized to be appropriated to the Secretary of Transportation for carrying out this section \$1,500,000 for each of the fiscal years 2012 through 2015. Such amounts shall not be derived from user fees collected under section 60301.~~

(c) Funding.—

(1) In general.—Subject to paragraph (2), out of amounts made available under section 2(b) of the PIPES Act of 2016 (Public Law 114-183; 130 Stat. 515), the Secretary shall use \$2,000,000 for each of fiscal years 2021 through 2023 to carry out this section.

(2) Improving technical assistance.—From the amounts used to carry out this section under paragraph (1) each fiscal year, the Secretary shall award \$1,000,000 to an eligible applicant through a competitive selection process for the purpose of improving the quality of technical assistance provided to communities or individuals under this section.

(3) Limitation.—Any amounts used to carry out this section shall not be derived from user fees collected under section 60301.

(d) Definitions.—In this section:

(1) Technical assistance.—The term “technical assistance” means engineering, research, and other scientific analysis of pipeline safety issues, including the promotion of public participation on technical pipeline safety issues in proceedings related to this chapter.

(2) Eligible applicant.—The term “eligible applicant” means a nonprofit entity that—

(A) is a public safety advocate;

(B) has pipeline safety expertise;

(C) is able to provide individuals and communities with technical assistance; and

(D) was established with funds designated for the purpose of community service through the implementation of section 3553 of title 18 relating to violations of this chapter.

§ 60131. Verification of pipeline qualification programs

(a) In general.--Subject to the requirements of this section, the Secretary of Transportation shall require the operator of a pipeline facility to develop and adopt a qualification program to ensure that the individuals who perform covered tasks are qualified to conduct such tasks.

(b) Standards and criteria.--

(1) Development.--Not later than 1 year after the date of enactment of this section, the Secretary shall ensure that the Department of Transportation has in place standards and criteria for qualification programs referred to in subsection (a).

(2) Contents.--The standards and criteria shall include the following:

(A) The establishment of methods for evaluating the acceptability of the qualifications of individuals described in subsection (a).

(B) A requirement that pipeline operators develop and implement written plans and procedures to qualify individuals described in subsection (a) to a level found acceptable using the methods established under subparagraph (A) and evaluate the abilities of individuals described in subsection (a) according to such methods.

(C) A requirement that the plans and procedures adopted by a pipeline operator under subparagraph (B) be reviewed and verified under subsection (e).

(c) Development of qualification programs by pipeline operators.--The Secretary shall require each pipeline operator to develop and adopt, not later than 2 years after the date of enactment of this section, a qualification program that complies with the standards and criteria described in subsection (b).

(d) Elements of qualification programs.--A qualification program adopted by an operator under subsection (a) shall include, at a minimum, the following elements:

(1) A method for examining or testing the qualifications of individuals described in subsection (a).

The method may include written examination, oral examination, observation during on-the-job performance, on-the-job training, simulations, and other forms of assessment. The method may not be limited to observation of on-the-job performance, except with respect to tasks for which the Secretary has determined that such observation is the best method of examining or testing qualifications. The Secretary shall ensure that the results of any such observations are documented in writing.

(2) A requirement that the operator complete the qualification of all individuals described in subsection (a) not later than 18 months after the date of adoption of the qualification program.

(3) A periodic requalification component that provides for examination or testing of individuals in accordance with paragraph (1).

(4) A program to provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities.

(e) Review and verification of programs.--

(1) In general.--The Secretary shall review the qualification program of each pipeline operator and verify its compliance with the standards and criteria described in subsection (b) and that it includes the elements described in subsection (d). The Secretary shall record the results of that review for use in the next review of an operator's program.

(2) Deadline for completion.--Reviews and verifications under this subsection shall be completed not later than 3 years after the date of the enactment of this section.

(3) Inadequate programs.--If the Secretary decides that a qualification program is inadequate for the safe operation of a pipeline facility, the Secretary shall act as under section 60108(a)(2) to require the operator to revise the qualification program.

(4) Program modifications.--If the operator of a pipeline facility significantly modifies a program that has been verified under this subsection, the operator shall notify the Secretary of the modifications. The Secretary shall review and verify such modifications in accordance with paragraph (1).

(5) Waivers and modifications.--In accordance with section 60118(c), the Secretary may waive or modify any requirement of this section if the waiver or modification is not inconsistent with pipeline safety.

(6) Inaction by the Secretary.--Notwithstanding any failure of the Secretary to prescribe standards and criteria as described in subsection (b), an operator of a pipeline facility shall develop and adopt a qualification program that complies with the requirement of subsection (b)(2)(B) and includes the elements described in subsection (d) not later than 2 years after the date of enactment of this section.

(f) Intrastate pipeline facilities.--In the case of an intrastate pipeline facility operator, the duties and powers of the Secretary under this section with respect to the qualification program of the operator shall be vested in the appropriate State regulatory agency, consistent with this chapter.

(g) Covered task defined.--In this section, the term "covered task"--

(1) with respect to a gas pipeline facility, has the meaning such term has under section 192.801 of title 49, Code of Federal Regulations, including any subsequent modifications; and

(2) with respect to a hazardous liquid pipeline facility, has the meaning such term has under section 195.501 of such title, including any subsequent modifications.

(h) Report.--Not later than 4 years after the date of enactment of this section, the Secretary shall transmit to Congress a report on the status and results to date of the personnel qualification regulations issued under this chapter.

§ 60132. National pipeline mapping system

(a) Information to be provided.--Not later than 6 months after the date of enactment of this section, the operator of a pipeline facility (except distribution lines and gathering lines) shall provide to the Secretary of Transportation the following information with respect to the facility:

(1) Geospatial data appropriate for use in the National Pipeline Mapping System or data in a format that can be readily converted to geospatial data.

(2) The name and address of the person with primary operational control to be identified as its operator for purposes of this chapter.

(3) A means for a member of the public to contact the operator for additional information about the pipeline facilities it operates.

(4) Any other geospatial or technical data, including design and material specifications, that the Secretary determines are necessary to carry out the purposes of this section. The Secretary shall give reasonable notice to operators that the data are being requested.

(b) Updates.--A person providing information under subsection (a) shall provide to the Secretary updates of the information to reflect changes in the pipeline facility owned or operated by the person and as otherwise required by the Secretary.

(c) Technical assistance to improve local response capabilities.--The Secretary may provide technical assistance to State and local officials to improve local response capabilities for pipeline emergencies by adapting information available through the National Pipeline Mapping System to software used by emergency response personnel responding to pipeline emergencies.

(d) Map of High-consequence Areas.—The Secretary shall—

(1) maintain, as part of the National Pipeline Mapping System, a map of designated high-consequence areas (as described in section 60109(a)) in which pipelines are required to meet integrity management program regulations, excluding any proprietary or sensitive security information; and

(2) update the map biennially.

(e) Program To Promote Awareness of National Pipeline Mapping System.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall develop and implement a program promoting greater awareness of the existence of the National Pipeline Mapping System to State and local emergency responders and other interested parties. The program shall include guidance on how to use the National Pipeline Mapping System to locate pipelines in communities and local jurisdictions.

(f) Public Disclosure Limited.—The Secretary may not disclose information collected pursuant to subsection (a) except to the extent permitted by section 552 of title 5.

§ 60133. Coordination of environmental reviews

(a) Interagency committee.--

(1) Establishment and purpose.--Not later than 30 days after the date of enactment of this section, the President shall establish an Interagency Committee to develop and ensure implementation of a coordinated environmental review and permitting process in order to enable pipeline operators to commence and complete all activities necessary to carry out pipeline repairs within any time periods specified by rule by the Secretary.

(2) Membership.--The Chairman of the Council on Environmental Quality (or a designee of the Chairman) shall chair the Interagency Committee, which shall consist of representatives of Federal agencies with responsibilities relating to pipeline repair projects, including each of the following persons (or a designee thereof):

(A) The Secretary of Transportation.

(B) The Administrator of the Environmental Protection Agency.

(C) The Director of the United States Fish and Wildlife Service.

(D) The Assistant Administrator for Fisheries of the National Oceanic and Atmospheric Administration.

(E) The Director of the Bureau of Land Management.

(F) The Director of the Minerals Management Service.

(G) The Assistant Secretary of the Army for Civil Works.

(H) The Chairman of the Federal Energy Regulatory Commission.

(3) Evaluation.--The Interagency Committee shall evaluate Federal permitting requirements to which access, excavation, and restoration activities in connection with pipeline repairs described in paragraph (1) may be subject. As part of its evaluation, the Interagency Committee shall examine the access, excavation, and restoration practices of the pipeline industry in connection with such pipeline repairs, and may develop a compendium of best practices used by the industry to access, excavate, and restore the site of a pipeline repair.

(4) Memorandum of understanding.--Based upon the evaluation required under paragraph (3) and not later than 1 year after the date of enactment of this section, the members of the Interagency

Committee shall enter into a memorandum of understanding to provide for a coordinated and expedited pipeline repair permit review process to carry out the purpose set forth in paragraph (1). The Interagency Committee shall include provisions in the memorandum of understanding identifying those repairs or categories of repairs described in paragraph (1) for which the best practices identified under paragraph (3), when properly employed by a pipeline operator, would result in no more than minimal adverse effects on the environment and for which discretionary administrative reviews may therefore be minimized or eliminated. With respect to pipeline repairs described in paragraph (1) to which the preceding sentence would not be applicable, the Interagency Committee shall include provisions to enable pipeline operators to commence and complete all activities necessary to carry out pipeline repairs within any time periods specified by rule by the Secretary. The Interagency Committee shall include in the memorandum of understanding criteria under which permits required for such pipeline repair activities should be prioritized over other less urgent agency permit application reviews. The Interagency Committee shall not enter into a memorandum of understanding under this paragraph except by unanimous agreement of the members of the Interagency Committee.

(5) State and local consultation.--In carrying out this subsection, the Interagency Committee shall consult with appropriate State and local environmental, pipeline safety, and emergency response officials, and such other officials as the Interagency Committee considers appropriate.

(b) Implementation.--Not later than 180 days after the completion of the memorandum of understanding required under subsection (a)(4), each agency represented on the Interagency Committee shall revise its regulations as necessary to implement the provisions of the memorandum of understanding.

(c) Savings provisions; no preemption.--Nothing in this section shall be construed--

- (1) to require a pipeline operator to obtain a Federal permit, if no Federal permit would otherwise have been required under Federal law; or
- (2) to preempt applicable Federal, State, or local environmental law.

(d) Interim operational alternatives.--

(1) In general.--Not later than 30 days after the date of enactment of this section, and subject to the limitations in paragraph (2), the Secretary of Transportation shall revise the regulations of the Department, to the extent necessary, to permit a pipeline operator subject to time periods for repair specified by rule by the Secretary to implement alternative mitigation measures until all applicable permits have been granted.

(2) Limitations.--The regulations issued by the Secretary pursuant to this subsection shall not allow an operator to implement alternative mitigation measures pursuant to paragraph (1) unless--

- (A) allowing the operator to implement such measures would be consistent with the protection of human health, public safety, and the environment;
- (B) the operator, with respect to a particular repair project, has applied for and is pursuing diligently and in good faith all required Federal, State, and local permits to carry out the project; and
- (C) the proposed alternative mitigation measures are not incompatible with pipeline safety.

(e) Ombudsman.--The Secretary shall designate an ombudsman to assist in expediting pipeline repairs and resolving disagreements between Federal, State, and local permitting agencies and the pipeline operator during agency review of any pipeline repair activity, consistent with protection of human health, public safety, and the environment.

(f) State and local permitting processes.--The Secretary shall encourage States and local governments to consolidate their respective permitting processes for pipeline repair projects subject to any time periods for repair specified by rule by the Secretary. The Secretary may request other relevant Federal agencies to provide technical assistance to States and local governments for the purpose of encouraging such consolidation.

§ 60134. State damage prevention programs

(a) In general.—The Secretary may make a grant to a State authority (including a municipality with respect to intrastate gas pipeline transportation) to assist in improving the overall quality and effectiveness of a damage prevention program of the State authority under subsection (e) if the State authority—

(1) has in effect an annual certification under section 60105 or an agreement under section 60106;

and

(2)(A) has in effect an effective damage prevention program that meets the requirements of subsection (b); or

(B) demonstrates that it has made substantial progress toward establishing such a program, and that such program will meet the requirements of subsection ~~(b)~~ (b); and

(3) does not provide any exemptions to municipalities, State agencies, or their contractors from the one-call notification system requirements of the program. *[this amendment takes effect 1/3/2014]*

(b) Damage prevention program elements.— An effective damage prevention program includes the following elements:

(1) Participation by operators, excavators, and other stakeholders in the development and implementation of methods for establishing and maintaining effective communications between stakeholders from receipt of an excavation notification until successful completion of the excavation, as appropriate.

(2) A process for fostering and ensuring the support and partnership of stakeholders, including excavators, operators, locators, designers, and local government in all phases of the program.

(3) A process for reviewing the adequacy of a pipeline operator's internal performance measures regarding persons performing locating services and quality assurance programs.

(4) Participation by operators, excavators, and other stakeholders in the development and implementation of effective employee training programs to ensure that operators, the one-call center, the enforcing agency, and the excavators have partnered to design and implement training for the employees of operators, excavators, and locators.

(5) A process for fostering and ensuring active participation by all stakeholders in public education for damage prevention activities.

(6) A process for resolving disputes that defines the State authority's role as a partner and facilitator to resolve issues.

(7) Enforcement of State damage prevention laws and regulations for all aspects of the damage prevention process, including public education, and the use of civil penalties for violations assessable by the appropriate State authority.

(8) A process for fostering and promoting the use, by all appropriate stakeholders, of improving technologies that may enhance communications, underground pipeline locating capability, and gathering and analyzing information about the accuracy and effectiveness of locating programs.

(9) A process for review and analysis of the effectiveness of each program element, including a means for implementing improvements identified by such program reviews.

(c) Factors to consider.—In making grants under this section, the Secretary shall take into consideration the commitment of each State to ensuring the effectiveness of its damage prevention program, including legislative and regulatory actions taken by the State.

(d) Application.—If a State authority files an application for a grant under this section not later than September 30 of a calendar year and demonstrates that the Governor (or chief executive) of the State has designated it as the appropriate State authority to receive the grant, the Secretary shall review the State's damage prevention program to determine its effectiveness.

(e) Use of funds.—A grant under this section to a State authority may only be used to pay the cost of the personnel, equipment, and activities that the State authority reasonably requires for the calendar year covered by the grant to develop or carry out its damage prevention program in accordance with subsection (b).

(f) Nonapplicability of limitation.—A grant made under this section is not subject to the section 60107(a) limitation on the maximum percentage of funds to be paid by the Secretary.

(g) Limitation on use of funds.—Funds provided to carry out this section may not be used for lobbying or in direct support of litigation.

(h) Damage prevention process defined.—In this section, the term ‘damage prevention process’ means a process that incorporates the principles described in sections 60114(b), 60114(d), and 60114(e).

(i) Authorization of appropriations.—There is authorized to be appropriated to the Secretary to provide grants under this section \$1,500,000 for each of fiscal years 2021 through 2023~~fiscal years 2012 through 2015~~. Such funds shall remain available until expended.

§ 60135. Enforcement transparency

(a) In general.—Not later than December 31, 2007, the Secretary shall—

(1) provide a monthly updated summary to the public of all gas and hazardous liquid pipeline enforcement actions taken by the Secretary or the Pipeline and Hazardous Materials Safety Administration, from the time a notice commencing an enforcement action is issued until the enforcement action is final;

(2) include in each such summary identification of the operator involved in the enforcement activity, the type of alleged violation, the penalty or penalties proposed, any changes in case status since the previous summary, the final assessment amount of each penalty, and the reasons for a reduction in the proposed penalty, if appropriate; and

(3) provide a mechanism by which a pipeline operator named in an enforcement action may make information, explanations, or documents it believes are responsive to the enforcement action available to the public.

(b) Electronic availability.—Each summary under this section shall be made available to the public by electronic means.

(c) Relationship to FOIA.—Nothing in this section shall be construed to require disclosure of information or records that are exempt from disclosure under section 552 of title 5.

§ 60136. Petroleum product transportation capacity study

(a) In general.—The Secretaries of Transportation and Energy shall conduct periodic analyses of the domestic transport of petroleum products by pipeline. Such analyses should identify areas of the United States where unplanned loss of individual pipeline facilities may cause shortages of petroleum products or price disruptions and where shortages of pipeline capacity and reliability concerns may have or are anticipated to contribute to shortages of petroleum products or price disruptions. Upon identifying such areas, the Secretaries may determine if the current level of regulation is sufficient to minimize the potential for un-planned losses of pipeline capacity.

(b) Consultation.—In preparing any analysis under this section, the Secretaries may consult with the heads of other government agencies and public- and private-sector experts in pipeline and other forms of petroleum product transportation, energy consumption, pipeline capacity, population, and economic development.

(c) Report to Congress.—Not later than June 1, 2008, the Secretaries shall submit to the Committee on Energy and Commerce and the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation and the Committee on Energy and Natural Resources of the Senate a report setting forth their recommendations to reduce the likelihood of the shortages and price disruptions referred to in subsection (a).

(d) Additional reports.—The Secretaries shall submit additional reports to the congressional committees referred to in subsection (c) containing the results of any subsequent analyses performed under subsection (a) and any additional recommendations, as appropriate.

(e) Petroleum product defined.—In this section, the term ‘petroleum product’ means oil of any kind or in any form, gasoline, diesel fuel, aviation fuel, fuel oil, kerosene, any product obtained from refining or processing of crude oil, liquefied petroleum gases, natural gas liquids, petrochemical feedstocks, condensate, waste or refuse mixtures containing any of such oil products, and any other liquid hydrocarbon compounds.

§ 60137. Pipeline control room management

(a) In general.—Not later than June 1, 2008, the Secretary shall issue regulations requiring each operator of a gas or hazardous liquid pipeline to develop, implement, and submit to the Secretary or, in the case of an operator of an intrastate pipeline located within the boundaries of a State that has in effect an annual certification under section 60105, to the head of the appropriate State authority, a human factors management plan designed to reduce risks associated with human factors, including fatigue, in each control center for the pipeline. Each plan must include, among the measures to reduce such risks, a maximum limit on the hours of service established by the operator for individuals employed as controllers in a control center for the pipeline.

(b) Review and approval of the plan.—The Secretary or, in the case of an operator of an intrastate pipeline located within the boundaries of a State that has in effect an annual certification under section 60105, the head of the appropriate State authority, shall review and approve each plan submitted to the Secretary or the head of such authority, under subsection (a). The Secretary and the head of such authority may not approve a plan that does not include a maximum limit on the hours of service established by the operator of the pipeline for individuals employed as controllers in a control center for the pipeline.

(c) Enforcement of the plan.—If the Secretary or the head of the appropriate State authority determines that an operator’s plan submitted to the Secretary or the head of such authority under subsection (a), or implementation of such a plan, does not comply with the regulations issued under this section or is inadequate for the safe operation of a pipeline, the Secretary or the head of such authority may take action consistent with this chapter and enforce the requirements of such regulations.

(d) Compliance with the plan.—Each operator of a gas or hazardous liquid pipeline shall document compliance with the plan submitted by the operator under subsection (a) and the reasons for any deviation from compliance with such plan. The Secretary or the head of the appropriate State authority, as the case may be, shall review the reasonableness of any such deviation in considering whether to take enforcement action or discontinue approval of the operator’s plan under subsection (b).

(e) Deviation reporting requirements.—In issuing regulations under subsection (a), the Secretary shall develop and include in such regulations requirements for an operator of a gas or hazardous liquid pipeline to report deviations from compliance with the plan submitted to the Secretary by the operator under subsection (a).

§ 60138. Response plans

(a) In General.—The Secretary of Transportation shall—

- (1) maintain on file a copy of the most recent response plan (as defined in part 194 of title 49, Code of Federal Regulations) prepared by an owner or operator of a pipeline facility; and
- (2) provide upon written request to a person a copy of the plan, which may exclude, as the Secretary determines appropriate—

- (A) proprietary information;
- (B) security-sensitive information, including information described in section 1520.5(a) of title 49, Code of Federal Regulations;
- (C) specific response resources and tactical resource deployment plans; and
- (D) the specific amount and location of worst case discharges (as defined in part 194 of title 49, Code of Federal Regulations), including the process by which an owner or operator determines the worst case discharge.

(b) Relationship to FOIA.—Nothing in this section may be construed to require disclosure of information or records that are exempt from disclosure under section 552 of title 5.

§ 60139. Maximum allowable operating pressure

(a) Verification of Records.—

(1) In general.—The Secretary of Transportation shall require each owner or operator of a pipeline facility to conduct, not later than 6 months after the date of enactment of this section, a verification of the records of the owner or operator relating to the interstate and intrastate gas transmission pipelines of the owner or operator in class 3 and class 4 locations and class 1 and class 2 high-consequence areas.

(2) Purpose.—The purpose of the verification shall be to ensure that the records accurately reflect the physical and operational characteristics of the pipelines described in paragraph (1) and confirm the established maximum allowable operating pressure of the pipelines.

(3) Elements.—The verification process under this subsection shall include such elements as the Secretary considers appropriate.

(b) Reporting.—

(1) Documentation of certain pipelines.—Not later than 18 months after the date of enactment of this section, each owner or operator of a pipeline facility shall identify and submit to the Secretary documentation relating to each pipeline segment of the owner or operator described in subsection (a)(1) for which the records of the owner or operator are insufficient to confirm the established maximum allowable operating pressure of the segment.

(2) Exceedances of maximum allowable operating pressure.—If there is an exceedance of the maximum allowable operating pressure with respect to a gas transmission pipeline of an owner or operator of a pipeline facility that exceeds the build-up allowed for operation of pressure-limiting or control devices, the owner or operator shall report the exceedance to the Secretary and appropriate State authorities on or before the 5th day following the date on which the exceedance occurs.

(c) Determination of maximum allowable operating pressure.—

(1) In general.—In the case of a transmission line of an owner or operator of a pipeline facility identified under subsection (b)(1), the Secretary shall—

(A) require the owner or operator to reconfirm a maximum allowable operating pressure as expeditiously as economically feasible; and

(B) determine what actions are appropriate for the pipeline owner or operator to take to maintain safety until a maximum allowable operating pressure is confirmed.

(2) Interim actions.—In determining the actions for an owner or operator of a pipeline facility to take under paragraph (1)(B), the Secretary shall take into account potential consequences to public safety and the environment, potential impacts on pipeline system reliability and deliverability, and other factors, as appropriate.

(d) Testing regulations.—

(1) In general.—Not later than 18 months after the date of enactment of this section, the Secretary shall issue regulations for conducting tests to confirm the material strength of previously untested natural gas transmission pipelines located in high-consequence areas and operating at a pressure greater than 30 percent of specified minimum yield strength.

(2) Considerations.—In developing the regulations, the Secretary shall consider safety testing methodologies, including, at a minimum—

(A) pressure testing; and

(B) other alternative methods, including in-line inspections, determined by the Secretary to be of equal or greater effectiveness.

(3) Completion of testing.—The Secretary, in consultation with the Chairman of the Federal Energy Regulatory Commission and State regulators, as appropriate, shall establish timeframes for the completion of such testing that take into account potential consequences to public safety and the environment and that minimize costs and service disruptions.

(e) High-consequence area defined.—In this section, the term “high-consequence area” means an area described in section 60109(a).

§ 60140. Cover over buried pipelines

(a) Hazardous liquid pipeline incidents involving buried pipelines.—

(1) Study.—The Secretary of Transportation shall conduct a study of hazardous liquid pipeline incidents at crossings of inland bodies of water with a width of at least 100 feet from high water mark to high water mark to determine if the depth of cover over the buried pipeline was a factor in any accidental release of hazardous liquids.

(2) Report.—Not later than 1 year after the date of enactment of this section, the Secretary shall transmit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the study.

(b) Assessment of current requirements for depth of cover over buried pipelines.—

(1) In general.—If, following completion of the study under subsection (a), the Secretary finds that the depth of cover over buried pipelines is a contributing factor in the accidental release of hazardous liquids from the pipelines, the Secretary, not later than 1 year after the date of completion of the study, shall review and determine the sufficiency of current requirements for the depth of cover over buried pipelines.

(2) Legislative recommendations.—

(A) Development.—If the Secretary determines under paragraph (1) that the current requirements for the depth of cover over buried pipelines are insufficient, the Secretary shall develop legislative recommendations for improving the safety of buried pipelines at crossings of inland bodies of water with a width of at least 100 feet from high water mark to high water mark.

(B) Consideration of factors.—In developing legislative recommendations under subparagraph (A), the Secretary shall consider the factors specified in section 60102(b)(2).

(C) Report to Congress.—If the Secretary develops legislative recommendations under subparagraph (A), the Secretary shall submit to the committees referred to in subsection (a)(2) a report containing the legislative recommendations.

§ 60141. Standards for underground natural gas storage facilities

(a) Minimum safety standards.—Not later than 2 years after the date of enactment of the PIPES Act of 2016, the Secretary, in consultation with the heads of other relevant Federal agencies, shall issue minimum safety standards for underground natural gas storage facilities.

(b) Considerations.—In developing the safety standards required under subsection (a), the Secretary shall, to the extent practicable—

(1) consider consensus standards for the operation, environmental protection, and integrity management of underground natural gas storage facilities;

(2) consider the economic impacts of the regulations on individual gas customers;

(3) ensure that the regulations do not have a significant economic impact on end users; and
(4) consider the recommendations of the Aliso Canyon natural gas leak task force established
under section 31 of the PIPES Act of 2016.

(c) Federal-state cooperation.—The Secretary may authorize a State authority (including a municipality)
to participate in the oversight of underground natural gas storage facilities in the same manner as
provided in sections 60105 and 60106.

(d) Rules of construction.—(1) In general.—Nothing in this section may be construed to affect any
Federal regulation relating to gas pipeline facilities that is in effect on the day before the date of
enactment of the PIPES Act of 2016.

(2) Limitations.—Nothing in this section may be construed to authorize the Secretary—

(A) to prescribe the location of an underground natural gas storage facility; or

(B) to require the Secretary's permission to construct a facility referred to in subparagraph (A).

(e) Preemption.—A State authority may adopt additional or more stringent safety standards for
intrastate underground natural gas storage facilities if such standards are compatible with the minimum
standards prescribed under this section.

(f) Statutory construction.—Nothing in this section shall be construed to affect the Secretary's authority
under this title to regulate the underground storage of gas that is not natural gas.

§ 60142. Pipeline safety enhancement programs

(a) In General.—The Secretary may establish and carry out limited safety-enhancing testing programs
to evaluate innovative technologies and operational practices testing the safe operation of—

(1) a natural gas pipeline facility; or

(2) a hazardous liquid pipeline facility.

(b) Limitations.—

(1) In general.—Testing programs established under subsection (a) may not exceed—

(A) 5 percent of the total miles of hazardous liquid pipelines in the United States that are
regulated by—

(i) the Pipeline and Hazardous Materials Safety Administration; or

(ii) a State authority under section 60105 or 60106; and

(B) 5 percent of the total miles of natural gas pipelines in the United States that are regulated
by—

(i) the Pipeline and Hazardous Materials Safety Administration; or

(ii) a State authority under section 60105 or 60106.

(2) Operator mileage limitation.—The Secretary shall limit the miles of pipelines that each operator
can test under each program established under subsection (a) to the lesser of—

(A) 38 percent of the total miles of pipelines in the system of the operator that are regulated
by—

(i) the Pipeline and Hazardous Materials Safety Administration; or

(ii) a State authority under section 60105 or 60106; or

(B) 1,000 miles.

(3) Prohibited areas.—Any program established under subsection (a) shall not be located in—

(A) a high population area (as defined in section 195.450 of title 49, Code of Federal
Regulations (or a successor regulation));

(B) a high consequence area (as defined in section 192.903 of title 49, Code of Federal
Regulations (or a successor regulation)); or

(C) an unusually sensitive area (as described under subsection (a)(1)(B)(ii) of section 60109 in
accordance with subsection (b) of that section).

(4) High consequence areas for hazardous liquid pipelines.—

(A) In general.—Not later than 1 year after the date of enactment of this section, the Secretary

shall submit to Congress a report examining the benefits and costs of prohibiting the testing of hazardous liquid pipelines in high consequence areas (as defined in section 195.450 of title 49, Code of Federal Regulations (or a successor regulation)).

(B) Contents of report.—The report described in subparagraph (A) shall examine—

- (i) the safety benefits of allowing the testing of hazardous liquid pipelines in high consequence areas (as defined in section 195.450 of title 49, Code of Federal Regulations (or a successor regulation)); and
- (ii) whether additional testing conditions are required to protect those areas while conducting a testing program established under subsection (a) in those areas.

(c) Duration.—

(1) In general.—The term of a testing program established under subsection (a) shall be not more than a period of 3 years beginning on the date of approval of the program.

(2) Requirement.—The Secretary shall not establish any additional safety-enhancing testing programs under subsection (a) after the date that is 3 years after the date of enactment of this section.

(d) Safety Standards.—

(1) In general.—The Secretary shall require, as a condition of approval of a testing program under subsection (a), that the safety measures in the testing program are designed to achieve a level of safety that is greater than the level of safety required by this chapter.

(2) Determination.—

(A) In general.—The Secretary may issue an order under subparagraph (A) of section 60118(c)(1) to accomplish the purpose of a testing program for a term not to exceed the time period described in subsection (c) if the condition described in paragraph (1) is met, as determined by the Secretary.

(B) Limitation.—An order under subparagraph (A) shall pertain only to those regulations that would otherwise prevent the use of the safety technology to be tested under the testing program.

(3) Increased safety capabilities.—For purposes of paragraph (1), improvement in the reliability, accuracy, durability, or certainty of pipeline safety technologies, techniques, or methods shall constitute an appropriate means of meeting the safety measure requirement described in that paragraph.

(e) Considerations.—In establishing a testing program under subsection (a), the Secretary shall consider—

(1) the accident and incident record of the owners or operators participating in the program;

(2)(A) whether the owners or operators participating in the program have a safety management system in place; and

(B) how the application of that system proposes to eliminate or mitigate potential safety and environmental risks throughout the duration of the program; and

(3) whether the proposed safety technology has been tested through a research and development program carried out by—

(A) the Secretary;

(B) collaborative research development organizations; or

(C) other institutions.

(f) Data and Findings.—

(1) In general.—As a participant in a testing program established under subsection (a), an owner or operator shall submit to the Secretary detailed findings and a summary of data collected as a result of participation in the testing program.

(2) Public report.—The Secretary shall make publicly available on the website of the Department of Transportation an annual report for any ongoing testing program established under subsection (a) summarizing the progress of the program.

(g) Authority to Revoke Participation.—The Secretary shall immediately revoke participation in a testing program under subsection (a) if—

- (1)(A) the participant has an accident or incident involving death or personal injury necessitating in-patient hospitalizations; and
- (B) the testing program is determined to be the cause of, or a contributing factor to, that accident or incident;
- (2) the participant fails to comply with the terms and conditions of the testing program; or
- (3) in the determination of the Secretary, continued participation in the testing program by the participant would be unsafe or would not be consistent with the goals and objectives of this chapter.

(h) Authority to Terminate Program.—The Secretary shall immediately terminate a testing program under subsection (a) if continuation of the testing program would not be consistent with the goals and objectives of this chapter.

(i) States Rights.--

(1) Exemption.—Except as provided in paragraph (2), if a State submits to the Secretary notice that the State requests an exemption from any testing program considered for establishment under this section, the State shall be exempt.

(2) Limitations.—

(A) In general.—The Secretary shall not grant a requested exemption under paragraph (1) after a testing program is established.

(B) Late notice.—The Secretary shall not grant a requested exemption under paragraph (1) if the notice submitted under that paragraph is submitted to the Secretary more than 30 days after the date on which the Secretary issues an order providing an effective date for the testing program in accordance with subsection (j).

(3) Effect.—If a State has not submitted a notice requesting an exemption under paragraph (1), the State shall not enforce any law (including regulations) that is inconsistent with a testing program in effect in the State under this section.

(j) Program Review Process and Public Notice.—

(1) In general.—The Secretary shall publish in the Federal Register and send directly to each relevant State and each appropriate State authority with a certification in effect under section 60105 a notice of each proposed testing program under subsection (a), including the order to be considered, and provide an opportunity for public comment for not less than 90 days.

(2) Response from Secretary.—Not later than the date on which the Secretary issues an order providing an effective date of a testing program noticed under paragraph (1), the Secretary shall—

(A) publish the order in the Federal Register; and

(B) respond to each comment submitted under paragraph (1).

(k) Report to Congress.—At the conclusion of each testing program, the Secretary shall make publicly available on the website of the Department of Transportation a report containing—

(1) the findings and conclusions of the Secretary with respect to the testing program; and

(2) any recommendations of the Secretary with respect to the testing program, including any recommendations for amendments to laws (including regulations) and the establishment of standards, that—

(A) would enhance the safe operation of interstate gas or hazardous liquid pipeline facilities; and

(B) are technically, operationally, and economically feasible.

(l) Standards.—If a report under subsection (k) indicates that it is practicable to establish technically, operationally, and economically feasible standards for the use of a safety-enhancing technology and any corresponding operational practices tested by the testing program described in the report, the Secretary, as soon as practicable after submission of the report, may promulgate regulations consistent with chapter 5 of title 5 (commonly known as the “Administrative Procedure Act”) that—

(1) allow operators of interstate gas or hazardous liquid pipeline facilities to use the relevant technology or practice to the extent practicable; and

(2) establish technically, operationally, and economically feasible standards for the capability and deployment of the technology or practice.

§ 60143. Idled pipelines

(a) Definition of Idled.—In this section, the term “idled”, with respect to a pipeline, means that the pipeline—

- (1)(A) has ceased normal operations; and
(B) will not resume service for a period of not less than 180 days;
- (2) has been isolated from all sources of hazardous liquid, natural gas, or other gas; and
- (3)(A) has been purged of combustibles and hazardous materials and maintains a blanket of inert, nonflammable gas at low pressure; or
(B) has not been purged as described in subparagraph (A), but the volume of gas is so small that there is no potential hazard, as determined by the Secretary pursuant to a rule.

(b) Rulemaking.—

(1) In general.—Not later than 2 years after the date of enactment of the PIPES Act of 2020, the Secretary shall promulgate regulations prescribing the applicability of the pipeline safety requirements to idled natural or other gas transmission and hazardous liquid pipelines.

(2) Requirements.—

(A) In general.—The applicability of the regulations under paragraph (1) shall be based on the risk that idled natural or other gas transmission and hazardous liquid pipelines pose to the public, property, and the environment, and shall include requirements to resume operation.

(B) Inspection.—The Secretary or an appropriate State agency shall inspect each idled pipeline and verify that the pipeline has been purged of combustibles and hazardous materials, if required under subsection (a).

(C) Requirements for reinspection.—The Secretary shall determine the requirements for periodic reinspection of idled natural or other gas transmission and hazardous liquid pipelines.

(D) Resumption of operations.—As a condition to allowing an idled pipeline to resume operations, the Secretary shall require that, prior to resuming operations, the pipeline shall be—

(i) inspected with—

(I) hydrostatic pressure testing;

(II) an internal inspection device; or

(III) if the use of hydrostatic pressure testing or an internal inspection device is not technologically feasible, another comparable technology or practice; and

(ii) in compliance with regulations promulgated under this chapter, including any regulations that became effective while the pipeline was idled.

User Fees (49 U.S.C. Chapter 603)

§ 60301. User fees

(a) Schedule of fees.--The Secretary of Transportation shall prescribe a schedule of fees for all natural gas and hazardous liquids transported by pipelines subject to chapter 601 of this title. The fees shall be based on usage (in reasonable relationship to volume-miles, miles, revenues, or a combination of volume-miles, miles, and revenues) of the pipelines. The Secretary shall consider the allocation of resources of the Department of Transportation when establishing the schedule.

(b) Imposition and time of collection.--A fee shall be imposed on each person operating a gas pipeline transmission facility, a liquefied natural gas pipeline facility, or a hazardous liquid pipeline facility to which chapter 601 of this title applies. The fee shall be collected before the end of the fiscal year to which it applies.

(c) Means of collection.--The Secretary shall prescribe procedures to collect fees under this section. The Secretary may use a department, agency, or instrumentality of the United States Government or of a State or local government to collect the fee and may reimburse the department, agency, or instrumentality a reasonable amount for its services.

(d) Use of fees.--A fee collected under this section--

(1)(A) related to a gas pipeline facility may be used only for an activity related to gas under chapter 601 of this title; and

(B) related to a hazardous liquid pipeline facility may be used only for an activity related to hazardous liquid under chapter 601 of this title; and

(2) may be used only to the extent provided in advance in an appropriation law.

(e) Limitations.--Fees prescribed under subsection (a) of this section shall be sufficient to pay for the costs of activities described in subsection (d) of this section. However, the total amount collected for a fiscal year may not be more than 105 percent of the total amount of the appropriations made for the fiscal year for activities to be financed by the fees.

§ 60302. User fees for underground natural gas storage facilities

(a) In General.—A fee shall be imposed on an entity operating an underground natural gas storage facility subject to section 60141. Any such fee imposed shall be collected before the end of the fiscal year to which it applies.

(b) Means of Collection.—The Secretary of Transportation shall prescribe procedures to collect fees under this section. The Secretary may use a department, agency, or instrumentality of the United States Government or of a State or local government to collect the fee and may reimburse the department, agency, or instrumentality a reasonable amount for its services.

(c) Use of Fees.—

(1) Account.—There is established an Underground Natural Gas Storage Facility Safety Account in the Pipeline Safety Fund established in the Treasury of the United States under section 60301.

(2) Use of Fees.—A fee collected under this section—

(A) shall be deposited in the Underground Natural Gas Storage Facility Safety Account; and

(B) if the fee is related to an underground natural gas storage facility subject to section 60141, the amount of the fee may be used only for an activity related to underground natural gas storage facility safety.

(3) Limitation.—No fee may be collected under this section, except to the extent that the expenditure of such fee to pay the costs of an activity related to underground natural gas storage facility safety for which such fee is imposed is provided in advance in an appropriations Act.

§ 60303. Fees for compliance review of liquefied natural gas facilities

(a) Imposition of Fee.—

(1) In general.—The Secretary of Transportation (referred to in this section as the “Secretary”) shall impose on a person who files with the Federal Energy Regulatory Commission as application for a liquefied natural gas facility that has design and construction costs totaling not less than \$2,500,000,000 a fee for the necessary expenses of a review, if any, that the Secretary conducts, in connection with that application, to determine compliance with subpart B of part 193 of title 49, Code of Federal Regulations (or successor regulations).

(2) Relation to other review.—The Secretary may not impose fees under paragraph (1) and section 60117(o) or 60301(b) for the same compliance review described in paragraph (1).

(b) Means of Collection.—

(1) In general.—The Secretary shall prescribe procedures to collect fees under this section.

(2) Use of government entities.—The Secretary may—

(A) use a department, agency, or instrumentality of the Federal Government or of a State or local government to collect fee under this section; and

(B) reimburse that department, agency, or instrumentality a reasonable amount for the services provided.

(c) Account.—There is established an account, to be known as the “Liquefied Natural Gas Siting Account”, in the Pipeline Safety Fund established in the Treasury of the United States under section 60301.

One-Call Notification Programs Statutes (49 U.S.C. § 6101 et seq.)

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§ 6101. Purposes

The purposes of this chapter are--

- (1) to enhance public safety;
- (2) to protect the environment;
- (3) to minimize risks to excavators; and
- (4) to prevent disruption of vital public services,

by reducing the incidence of damage to underground facilities during excavation through the voluntary adoption and efficient implementation by all States of State one-call notification programs that meet the minimum standards set forth under section 6103.

§ 6102. Definitions

In this chapter, the following definitions apply:

- (1) One-call notification system.--The term "one-call notification system" means a system operated by an organization that has as 1 of its purposes to receive notification from excavators of intended excavation in a specified area in order to disseminate such notification to underground facility operators that are members of the system so that such operators can locate and mark their facilities in order to prevent damage to underground facilities in the course of such excavation.
- (2) State one-call notification program.--The term "State one-call notification program" means the State statutes, regulations, orders, judicial decisions, and other elements of law and policy in effect in a State that establish the requirements for the operation of one-call notification systems in such State.
- (3) State.--The term "State" means a State, the District of Columbia, and Puerto Rico.
- (4) Secretary.--The term "Secretary" means the Secretary of Transportation.

§ 6103. Minimum standards for State one-call notification programs

~~(a) Minimum standards.--In order to qualify for a grant under section 6106, a State one-call notification program shall, at a minimum, provide for--~~

- ~~(1) appropriate participation by all underground facility operators, including all government operators;~~
- ~~(2) appropriate participation by all excavators, including all government and contract excavators; and~~
- ~~(3) flexible and effective enforcement under State law with respect to participation in, and use of, one-call notification systems.~~

(a) Minimum Standards.--

(1) In general.--In order to qualify for a grant under section 6106, a State one-call notification program, at a minimum, shall provide for--

- (A) appropriate participation by all underground facility operators, including all government operators;
- (B) appropriate participation by all excavators, including all government and contract excavators; and
- (C) flexible and effective enforcement under State law with respect to participation in, and use of, one-call notification systems.

(2) Exemptions prohibited.--In order to qualify for a grant under section 6106, a State one-call notification program may not exempt municipalities, State agencies, or their contractors from the one-call notification system requirements of the program. [this amendment takes effect 1/3/2014]

(b) Appropriate participation.--In determining the appropriate extent of participation required for types of underground facilities or excavators under subsection (a), a State shall assess, rank, and take into consideration the risks to the public safety, the environment, excavators, and vital public services associated with--

- (1) damage to types of underground facilities; and
- (2) activities of types of excavators.

(c) Implementation.--A State one-call notification program also shall, at a minimum, provide for and document--

- (1) consideration of the ranking of risks under subsection (b) in the enforcement of its provisions;
- (2) a reasonable relationship between the benefits of one-call notification and the cost of implementing and complying with the requirements of the State one-call notification program; and
- (3) voluntary participation where the State determines that a type of underground facility or an activity of a type of excavator poses a de minimis risk to public safety or the environment.

(d) Penalties.--To the extent the State determines appropriate and necessary to achieve the purposes of this chapter, a State one-call notification program shall, at a minimum, provide for--

- (1) administrative or civil penalties commensurate with the seriousness of a violation by an excavator or facility owner of a State one-call notification program;
- (2) increased penalties for parties that repeatedly damage underground facilities because they fail to use one-call notification systems or for parties that repeatedly fail to provide timely and accurate marking after the required call has been made to a one-call notification system;
- (3) reduced or waived penalties for a violation of a requirement of a State one-call notification program that results in, or could result in, damage that is promptly reported by the violator;
- (4) equitable relief; and
- (5) citation of violations.

§ 6104. Compliance with minimum standards

(a) Requirement.--In order to qualify for a grant under section 6106, each State shall submit to the Secretary a grant application under subsection (b). The State shall submit the application not later than 2 years after the date of enactment of this chapter.

(b) Application.--

- (1) Upon application by a State, the Secretary shall review that State's one-call notification program, including the provisions for the implementation of the program and the record of compliance and enforcement under the program.
- (2) Based on the review under paragraph (1), the Secretary shall determine whether the State's one-call notification program meets the minimum standards for such a program set forth in section 6103 in order to qualify for a grant under section 6106.
- (3) In order to expedite compliance under this section, the Secretary may consult with the State as to whether an existing State one-call notification program, a specific modification thereof, or a proposed State program would result in a positive determination under paragraph (2).
- (4) The Secretary shall prescribe the form and manner of filing an application under this section that shall provide sufficient information about a State's one-call notification program for the Secretary to evaluate its overall effectiveness. Such information may include the nature and reasons for exceptions from required participation, the types of enforcement available, and such other information as the Secretary deems necessary.
- (5) The application of a State under paragraph (1) and the record of actions of the Secretary under this section shall be available to the public.

(c) Alternative program.--A State is eligible to receive a grant under section 6106 if the State maintains an alternative one-call notification program that provides protection for public safety, excavators, and the environment that is equivalent to, or greater than, protection provided under a program that meets the minimum standards set forth in section 6103.

(d) Report.--The Secretary shall include the following information in reports submitted under section 60124 of this title--

- (1) a description of the extent to which each State has adopted and implemented the minimum Federal standards under section 6103 or maintains an alternative program under subsection (c);

- (2) an analysis by the Secretary of the overall effectiveness of each State's one-call notification program and the one-call notification systems operating under such program in achieving the purposes of this chapter;
- (3) the impact of each State's decisions on the extent of required participation in one-call notification systems on prevention of damage to underground facilities; and
- (4) areas where improvements are needed in one-call notification systems in operation in each State.

The report shall also include any recommendations the Secretary determines appropriate. If the Secretary determines that the purposes of this chapter have been substantially achieved, no further report under this section shall be required.

§ 6105. Implementation of best practices guidelines

(a) Adoption of best practices.--The Secretary of Transportation shall encourage States, operators of one-call notification programs, excavators (including all government and contract excavators), and underground facility operators to adopt and implement practices identified in the best practices report entitled "Common Ground", as periodically updated.

(b) Technical assistance.--The Secretary shall provide technical assistance to and participate in programs sponsored by a non-profit organization specifically established for the purpose of reducing construction-related damage to underground facilities.

(c) Grants.--

- (1) In general.--The Secretary may make grants to a non-profit organization described in subsection (b).
- (2) Authorization of appropriations.--In addition to amounts authorized under section 6107, there is authorized to be appropriated for making grants under this subsection \$500,000 for each of fiscal years 2003 through 2006. Such sums shall remain available until expended.
- (3) General revenue funding.--Any sums appropriated under this subsection shall be derived from general revenues and may not be derived from amounts collected under section 60301.

§ 6106. Grants to States

(a) In general.--The Secretary may make a grant of financial assistance to a State that qualifies under section 6104(b) to assist in improving--

- (1) the overall quality and effectiveness of one-call notification systems in the State;
- (2) communications systems linking one-call notification systems;
- (3) location capabilities, including training personnel and developing and using location technology;
- (4) record retention and recording capabilities for one-call notification systems;
- (5) public information and education;
- (6) participation in one-call notification systems; or
- (7) compliance and enforcement under the State one-call notification program.

(b) State action taken into account.--In making grants under this section, the Secretary shall take into consideration the commitment of each State to improving its State one-call notification program, including legislative and regulatory actions taken by the State after the date of enactment of this chapter.

(c) Funding for one-call notification systems.--A State may provide funds received under this section directly to any one-call notification system in such State that substantially adopts the best practices identified under section 6105.

§ 6107. Authorization of appropriations

~~(a) For grants to states.—There are authorized to be appropriated to the Secretary to provide grants to States under section 6106 \$1,000,000 for each of fiscal years 2003 through 2006 2007 through 2010 2012 through 2015. Such funds shall remain available until expended.~~

~~(b) For administration.—There are authorized to be appropriated to the Secretary such sums as may be necessary to carry out sections 6103, 6104, and 6105 for fiscal years 2003 through 2006 fiscal years 2007 through 2010 2012 through 2015.~~

~~(c) General revenue funding.—Any sums appropriated under this section shall be derived from general revenues and may not be derived from amounts collected under section 60301 of this title.~~

§ 6107. Funding

~~Of the amounts made available under section 60125(a)(1), the Secretary shall expend \$1,058,000 for each of fiscal years 2021 through 2023 \$1,058,000 for each of fiscal years 2016 through 2019 to carry out section 6106.~~

§ 6108. Relationship to State laws

Nothing in this chapter preempts State law or shall impose a new requirement on any State or mandate revisions to a one-call system.

§ 6109. Public education and awareness

~~(a) Grant authority.—The Secretary shall make a grant to an appropriate entity for promoting public education and awareness with respect to the 811 national excavation damage prevention phone number.~~

~~(b) Authorization of appropriations.—There is authorized to be appropriated to the Secretary \$1,000,000 for the period beginning October 1, 2006, and ending September 30, 2008, to carry out this section.~~

Section 12 of the Pipeline Safety Improvement Act of 2002
(49 U.S.C. 60101 note; Public Law 107–355)

Sec. 12. Pipeline Integrity, Safety, and Reliability Research and Development.

(a) In general.—The heads of the participating agencies shall carry out a program of research, development, demonstration, and standardization to ensure the integrity of pipeline facilities.

(b) Memorandum of understanding.—

(1) In general.—Not later than 120 days after the date of enactment of this Act, the heads of the participating agencies shall enter into a memorandum of understanding detailing their respective responsibilities in the program authorized by subsection (a).

(2) Areas of expertise.—Under the memorandum of understanding, each of the participating agencies shall have the primary responsibility for ensuring that the elements of the program within its expertise are implemented in accordance with this section. The Department of Transportation's responsibilities shall reflect its lead role in pipeline safety and expertise in pipeline inspection, integrity management, and damage prevention. The Department of Energy's responsibilities shall reflect its expertise in system reliability, low-volume gas leak detection, and surveillance technologies. The National Institute of Standards and Technology's responsibilities shall reflect its expertise in materials research and assisting in the development of consensus technical standards, as that term is used in section 12(d)(4) of Public Law 104–13 (15 U.S.C. 272 note).

(c) Program elements.—The program authorized by subsection (a) shall include research, development, demonstration, and standardization activities related to—

(1) materials inspection;

(2) stress and fracture analysis, detection of cracks, ~~corrosion~~, abrasion, and other abnormalities inside pipelines that lead to pipeline failure, and development of new equipment or technologies that are inserted into pipelines to detect anomalies;

(3) internal inspection and leak detection technologies, including detection of leaks at very low volumes;

(4) methods of analyzing content of pipeline throughput;

(5) pipeline security, including improving the real-time surveillance of pipeline rights-of-way, developing tools for evaluating and enhancing pipeline security and infrastructure, reducing natural, technological, and terrorist threats, and protecting first response units and persons near an incident;

(6) risk assessment methodology, including vulnerability assessment and reduction of third-party damage;

(7) communication, control, and information systems surety;

(8) fire safety of pipelines;

(9) improved excavation, construction, and repair technologies; and

(10) corrosion detection and improving methods, best practices, and technologies for identifying, detecting, preventing, and managing internal and external corrosion and other safety risks; and

~~(4011)~~ other appropriate elements.

The results of activities carried out under paragraph (10) shall be used by the participating agencies to support development and improvement of national consensus standards.

(d) Program plan.—

(1) In general.—Not later than 1 year after the date of enactment of this section, the Secretary of Transportation, in coordination with the Secretary of Energy and the Director of the National Institute of Standards and Technology, shall prepare and transmit to Congress a 5-year program plan to guide activities under this section. Such program plan shall be submitted to the Technical Pipeline Safety Standards Committee and the Technical Hazardous Liquid Pipeline Safety Standards Committee for review, and the report to Congress shall include the comments of the committees. The 5-year program plan shall be based on the memorandum of understanding under subsection (b) and take into account related activities of other Federal agencies.

(2) Consultation.—In preparing the program plan and selecting and prioritizing appropriate project proposals, the Secretary of Transportation shall consult with or seek the advice of appropriate representatives of the natural gas, crude oil, and petroleum product pipeline industries, utilities, manufacturers, institutions of higher learning, Federal agencies, pipeline research institutions, national laboratories, State pipeline safety officials, labor organizations, environmental organizations, pipeline safety advocates, and professional and technical societies.

(3) Ongoing pipeline transportation research and development.—

(A) In general.—After the initial 5-year program plan has been carried out by the participating agencies, the Secretary of Transportation, in coordination with the Director of the National Institute of Standards and Technology, as appropriate, shall prepare a research and development program plan every 5 years thereafter and shall transmit a report to Congress on the status and results-to-date of implementation of the program every 2 years. The biennial report shall include a summary of updated research needs and priorities identified through the consultation requirements of paragraph (2).

(B) Consultation.—The Secretary shall comply with the consultation requirements of paragraph (2) when preparing the program plan and in the selection and prioritization of research and development projects.

(C) Funding from non-federal sources.—The Secretary shall ensure at least 30 percent of the costs of program-wide research and development activities are carried out using non-Federal sources.

(C) Funding From Non-Federal Sources.—The Secretary shall ensure that—

(i) at least 30 percent of the costs of technology research and development activities may be carried out using non-Federal sources;

(ii) at least 20 percent of the costs of basic research and development with universities may be carried out using non-Federal sources; and

(iii) up to 100 percent of the costs of research and development for purely governmental purposes may be carried out using Federal funds.

(e) Reports to Congress.—Not later than 1 year after the date of enactment of this Act, and annually thereafter, the heads of the participating agencies shall transmit jointly to Congress a report on the status and results to date of the implementation of the program plan prepared under subsection (d).

~~(f) Authorization of Appropriations.—~~

~~(1) Department of Transportation.—There is authorized to be appropriated to the Secretary of Transportation for carrying out this section \$10,000,000 for each of the fiscal years 2003 through 2006.~~

~~(2) Department of Energy.—There is authorized to be appropriated to the Secretary of Energy for carrying out this section \$10,000,000 for each of the fiscal years 2003 through 2006.~~

~~(3) National Institute of Standards and Technology.—There is authorized to be appropriated to the Director of the National Institute of Standards and Technology for carrying out this section \$5,000,000 for each of the fiscal years 2003 through 2006.~~

~~(4) General Revenue Funding.—Any sums appropriated under this subsection shall be derived from general revenues and may not be derived from amounts collected under section 60301 of title 49, United States Code.~~

~~(g)~~(f) Pipeline integrity program.—Of the amounts available in the Oil Spill Liability Trust Fund established by section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509), \$3,000,000 shall be transferred to the Secretary of Transportation, as provided in appropriation Acts, to carry out programs for detection, prevention, and mitigation of oil spills for each of the fiscal years ~~2003 through 2006~~ 2012 through 2015 2016 through 2019 2021 through 2023.

~~(h)~~(g) Participating agencies defined.—In this section, the term “participating agencies” means the Department of Transportation, the Department of Energy, and the National Institute of Standards and Technology.

(h) Independent Experts.—Not later than 180 days after the date of enactment of the PIPES Act of 2016, the Secretary shall—

(1) implement processes and procedures to ensure that activities listed under subsection (c), to the greatest extent practicable, produce results that are peer-reviewed by independent experts and not by persons or entities that have a financial interest in the pipeline, petroleum, or natural gas industries, or that would be directly impacted by the results of the projects; and

(2) submit to the Committee on Transportation and Infrastructure, the Committee on Energy and Commerce, and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report describing the processes and procedures implemented under paragraph (1).

(i) Conflict Of Interest.—The Secretary shall take all practical steps to ensure that each recipient of an agreement under this section discloses in writing to the Secretary any conflict of interest on a research and development project carried out under this section, and includes any such disclosure as part of the final deliverable pursuant to such agreement. The Secretary may not make an award under this section directly to a pipeline owner or operator that is regulated by the Pipeline and Hazardous Materials Safety Administration or a State-certified regulatory authority if there is a conflict of interest relating to such owner or operator.

Uncodified Mandates from Act of 2011

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Sec. 3. Pipeline Damage Prevention.

(d) Excavation Damage.

(1) Study.—The Secretary of Transportation shall conduct a study on the impact of excavation damage on pipeline safety.

(2) Contents.—The study shall include—

- (A) an analysis of the frequency and severity of different types of excavation damage incidents;
- (B) an analysis of exemptions to the one-call notification system requirements in each State;
- (C) a comparison of exemptions to the one-call notification system requirements in each State to the types of excavation damage incidents in that State; and
- (D) an analysis of the potential safety benefits and adverse consequences of eliminating all exemptions for mechanized excavation from State one-call notification systems.

(3) Report.—Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the study.

Sec. 5. Integrity Management.

(a) Evaluation.—Not later than 18 months after the date of enactment of this Act, the Secretary of Transportation shall evaluate—

- (1) whether integrity management system requirements, or elements thereof, should be expanded beyond high-consequence areas; and
- (2) with respect to gas transmission pipeline facilities, whether applying integrity management program requirements, or elements thereof, to additional areas would mitigate the need for class location requirements.

(b) Factors.—In conducting the evaluation under subsection (a), the Secretary shall consider, at a minimum, the following:

- (1) The continuing priority to enhance protections for public safety.
- (2) The continuing importance of reducing risk in high consequence areas.
- (3) The incremental costs of applying integrity management standards to pipelines outside of high-consequence areas where operators are already conducting assessments beyond what is required under chapter 601 of title 49, United States Code.
- (4) The need to undertake integrity management assessments and repairs in a manner that is achievable and sustainable, and that does not disrupt pipeline service.
- (5) The options for phasing in the extension of integrity management requirements beyond high-consequence areas, including the most effective and efficient options for decreasing risks to an increasing number of people living or working in proximity to pipeline facilities.
- (6) The appropriateness of applying repair criteria, such as pressure reductions and special requirements for scheduling remediation, to areas that are not high-consequence areas.

(c) Report.—Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report, based on the evaluation conducted under subsection (a), containing the Secretary's analysis and findings regarding—

- (1) expansion of integrity management requirements, or elements thereof, beyond high-consequence areas; and
- (2) with respect to gas transmission pipeline facilities, whether applying the integrity management program requirements, or elements thereof, to additional areas would mitigate the need for class location requirements.

(d) Data reporting.—The Secretary shall collect any relevant data necessary to complete the evaluation required by subsection (a).

* * * * *

(f) Rulemaking requirements.—

(1) Review period defined.—In this subsection, the term “review period” means the period beginning on the date of enactment of this Act and ending on the earlier of—

(A) the date that is 1 year after the date of completion of the report under subsection (c); or

(B) the date that is 3 years after the date of enactment of this Act.

(2) Congressional authority.—In order to provide Congress the necessary time to review the results of the report required by subsection (c) and implement appropriate recommendations, the Secretary shall not, during the review period, issue final regulations described in paragraph (3)(B).

(3) Standards.—

(A) Findings.—As soon as practicable following the review period, the Secretary shall issue final regulations described in subparagraph (B), if the Secretary finds, in the report required under subsection (c), that—

(i) integrity management system requirements, or elements thereof, should be expanded beyond high consequence areas; and

(ii) with respect to gas transmission pipeline facilities, applying integrity management program requirements, or elements thereof, to additional areas would mitigate the need for class location requirements.

(B) Regulations.—Regulations issued by the Secretary under subparagraph (A), if any, shall—

(i) expand integrity management system requirements, or elements thereof, beyond high-consequence areas; and

(ii) remove redundant class location requirements for gas transmission pipeline facilities that are regulated under an integrity management program adopted and implemented under section 60109(c)(2) of title 49, United States Code.

(4) Savings clause.—

(A) In general.—Notwithstanding any other provision of this subsection, the Secretary, during the review period, may issue final regulations described in paragraph (3)(B), if the Secretary determines that a condition that poses a risk to public safety, property, or the environment is present or an imminent hazard exists and that the regulations will address the risk or hazard.

(B) Imminent hazard defined.—In subparagraph (A), the term “imminent hazard” means the existence of a condition related to pipelines or pipeline operations that presents a substantial likelihood that death, serious illness, severe personal injury, or substantial endangerment to health, property, or the environment may occur.

(g) Report to Congress on risk-based pipeline reassessment intervals.—Not later than 2 years after the date of enactment of this Act, the Comptroller General of the United States shall evaluate—

(1) whether risk-based reassessment intervals are a more effective alternative for managing risks to pipelines in high consequence areas once baseline assessments are complete when compared to the reassessment interval specified in section 60109(c)(3)(B) of title 49, United States Code;

(2) the number of anomalies found in baseline assessments required under section 60109(c)(3)(A) of title 49, United States Code, as compared to the number of anomalies found in reassessments required under section 60109(c)(3)(B) of such title; and

(3) the progress made in implementing the recommendations in GAO Report 06–945 and the current relevance of those recommendations that have not been implemented.

Sec. 6 Public Education and Awareness.

(b) Information to emergency response agencies.—

(1) Guidance.—Not later than 18 months after the date of enactment of this Act, the Secretary shall issue guidance to owners and operators of pipeline facilities on the importance of providing system-specific information about their pipeline facilities to emergency response agencies of the communities and jurisdictions in which those facilities are located.

(2) Consultation.—Before issuing guidance under paragraph (1), the Secretary shall consult with owners and operators of pipeline facilities to determine the extent to which the owners and operators are already providing system-specific information about their pipeline facilities to emergency response agencies.

Sec. 7. Cast Iron Gas Pipelines.

(b) Status report.—Not later than December 31, 2013, the Secretary of Transportation shall transmit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report that—

- (1) identifies the total mileage of cast iron gas pipelines in the United States; and
- (2) evaluates the progress that owners and operators of pipeline facilities have made in implementing their plans for the safe management and replacement of cast iron gas pipelines.

Sec. 8. Leak Detection.

(a) Leak detection report.—

(1) In general.—Not later than 1 year after the date of enactment of this Act, the Secretary of Transportation shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives a report on leak detection systems utilized by operators of hazardous liquid pipeline facilities and transportation-related flow lines.

(2) Contents.—The report shall include—

- (A) an analysis of the technical limitations of current leak detection systems, including the ability of the systems to detect ruptures and small leaks that are ongoing or intermittent, and what can be done to foster development of better technologies; and
- (B) an analysis of the practicability of establishing technically, operationally, and economically feasible standards for the capability of such systems to detect leaks, and the safety benefits and adverse consequences of requiring operators to use leak detection systems.

(b) Rule making requirements.—

(1) Review period defined.—In this subsection, the term “review period” means the period beginning on the date of enactment of this Act and ending on the earlier of—

- (A) the date that is 1 year after the date of completion of the report under subsection (a); or
- (B) the date that is 2 years after the date of enactment of this Act.

(2) Congressional Authority.—In order to provide Congress the necessary time to review the results of the report required by subsection (a) and implement appropriate recommendations, the Secretary, during the review period, shall not issue final regulations described in paragraph (3).

(3) Standards.—As soon as practicable following the review period, if the report required by subsection (a) finds that it is practicable to establish technically, operationally, and economically feasible standards for the capability of leak detection systems to detect leaks, the Secretary shall issue final regulations that—

- (A) require operators of hazardous liquid pipeline facilities to use leak detection systems where practicable; and
- (B) establish technically, operationally, and economically feasible standards for the capability of such systems to detect leaks.

(4) Savings clause.—

(A) In general.—Notwithstanding any other provision of this subsection, the Secretary, during the review period, may issue final regulations described in paragraph (3) if the Secretary determines that a condition that poses a risk to public safety, property, or the environment is present or an imminent hazard exists and that the regulations will address the risk or hazard.

(B) Imminent hazard defined.—In subparagraph (A), the term “imminent hazard” means the existence of a condition related to pipelines or pipeline operations that presents a substantial

likelihood that death, serious illness, severe personal injury, or substantial endangerment to health, property, or the environment may occur.

Sed. 9. Accident and Incident Notification.

- (a) Revision of regulations.—Not later than 18 months after the date of enactment of this Act, the Secretary of Transportation shall revise regulations issued under sections 191.5 and 195.52 of title 49, Code of Federal Regulations, to establish specific time limits for telephonic or electronic notice of accidents and incidents involving pipeline facilities to the Secretary and the National Response Center.
- (b) Minimum requirements.—In revising the regulations, the Secretary, at a minimum, shall—
- (1) establish time limits for telephonic or electronic notification of an accident or incident to require such notification at the earliest practicable moment following confirmed discovery of an accident or incident and not later than 1 hour following the time of such confirmed discovery;
 - (2) review procedures for owners and operators of pipeline facilities and the National Response Center to provide thorough and coordinated notification to all relevant State and local emergency response officials, including 911 emergency call centers, for the jurisdictions in which those pipeline facilities are located in the event of an accident or incident, and revise such procedures as appropriate; and
 - (3) require such owners and operators to revise their initial telephonic or electronic notice to the Secretary and the National Response Center with an estimate of the amount of the product released, an estimate of the number of fatalities and injuries, if any, and any other information determined appropriate by the Secretary within 48 hours of the accident or incident, to the extent practicable.
- (c) Updating of reports.—After receiving revisions described in subsection (b)(3), the National Response Center shall update the initial report on an accident or incident instead of generating a new report.

Sec. 13. Cost Recovery for Design Reviews.

- (b) Guidance.—Not later than 1 year after the date of enactment of this Act, the Secretary of Transportation shall issue guidance to clarify the meaning of the term “new or novel technologies or design” as used in section 60117(n)(1)(B)(ii) of title 49, United States Code, as amended by subsection (a) of this section.

Sec. 16. Study of Transportation of Diluted Bitumen.

Not later than 18 months after the date of enactment of this Act, the Secretary of Transportation shall complete a comprehensive review of hazardous liquid pipeline facility regulations to determine whether the regulations are sufficient to regulate pipeline facilities used for the transportation of diluted bitumen. In conducting the review, the Secretary shall conduct an analysis of whether any increase in the risk of a release exists for pipeline facilities transporting diluted bitumen. The Secretary shall report the results of the review to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives.

Sec. 17. Study of Nonpetroleum Hazardous Liquid Transported by Pipeline.

The Secretary of Transportation may conduct an analysis of the transportation of nonpetroleum hazardous liquids by pipeline facility for the purpose of identifying the extent to which pipeline facilities are currently being used to transport nonpetroleum hazardous liquids, such as chlorine, from chemical production

facilities across land areas not owned by the producer that are accessible to the public. The analysis should identify the extent to which the safety of the pipeline facilities is unregulated by the States and evaluate whether the transportation of such chemicals by pipeline facility across areas accessible to the public would present significant risks to public safety, property, or the environment in the absence of regulation. The results of the analysis shall be made available to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives.

Sec. 20. Administrative Enforcement Process.

(a) Issuance of regulations.—

(1) In general.—Not later than 2 years after the date of enactment of this Act, the Secretary of Transportation shall issue regulations—

(A) requiring hearings under sections 60112, 60117, 60118, and 60122 of title 49, United States Code, to be convened before a presiding official;

(B) providing the opportunity for any person requesting a hearing under section 60112, 60117, 60118, or 60122 of such title to arrange for a transcript of the hearing, at the expense of the requesting person;

(C) ensuring expedited review of any order issued pursuant to section 60112(e) of such title;

(D) implementing a separation of functions between personnel involved with the investigation and prosecution of an enforcement case and advising the Secretary on findings and determinations; and

(E) prohibiting ex-parte communication relevant to the question to be decided in such a case by parties to a investigation or hearing.

(2) Presiding official.—The regulations issued under this subsection shall—

(A) define the term “presiding official” to mean the person who conducts any hearing relating to civil penalty assessments, compliance orders, safety orders, or corrective action orders; and

(B) require that the presiding official be an attorney on the staff of the Deputy Chief Counsel of the Pipeline and Hazardous Materials Safety Administration that is not engaged in investigative or prosecutorial functions including the preparation of notices of probable violations, notices relating to civil penalty assessments, notices relating to compliance, or notices of proposed corrective actions.

(3) Expedited review.—The regulations issued under this subsection shall define the term “expedited review” for the purposes of paragraph (1)(C).

Sec. 21. Gas and Hazardous Liquid Gathering Lines.

(a) Review.—The Secretary of Transportation shall conduct a review of existing Federal and State regulations for gas and hazardous liquid gathering lines located onshore and offshore in the United States, including within the inlets of the Gulf of Mexico.

(b) Report to Congress.

(1) In general.—Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the review.

(2) Recommendations.—The report shall include the Secretary’s recommendations with respect to—

(A) the sufficiency of existing Federal and State laws and regulations to ensure the safety of gas and hazardous liquid gathering lines;

(B) the economic impacts, technical practicability, and challenges of applying existing Federal regulations to gathering lines that are not currently subject to Federal regulation when compared to the public safety benefits; and

(C) subject to a risk-based assessment, the need to modify or revoke existing exemptions from Federal regulation for gas and hazardous liquid gathering lines.

* * * * *

Sec. 25. Pipeline Safety Training for State and Local Government Personnel.

(a) In general.—To further the objectives of chapter 601 of title 49, United States Code, the Secretary of Transportation may provide the services of personnel from the Pipeline and Hazardous Materials Safety Administration to provide training for State and local government personnel at a pipeline safety training facility that is established and operated by an agency or instrumentality of the United States, a unit of State or local government, or an educational institution.

(b) Reimbursements for training expenditures.—

(1) In general.—Notwithstanding any other provision of law, the Secretary may require reimbursement from and local government personnel under subsection (a), including salaries, expenses, transportation for Pipeline and Hazardous Materials Safety Administration personnel, and the cost of training materials.

(2) Authorization of appropriations.—Amounts collected as reimbursement under paragraph (1) are authorized to be appropriated for the purposes set forth in chapter 601 of title 49, United States Code.

Sec. 26. Report on Minority-owned, Woman-owned, and Disadvantaged Businesses.

Not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States, based upon available information, shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives a comprehensive report assessing the levels and types of participation and methods of facilitating the participation of minority-owned business enterprises, woman-owned business enterprises, and disadvantaged business enterprises in the construction and operation of pipeline facilities in the United States.

Sec. 27. Report on Pipeline Projects.

(a) Study. —The Comptroller General of the United States shall conduct a comprehensive study regarding the process for obtaining Federal and State permits for projects to construct pipeline facilities.

(b) Evaluation.—In conducting the study, the Comptroller General shall evaluate how long it takes to issue permits for pipeline construction projects, the relationship between the States and the Federal Government in issuing such permits, and any recommendations from the States for improving the permitting process.

(c) Consultation.—In conducting the study, the Comptroller General shall consult with the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

(d) Report.—Not later than 1 year after the date of enactment of this Act, the Comptroller General shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the results of the study.

Sec. 29. Seismicity.

In identifying and evaluating all potential threats to each pipeline=segment pursuant to parts 192 and 195 of title 49, Code of Federal Regulations, an operator of a pipeline facility shall consider the seismicity of the area.

Sec. 30. Tribal Consultation for Pipeline Projects.

Not later than 1 year after the date of enactment of this Act, the Secretary of Transportation shall develop and implement a protocol for consulting with Indian tribes to provide technical assistance for the regulation of pipelines that are under the jurisdiction of Indian tribes.

Sec. 31. Pipeline Inspection and Enforcement Needs.

(a) Inspection and enforcement needs.—Not later than 12 months after the date of enactment of this Act, the Secretary of Transportation shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report that provides information on—

- (1) the total number of full-time equivalent positions for pipeline inspection and enforcement personnel at the Pipeline and Hazardous Materials Safety Administration;
- (2) out of the total number of such positions, how many of the positions are not filled and the reasons why the positions are not filled;
- (3) the actions the Administrator of the Pipeline and Hazardous Materials Safety Administration is taking to fill the positions; and
- (4) any additional inspection and enforcement resource needs of the Pipeline and Hazardous Materials Safety Administration.

(b) Staffing.—Subject to the availability of funds, the Secretary may increase the number of positions for pipeline inspection and enforcement personnel at the Pipeline and Hazardous Materials Safety Administration by 10 full-time equivalent employees, if—

- (1) on or before September 30, 2014, the Secretary fills the 135 full-time equivalent positions for pipeline inspection and enforcement personnel specified in section 18(e) of the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006 (120 Stat. 3498); and
- (2) in preparing the report under subsection (a), the Secretary finds that additional pipeline inspection and enforcement personnel are necessary.

Uncodified Mandates from Act of 2016

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Sec. 2. Authorization Of Appropriations.

(b) Operational Expenses.—There are authorized to be appropriated to the Secretary of Transportation for the necessary operational expenses of the Pipeline and Hazardous Materials Safety Administration the following amounts:

- (1) \$25,000,000 for fiscal year 2021.
- (2) \$26,000,000 for fiscal year 2022.
- (3) \$27,000,000 for fiscal year 2023.
- ~~(1) \$21,000,000 for fiscal year 2016.~~
- ~~(2) \$22,000,000 for fiscal year 2017.~~
- ~~(3) \$22,000,000 for fiscal year 2018.~~
- ~~(4) \$23,000,000 for fiscal year 2019.~~

Sec. 3. Regulatory Updates.

(a) Publication.—

(1) IN GENERAL.—The Secretary of Transportation shall publish an update on a publicly available Web site of the Department of Transportation regarding the status of a final rule for each outstanding regulation, and upon such publication notify the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives that such publication has been made.

(2) DEADLINES.—The Secretary shall publish an update under this subsection not later than 120 days after the date of enactment of this Act, and every 90 days thereafter until a final rule has been published in the Federal Register for each outstanding regulation.

(b) Contents.—The Secretary shall include in each update published under subsection (a)—

- (1) a description of the work plan for each outstanding regulation;
- (2) an updated rulemaking timeline for each outstanding regulation;
- (3) current staff allocations with respect to each outstanding regulation;
- (4) any resource constraints affecting the rulemaking process for each outstanding regulation;
- (5) any other details associated with the development of each outstanding regulation that affect the progress of the rulemaking process; and
- (6) a description of all rulemakings regarding gas or hazardous liquid pipeline facilities published in the Federal Register that are not identified under subsection (c).

(c) Outstanding Regulation Defined.—In this section, the term “outstanding regulation” means—

- (1) a final rule required under the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Public Law 112–90) that has not been published in the Federal Register; and
- (2) a final rule regarding gas or hazardous liquid pipeline facilities required under this Act or an Act enacted prior to the date of enactment of this Act (other than the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Public Law 112–90)) that has not been published in the Federal Register.

Sec. 4. Natural Gas Integrity Management Review.

(a) Report.—Not later than 18 months after the date of publication in the Federal Register of a final rule regarding the safety of gas transmission pipelines related to the notice of proposed rulemaking issued on April 8, 2016, titled “Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines” (81 Fed. Reg. 20721), the Comptroller General of the United States shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report

regarding the integrity management programs for gas pipeline facilities required under section 60109(c) of title 49, United States Code.

(b) Contents.—The report required under subsection (a) shall include—

- (1) an analysis of stakeholder perspectives, taking into consideration technical, operational, and economic feasibility, regarding ways to enhance pipeline facility safety, prevent inadvertent releases from pipeline facilities, and mitigate any adverse consequences of such inadvertent releases, including changes to the definition of high consequence area, or expanding integrity management beyond high consequence areas;
- (2) a review of the types of benefits, including safety benefits, and estimated costs of the legacy class location regulations;
- (3) an analysis of the impact pipeline facility features, including the age, condition, materials, and construction of a pipeline facility, have on safety and risk analysis of a particular pipeline facility;
- (4) a description of any challenges affecting Federal or State regulators in the oversight of gas transmission pipeline facilities and how the challenges are being addressed; and
- (5) a description of any challenges affecting the natural gas industry in complying with the programs, and how the challenges are being addressed, including any challenges faced by publicly owned natural gas distribution systems.

(c) Definition Of High Consequence Area.—In this section, the term “high consequence area” has the meaning given the term in section 192.903 of title 49, Code of Federal Regulations.

Sec. 5. Hazardous Liquid Integrity Management Review.

(a) Report.—Not later than 18 months after the date of publication in the Federal Register of a final rule regarding the safety of hazardous liquid pipeline facilities related to the notice of proposed rulemaking issued on October 13, 2015, titled “Pipeline Safety: Safety of Hazardous Liquid Pipelines” (80 Fed. Reg. 61610), the Comptroller General of the United States shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report regarding the integrity management programs for hazardous liquid pipeline facilities, as regulated under sections 195.450 and 195.452 of title 49, Code of Federal Regulations.

(b) Contents.—The report required under subsection (a) shall include—

- (1) taking into consideration technical, operational, and economic feasibility, an analysis of stakeholder perspectives on—
 - (A) ways to enhance hazardous liquid pipeline facility safety;
 - (B) risk factors that may warrant more frequent inspections of hazardous liquid pipeline facilities; and
 - (C) changes to the definition of high consequence area;
- (2) an analysis of how surveying, assessment, mitigation, and monitoring activities, including real-time hazardous liquid pipeline facility monitoring during significant flood events and information sharing with Federal agencies, are being used to address risks associated with rivers, flood plains, lakes, and coastal areas;
- (3) an analysis of the impact pipeline facility features, including the age, condition, materials, and construction of a pipeline facility, have on safety and risk analysis of a particular pipeline facility and what changes to the definition of high consequence area could be made to improve pipeline facility safety; and
- (4) a description of any challenges affecting Federal or State regulators in the oversight of hazardous liquid pipeline facilities and how those challenges are being addressed.

(c) Definition Of High Consequence Area.—In this section, the term “high consequence area” has the meaning given the term in section 195.450 of title 49, Code of Federal Regulations.

Sec. 7. Inspection Report Information.

(b) Notification.—Not later than October 1, 2017, and each fiscal year thereafter for 2 years, the Administrator shall notify the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of—

- (1) the number of times a deadline under section 60108(e) of title 49, United States Code, was exceeded in the prior fiscal year; and
- (2) in each instance, the length of time by which the deadline was exceeded.

Sec. 8. Improving Damage Prevention Technology.

(a) Study.—The Secretary of Transportation, in consultation with stakeholders, shall conduct a study on improving existing damage prevention programs through technological improvements in location, mapping, excavation, and communications practices to prevent excavation damage to a pipe or its coating, including considerations of technical, operational, and economic feasibility and existing damage prevention programs.

(b) Contents.—The study under subsection (a) shall include—

- (1) an identification of any methods to improve existing damage prevention programs through location and mapping practices or technologies in an effort to reduce releases caused by excavation;
- (2) an analysis of how increased use of global positioning system digital mapping technologies, predictive analytic tools, public awareness initiatives including one-call initiatives, the use of mobile devices, and other advanced technologies could supplement existing one-call notification and damage prevention programs to reduce the frequency and severity of incidents caused by excavation damage;
- (3) an identification of any methods to improve excavation practices or technologies in an effort to reduce pipeline damage;
- (4) an analysis of the feasibility of a national data repository for pipeline excavation accident data that creates standardized data models for storing and sharing pipeline accident information; and
- (5) an identification of opportunities for stakeholder engagement in preventing excavation damage.

(c) Report.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives a report containing the results of the study conducted under subsection (a), including recommendations, that include the consideration of technical, operational, and economic feasibility, on how to incorporate into existing damage prevention programs technological improvements and practices that help prevent excavation damage.

Sec. 9. Workforce Management.

(a) Review.—Not later than 1 year after the date of the enactment of this Act, the Inspector General of the Department of Transportation shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate, a review of Pipeline and Hazardous Materials Safety Administration staff resource management, including—

- (1) geographic allocation plans, hiring and time-to-hire challenges, and expected retirement rates and recruitment and retention strategies;
- (2) an identification and description of any previous periods of macroeconomic and pipeline industry conditions under which the Pipeline and Hazardous Materials Safety Administration has encountered difficulty in filling vacancies, and the degree to which special hiring authorities,

including direct hiring authority authorized by the Office of Personnel Management, could have ameliorated such difficulty; and
(3) recommendations to address hiring challenges, training needs, and any other identified staff resource challenges.

(b) Direct Hiring.—Upon identification of a period described in subsection (a)(2), the Administrator of the Pipeline and Hazardous Materials Safety Administration may apply to the Office of Personnel Management for the authority to appoint qualified candidates to any position relating to pipeline safety, as determined by the Administrator, without regard to sections 3309 through 3319 of title 5, United States Code.

(c) Savings Clause.—Nothing in this section shall preclude the Administrator of the Pipeline and Hazardous Materials Safety Administration from applying to the Office of Personnel Management for the authority described in subsection (b) prior to the completion of the report required under subsection (a).

Sec. 10. Information-Sharing System.

(a) In General.—Not later than 180 days after the date of the enactment of this Act, the Secretary of Transportation shall convene a working group to consider the development of a voluntary information-sharing system to encourage collaborative efforts to improve inspection information feedback and information sharing with the purpose of improving gas transmission and hazardous liquid pipeline facility integrity risk analysis.

(b) Membership.—The working group convened pursuant to subsection (a) shall include representatives from—

- (1) the Pipeline and Hazardous Materials Safety Administration;
- (2) industry stakeholders, including operators of pipeline facilities, inspection technology, coating, and cathodic protection vendors, and pipeline inspection organizations;
- (3) safety advocacy groups;
- (4) research institutions;
- (5) State public utility commissions or State officials responsible for pipeline safety oversight;
- (6) State pipeline safety inspectors;
- (7) labor representatives; and
- (8) other entities, as determined appropriate by the Secretary.

(c) Considerations.—The working group convened pursuant to subsection (a) shall consider and provide recommendations to the Secretary on—

- (1) the need for, and the identification of, a system to ensure that dig verification data are shared with in-line inspection operators to the extent consistent with the need to maintain proprietary and security-sensitive data in a confidential manner to improve pipeline safety and inspection technology;
- (2) ways to encourage the exchange of pipeline inspection information and the development of advanced pipeline inspection technologies and enhanced risk analysis;
- (3) opportunities to share data, including dig verification data between operators of pipeline facilities and in-line inspector vendors to expand knowledge of the advantages and disadvantages of the different types of in-line inspection technology and methodologies;
- (4) options to create a secure system that protects proprietary data while encouraging the exchange of pipeline inspection information and the development of advanced pipeline inspection technologies and enhanced risk analysis;
- (5) means and best practices for the protection of safety- and security-sensitive information and proprietary information; and
- (6) regulatory, funding, and legal barriers to sharing the information described in paragraphs (1) through (4).

(d) Publication.—The Secretary shall publish the recommendations provided under subsection (c) on a publicly available Web site of the Department of Transportation.

Sec. 11. Nationwide Integrated Pipeline Safety Regulatory Database.

(a) Report.—Not later than 1 year after the date of enactment of this Act, the Secretary of Transportation shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the feasibility of establishing a national integrated pipeline safety regulatory inspection database to improve communication and collaboration between the Pipeline and Hazardous Materials Safety Administration and State pipeline regulators.

(b) Contents.—The report submitted under subsection (a) shall include—

- (1) a description of any efforts underway to test a secure information-sharing system for the purpose described in subsection (a);
- (2) a description of any progress in establishing common standards for maintaining, collecting, and presenting pipeline safety regulatory inspection data, and a methodology for sharing the data;
- (3) a description of any inadequacies or gaps in State and Federal inspection, enforcement, geospatial, or other pipeline safety regulatory inspection data;
- (4) a description of the potential safety benefits of a national integrated pipeline safety regulatory inspection database; and
- (5) recommendations, including those of stakeholders for how to implement a secure information-sharing system that protects proprietary and security sensitive information and data for the purpose described in subsection (a).

(c) Consultation.—In implementing this section, the Secretary shall consult with stakeholders, including each State authority operating under a certification to regulate intrastate pipelines under section 60105 of title 49, United States Code.

(d) Establishment Of Database.—The Secretary may establish, if appropriate, a national integrated pipeline safety regulatory database—

- (1) after submission of the report required under subsection (a); or
- (2) upon notification to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of the need to establish such database prior to the submission of the report under subsection (a).

Sec. 14. Safety Data Sheets.

(a) In General.—Each owner or operator of a hazardous liquid pipeline facility, following an accident involving such pipeline facility that results in a hazardous liquid spill, shall provide safety data sheets on any spilled hazardous liquid to the designated Federal On-Scene Coordinator and appropriate State and local emergency responders within 6 hours of a telephonic or electronic notice of the accident to the National Response Center.

(b) Definitions.—In this section:

- (1) Federal On-Scene Coordinator.—The term “Federal On-Scene Coordinator” has the meaning given such term in section 311(a) of the Federal Water Pollution Control Act (33 U.S.C. 1321(a)).
- (2) National Response Center.—The term “National Response Center” means the center described under section 300.125(a) of title 40, Code of Federal Regulations.
- (3) Safety Data Sheet.—The term “safety data sheet” means a safety data sheet required under section 1910.1200 of title 29, Code of Federal Regulations.

Sec. 15. Hazardous Materials Identification Numbers.

Not later than 90 days after the date of enactment of this Act, the Secretary of Transportation shall issue an advanced notice of proposed rulemaking to take public comment on the petition for rulemaking dated October 28, 2015, titled “Corrections to Title 49 CFR 172.336 Identification numbers; special provisions” (P-1667).

Sec. 18. Response Plans.

Each owner or operator of a hazardous liquid pipeline facility required to prepare a response plan pursuant to part 194 of title 49, Code of Federal Regulations, shall—

- (1) consider the impact of a discharge into or on navigable waters or adjoining shorelines, including those that may be covered in whole or in part by ice; and
- (2) include procedures and resources for responding to such discharge in the plan.

Sec. 19. Unusually Sensitive Areas.

(b) Unusually Sensitive Areas (USA) Ecological Resources.—~~The Secretary~~

(1) Definitions.—In this subsection:

(A) Certain coastal waters.—The term “certain coastal waters” means—

(i) the territorial sea of the United States;

(ii) the Great Lakes and their connecting waters; and

(iii) the marine and estuarine waters of the United States up to the head of tidal influence.

(B) Coastal beach.—The term “coastal beach” means any land between the high- and low-water marks of certain coastal waters.

(2) Revision.—The Secretary of Transportation shall revise section 195.6(b) of title 49, Code of Federal Regulations, to explicitly state that the Great Lakes, coastal beaches, and ~~marine coastal waters~~ certain coastal waters are USA ecological resources for purposes of determining whether a pipeline is in a high consequence area (as defined in section 195.450 of such title).

Sec. 20. Pipeline Safety Technical Assistance Grants.

(b) Audit.—Not later than 180 days after the date of enactment of this Act, the Inspector General of the Department of Transportation shall submit to the Secretary of Transportation, the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives, and the Committee on Commerce, Science, and Transportation of the Senate a report evaluating the grant program under section 60130 of title 49, United States Code. The report shall include—

- (1) a list of the recipients of all grant funds during fiscal years 2010 through 2015;
- (2) a description of how each grant was used;
- (3) an analysis of the compliance with the terms of grant agreements, including subsections (a) and (b) of such section;
- (4) an evaluation of the competitive process used to award the grant funds; and
- (5) an evaluation of—
 - (A) the ability of the Pipeline and Hazardous Materials Safety Administration to oversee grant funds and usage; and
 - (B) the procedures used for such oversight.

Sec. 21. Study Of Materials And Corrosion Prevention In Pipeline Transportation.

(a) In General.—Not later than 2 years after the date of enactment of this Act, the Comptroller General of the United States shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a study on materials, training, and corrosion prevention technologies for gas and hazardous liquid pipeline facilities.

(b) Requirements.—The study required under subsection (a) shall include—

(1) an analysis of—

(A) the range of piping materials, including plastic materials, used to transport hazardous liquids and natural gas in the United States and in other developed countries around the world;

(B) the types of technologies used for corrosion prevention, including coatings and cathodic protection;

(C) common causes of corrosion, including interior and exterior moisture buildup and impacts of moisture buildup under insulation; and

(D) the training provided to personnel responsible for identifying and preventing corrosion in pipelines, and for repairing such pipelines;

(2) the extent to which best practices or guidance relating to pipeline facility design, installation, operation, and maintenance, including training, are available to recognize or prevent corrosion;

(3) an analysis of the estimated costs and anticipated benefits, including safety benefits, associated with the use of such materials and technologies; and

(4) stakeholder and expert perspectives on the effectiveness of corrosion control techniques to reduce the incidence of corrosion-related pipeline failures.

Sec. 22. Research and Development.

(a) In General.—Not later than 18 months after the date of enactment of this Act, the Inspector General of the Department of Transportation shall submit to the Committee on Transportation and Infrastructure, the Committee on Energy and Commerce, and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report regarding the Pipeline and Hazardous Materials Safety Administration's research and development program carried out under section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note). The report shall include an evaluation of—

(1) compliance with the consultation requirement under subsection (d)(2) of such section;

(2) the extent to which the Pipeline and Hazardous Materials Safety Administration enters into joint research ventures with Federal and non-Federal entities, and benefits thereof;

(3) the policies and procedures the Pipeline and Hazardous Materials Safety Administration has put in place to ensure there are no conflicts of interest with administering grants pursuant to the program, and whether those policies and procedures are being followed; and

(4) an evaluation of the outcomes of research conducted with Federal and non-Federal entities and the degree to which such outcomes have been adopted or utilized.

Sec. 23. Active and Abandoned Pipelines.

Not later than 90 days after the date of enactment of this Act, the Secretary of Transportation shall issue an advisory bulletin to owners and operators of gas or hazardous liquid pipeline facilities and Federal and State pipeline safety personnel regarding procedures of the Pipeline and Hazardous Materials Safety Administration required to change the status of a pipeline facility from active to abandoned, including specific guidance on the terms recognized by the Secretary for each pipeline status referred to in such advisory bulletin.

SEC. 24. State Pipeline Safety Agreements.

(a) Study.—Not later than 2 years after the date of enactment of this Act, the Comptroller General of the United States shall complete a study on State pipeline safety agreements made pursuant to section 60106 of title 49, United States Code. Such study shall consider the following:

- (1) The integration of Federal and State or local authorities in carrying out activities pursuant to an agreement under such section.
- (2) The estimated staff and other resources used by Federal and State authorities in carrying out inspection activities pursuant to agreements under such section.
- (3) The estimated staff and other resources used by the Pipeline and Hazardous Materials Safety Administration in carrying out interstate inspections in areas where there is no interstate agreement with a State pursuant to such section.

Sec. 26. Study on Propane Gas Pipeline Facilities.

(a) In General.—The Secretary of Transportation shall enter into an agreement with the Transportation Research Board of the National Academies to conduct a study examining the safety, regulatory requirements, techniques, and best practices applicable to pipeline facilities that transport or store only petroleum gas or mixtures of petroleum gas and air to 100 or fewer customers, in accordance with the requirements of this section.

(b) Requirements.—In conducting the study pursuant to subsection (a), the Transportation Research Board shall analyze—

- (1) Federal, State, and local regulatory requirements applicable to pipeline facilities described in subsection (a);
- (2) techniques and best practices relating to the design, installation, operation, and maintenance of such pipeline facilities; and
- (3) the costs and benefits, including safety benefits, associated with such applicable regulatory requirements and the use of such techniques and best practices.

(c) Participation.—In conducting the study pursuant to subsection (a), the Transportation Research Board shall consult with Federal, State, and local governments, private sector entities, and consumer and pipeline safety advocates, as appropriate.

(d) Deadline.—Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate the results of the study conducted pursuant to subsection (a) and any recommendations for improving the safety of such pipeline facilities.

(e) Definition.—In this section, the term “petroleum gas” has the meaning given that term in section 192.3 of title 49, Code of Federal Regulations, as in effect on the date of enactment of this Act.

Sec. 27. Standards For Certain Liquefied Natural Gas Pipeline Facilities.

(b) Update To Minimum Safety Standards.—The Secretary of Transportation shall review and update the minimum safety standards prescribed pursuant to section 60103 of title 49, United States Code, for permanent, small scale liquefied natural gas pipeline facilities.

(c) Savings Clause.—Nothing in this section shall be construed to limit the Secretary’s authority under chapter 601 of title 49, United States Code, to regulate liquefied natural gas pipeline facilities.

Sec. 28. Pipeline Odorization Study.

Not later than 2 years after the date of the enactment of this Act, the Comptroller General of the United States shall submit a report to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives that assesses—

- (1) the feasibility, costs, and benefits of odorizing all combustible gas in pipeline transportation; and
- (2) the affects of the odorization of all combustible gas in pipeline transportation on—
 - (A) manufacturers, agriculture, and other end users; and
 - (B) public health and safety.

Sec. 29. Report on Natural Gas Leak Reporting.

(a) In General.—Not later than 1 year after the date of the enactment of this Act, the Administrator of the Pipeline and Hazardous Materials Safety Administration shall submit to Congress a report on the metrics provided to the Pipeline and Hazardous Materials Safety Administration and other Federal and State agencies related to lost and unaccounted for natural gas from distribution pipelines and systems.

(b) Elements.—The report required under subsection (a) shall include the following elements:

- (1) An examination of different reporting requirements or standards for lost and unaccounted for natural gas to different agencies, the reasons for any such discrepancies, and recommendations for harmonizing and improving the accuracy of reporting.
- (2) An analysis of whether separate or alternative reporting could better measure the amounts and identify the location of lost and unaccounted for natural gas from natural gas distribution systems.
- (3) A description of potential safety issues associated with natural gas that is lost and unaccounted for from natural gas distribution systems.
- (4) An assessment of whether alternate reporting and measures will resolve any safety issues identified under paragraph (3), including an analysis of the potential impact, including potential savings, on rate payers and end users of natural gas products of such reporting and measures.

(c) Consideration of Recommendations.—If the Administrator determines that alternate reporting structures or recommendations included in the report required under subsection (a) would significantly improve the reporting and measurement of lost and unaccounted for gas and safety of natural gas distribution systems, the Administrator shall, not later than 1 year after making such determination, issue regulations, as the Administrator determines appropriate, to implement the recommendations.

Sec. 30. Review of State Policies Relating to Natural Gas Leaks.

(a) Review.—The Administrator of the Pipeline and Hazardous Materials Safety Administration shall conduct a State-by-State review of State-level policies that—

- (1) encourage the repair and replacement of leaking natural gas distribution pipelines or systems that pose a safety threat, such as timelines to repair leaks and limits on cost recovery from ratepayers; and
- (2) may create barriers for entities to conduct work to repair and replace leaking natural gas pipelines or distribution systems.

(b) Report.—Not later than 1 year after the date of the enactment of this Act, the Administrator shall submit to the Committee on Transportation and Infrastructure and the Committee on Energy and Commerce of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report containing the findings of the review conducted under subsection (a) and recommendations on Federal or State policies or best practices to improve safety by accelerating the repair and replacement of natural gas pipelines or systems that are leaking or releasing

natural gas. The report shall consider the potential impact, including potential savings, of the implementation of such recommendations on ratepayers or end users of the natural gas pipeline system.

(c) Implementation of Recommendations.—If the Administrator determines that the recommendations made under subsection (b) would significantly improve pipeline safety, the Administrator shall, not later than 1 year after making such determination, and in coordination with the heads of other relevant agencies as appropriate, issue regulations, as the Administrator determines appropriate, to implement the recommendations.

Sec. 31. Aliso Canyon Natural Gas Leak Task Force.

(a) Establishment Of Task Force.—Not later than 15 days after the date of enactment of this Act, the Secretary of Energy shall lead and establish an Aliso Canyon natural gas leak task force.

(b) Membership Of Task Force.—In addition to the Secretary, the task force established under subsection (a) shall be composed of—

- (1) 1 representative from the Department of Transportation;
- (2) 1 representative from the Department of Health and Human Services;
- (3) 1 representative from the Environmental Protection Agency;
- (4) 1 representative from the Department of the Interior;
- (5) 1 representative from the Department of Commerce;
- (6) 1 representative from the Federal Energy Regulatory Commission; and
- (7) representatives of State and local governments, as determined appropriate by the Secretary and the Administrator.

(c) Report.—

(1) In General.—Not later than 180 days after the date of enactment of this Act, the task force established under subsection (a) shall submit a final report that contains the information described in paragraph (2) to—

- (A) the Committee on Energy and Natural Resources of the Senate;
- (B) the Committee on Natural Resources of the House of Representatives;
- (C) the Committee on Environment and Public Works of the Senate;
- (D) the Committee on Transportation and Infrastructure of the House of Representatives;
- (E) the Committee on Commerce, Science, and Transportation of the Senate;
- (F) the Committee on Energy and Commerce of the House of Representatives;
- (G) the Committee on Health, Education, Labor, and Pensions of the Senate;
- (H) the Committee on Education and the Workforce of the House of Representatives;
- (I) the President; and
- (J) relevant Federal and State agencies.

(2) Information Included.—The report submitted under paragraph (1) shall include—

- (A) an analysis and conclusion of the cause and contributing factors of the Aliso Canyon natural gas leak;
- (B) an analysis of measures taken to stop the natural gas leak, with an immediate focus on other, more effective measures that could be taken;
- (C) an assessment of the impact of the natural gas leak on—
 - (i) health, safety, and the environment;
 - (ii) wholesale and retail electricity prices; and
 - (iii) the reliability of the bulk-power system;
- (D) an analysis of how Federal, State, and local agencies responded to the natural gas leak;
- (E) in order to lessen the negative impacts of leaks from underground natural gas storage facilities, recommendations on how to improve—
 - (i) the response to a future leak; and
 - (ii) coordination between all appropriate Federal, State, and local agencies in the response to the Aliso Canyon natural gas leak and future natural gas leaks;

- (F) an analysis of the potential for a similar natural gas leak to occur at other underground natural gas storage facilities in the United States;
 - (G) recommendations on how to prevent any future natural gas leaks;
 - (H) recommendations regarding Aliso Canyon and other underground natural gas storage facilities located in close proximity to residential populations;
 - (I) any recommendations on information that is not currently collected but that would be in the public interest to collect and distribute to agencies and institutions for the continued study and monitoring of natural gas storage infrastructure in the United States; and
 - (J) any other recommendations, as appropriate.
- (3) Publication.—The final report under paragraph (1) shall be made available to the public in an electronically accessible format.
- (4) Findings.—If, before the final report is submitted under paragraph (1), the task force established under subsection (a) finds methods to solve the natural gas leak at Aliso Canyon, finds methods to better protect the affected communities, or finds methods to help prevent other leaks, the task force shall immediately submit such findings to the entities described in subparagraphs (A) through (J) of paragraph (1).

Uncodified Mandates from Act of 2020

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Sec. 102. Pipeline Workforce Development.

- (a) Inspector.—Not later than 1 year after the date of enactment of this Act, the Administrator shall—
 - (1) review the inspector training programs provided at the Inspector Training and Qualifications Division of the Administration in Oklahoma City, Oklahoma; and
 - (2) determine whether any of the programs referred to in paragraph (1), or any portions of the programs, could be provided online through teletraining or another type of distance learning.
- (b) Staffing.—
 - (1) In general.—The Secretary shall increase the number of full-time equivalent employees (as compared to the number of positions on the date of enactment of this Act) by 8 full-time employees with subject matter expertise in pipeline safety, pipeline facilities, and pipeline systems to finalize outstanding rulemakings and fulfill congressional mandates.
 - (2) Pipeline inspection and enforcement personnel.—The Secretary shall ensure that the number of full-time positions for pipeline inspection and enforcement personnel in the Office of Pipeline Safety of the Administration does not fall below the following:
 - (A) 224 for fiscal year 2021.
 - (B) 235 for fiscal year 2022.
 - (C) 247 for fiscal year 2023.
- (c) Recruitment and Retention Incentives.—
 - (1) In general.—The Secretary shall use incentives, as necessary, to recruit and retain a qualified workforce, including inspection and enforcement personnel and attorneys and subject matter experts at the Office of Pipeline Safety of the Administration, including—
 - (A) special pay rates permitted under section 5305 of title 5, United States Code;
 - (B) repayment of student loans permitted under section 5379 of that title;
 - (C) tuition assistance permitted under chapter 41 of that title;
 - (D) recruitment incentives permitted under section 5753 of that title; and
 - (E) retention incentives permitted under section 5754 of that title.
 - (2) Continued service agreement.—The Secretary shall ensure that the incentives described in paragraph (1) are accompanied by a continued service agreement.
 - (3) Approval.—The Secretary shall request, as necessary, the approval of the Office of Personnel Management to use the incentives described in paragraph (1).

Sec. 105. Pipeline Safety Testing Enhancement Study.

Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to the Committees on Commerce, Science, and Transportation and Appropriations of the Senate and the Committees on Transportation and Infrastructure, Energy and Commerce, and Appropriations of the House of Representatives a report relating to—

- (1) the research and development capabilities of the Administration, in accordance with section 12 of the Pipeline Safety Improvement Act of 2002 (49 U.S.C. 60101 note; Public Law 107–355);
- (2)(A) the development of additional testing and research capabilities through the establishment of an independent pipeline safety testing facility under the Department of Transportation;
 - (B) whether an independent pipeline safety testing facility would be critical to the work of the Administration;
 - (C) the costs and benefits of developing an independent pipeline safety testing facility under the Department of Transportation; and
 - (D) the costs and benefits of colocating an independent pipeline safety testing facility at an existing training center of the Administration; and
- (3) the ability of the Administration to use the testing facilities of the Department of Transportation, other Federal agencies, or federally funded research and development centers.

Sec. 106. Regulatory Updates.

- (a) **Definition of Outstanding Mandate.**—In this section, the term “outstanding mandate” means—
- (1) a final rule required to be issued under the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Public Law 112–90; 125 Stat. 1904) that has not been published in the Federal Register;
 - (2) a final rule required to be issued under the PIPES Act of 2016 (Public Law 114–183; 130 Stat. 514) that has not been published in the Federal Register; and
 - (3) any other final rule regarding gas or hazardous liquid pipeline facilities required to be issued under this Act or an Act enacted prior to the date of enactment of this Act that has not been published in the Federal Register.
- (b) **Requirements.**—
- (1) **Periodic updates.**—Not later than 30 days after the date of enactment of this Act, and every 30 days thereafter until a final rule referred to in paragraphs (1) through (3) of subsection (a) is published in the Federal Register, the Secretary shall publish on a publicly available website of the Department of Transportation an update regarding the status of each outstanding mandate in accordance with subsection (c).
 - (2) **Notification of Congress.**—On publication of a final rule in the Federal Register for an outstanding mandate, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a notification in accordance with subsection (c).
- (c) **Contents.**—An update published or a notification submitted under paragraph (1) or (2) of subsection (b) shall contain, as applicable—
- (1) with respect to information relating to the Administration—
 - (A) a description of the work plan for each outstanding mandate;
 - (B) an updated rulemaking timeline for each outstanding mandate;
 - (C) the staff allocations with respect to each outstanding mandate;
 - (D) any resource constraints affecting the rulemaking process for each outstanding mandate;
 - (E) any other details associated with the development of each outstanding mandate that affect the progress of the rulemaking process with respect to that outstanding mandate; and
 - (F) a description of all rulemakings regarding gas or hazardous liquid pipeline facilities published in the Federal Register that are not identified under subsection (b)(2); and
 - (2) with respect to information relating to the Office of the Secretary—
 - (A) the date that the outstanding mandate was submitted to the Office of the Secretary for review;
 - (B) the reason that the outstanding mandate is under review beyond 45 days;
 - (C) the staff allocations within the Office of the Secretary with respect to each [sic] the outstanding mandate;
 - (D) any resource constraints affecting review of the outstanding mandate;
 - (E) an estimated timeline of when review of the outstanding mandate will be complete, as of the date of the update;
 - (F) if applicable, the date that the outstanding mandate was returned to the Administration for revision and the anticipated date for resubmission to the Office of the Secretary;
 - (G) the date that the outstanding mandate was submitted to the Office of Management and Budget for review; and
 - (H) a statement of whether the outstanding mandate remains under review by the Office of Management and Budget.

Sec. 110. Updates to Standards for Liquefied Natural Gas Facilities.

- (a) In General.—Not later than 3 years after the date of enactment of this Act, the Secretary shall—
- (1) review the minimum operating and maintenance standards prescribed under section 60103(d) of title 49, United States Code; and
 - (2) based on the review under paragraph (1), update the standards described in that paragraph applicable to large-scale liquefied natural gas facilities (other than peak shaving facilities) to provide for a risk-based regulatory approach for such facilities, consistent with this section.
- (b) Scope.—In updating the minimum operating and maintenance standards under subsection (a)(2), the Secretary shall ensure that all regulations, guidance, and internal documents—
- (1) are developed and applied in a manner consistent with this section; and
 - (2) achieve a level of safety that is equivalent to, or greater than, the level of safety required by the standards prescribed as of the date of enactment of this Act under—
 - (A) section 60103(d) of title 49, United States Code; and
 - (B) part 193 of title 49, Code of Federal Regulations (as in effect on the date of enactment of this Act).
- (c) Requirements.—The updates to the operating and maintenance standards required under subsection (a)(2) shall, at a minimum, require operators—
- (1) to develop and maintain written safety information identifying hazards associated with—
 - (A) the processes of liquefied natural gas conversion, storage, and transport;
 - (B) equipment used in the processes; and
 - (C) technology used in the processes;
 - (2) to conduct a hazard assessment, including the identification of potential sources of accidental releases;
 - (3)(A) to consult with employees and representatives of employees on the development and execution of hazard assessments under paragraph (2); and
 - (B) to provide employees access to the records of the hazard assessments and any other records required under the updated standards;
 - (4) to establish a system to respond to the findings of a hazard assessment conducted under paragraph (2) that addresses prevention, mitigation, and emergency responses;
 - (5) to review, when a design change occurs, the most recent hazard assessment conducted under paragraph (2) and the response system established under paragraph (4);
 - (6) to develop and implement written operating procedures for the processes of liquefied natural gas conversion, storage, and transport;
 - (7)(A) to provide written safety and operating information to employees; and
 - (B) to train employees in operating procedures with an emphasis on addressing hazards and using safe practices;
 - (8) to ensure contractors and contract employees are provided appropriate information and training;
 - (9) to train and educate employees and contractors in emergency response;
 - (10) to establish a quality assurance program to ensure that equipment, maintenance materials, and spare parts relating to the operations and maintenance of liquefied natural gas facilities are fabricated and installed consistent with design specifications;
 - (11) to establish maintenance systems for critical process-related equipment, including written procedures, employee training, appropriate inspections, and testing of that equipment to ensure ongoing mechanical integrity;
 - (12) to conduct pre-start-up safety reviews of all newly installed or modified equipment;
 - (13) to establish and implement written procedures to manage change to processes of liquefied natural gas conversion, storage, and transport, technology, equipment, and facilities; and
 - (14)(A) to investigate each incident that results in, or could have resulted in—
 - (i) loss of life;
 - (ii) destruction of private property; or
 - (iii) a major accident; and
 - (B) to have operating personnel—

- (i) review any findings of an investigation under subparagraph (A); and
- (ii) if appropriate, take responsive measures.

(d) Submission and Approval.—

- (1) In general.—The Secretary shall require that operators that are subject to the regulations under subsection (a)(2) submit to the Secretary for approval a plan for the implementation of the requirements described in subsection (c).
- (2) Requirement.—The implementation plan described in paragraph (1) shall include—
 - (A) an anticipated schedule for the implementation of the requirements described in subsection (c); and
 - (B) an overview of the process for implementation.

(e) Inspection and Compliance Assurance.—

- (1) Determination of inadequate programs.—If the Secretary determines during an inspection carried out under chapter 601 of title 49, United States Code, that an operator's implementation of the requirements described in subsection (c) does not comply with the requirements of that chapter (including any regulations promulgated under that chapter), has not been adequately implemented, is inadequate for the safe operation of a large-scale liquefied natural gas facility, or is otherwise inadequate, the Secretary may conduct enforcement proceedings under that chapter.
- (2) Savings Clause.—Nothing in this section shall affect the authority of the Secretary to carry out inspections or conduct enforcement proceedings under chapter 601 of title 49, United States Code.

(f) Emergencies and Compliance.—Nothing in this section may be construed to diminish or modify—

- (1) the authority of the Secretary under this title to act in the case of an emergency; or
- (2) the authority of the Secretary under sections 60118 through 60123 of title 49, United States Code.

(g) Civil Penalties.—A person violating the standards prescribed under this section, including any revisions to the minimum operating and maintenance standards prescribed under 60103 of title 49, United States Code, shall be liable for a civil penalty that may not exceed \$200,000 for each violation pursuant to section 60122(a)(1) of that title.

Sec. 111. National Center of Excellence for Liquefied Natural Gas Safety.

(a) Definitions.—In this section:

- (1) Center.—The term “Center” means the National Center of Excellence for Liquefied Natural Gas Safety that may be established under subsection (b).
- (2) LNG.—The term “LNG” means liquefied natural gas.
- (3) LNG sector stakeholder.—The term “LNG sector stakeholder” means a representative of—
 - (A) LNG facilities that represent the broad array of LNG facilities operating in the United States;
 - (B) States, Indian Tribes, and units of local government;
 - (C) postsecondary education;
 - (D) labor organizations;
 - (E) safety organizations; or
 - (F) Federal regulatory agencies of jurisdiction, which may include—
 - (i) the Administration;
 - (ii) the Federal Energy Regulatory Commission;
 - (iii) the Department of Energy;
 - (iv) the Occupational Safety and Health Administration;
 - (v) the Coast Guard; and
 - (vi) the Maritime Administration.

(b) Establishment.—Only after submitting the report under subsection (c) to the committees of Congress described in that subsection, and subject to the availability of funds appropriated by Congress for the applicable purpose, the Secretary, in consultation with LNG sector stakeholders, may establish a center, to be known as the “National Center of Excellence for Liquefied Natural Gas Safety”.

(c) Report.—

(1) In general.—Not later than 18 months after the date of enactment of this Act, the Secretary shall submit to the Committees on Commerce, Science, and Transportation and Appropriations of the Senate and the Committees on Transportation and Infrastructure, Energy and Commerce, and Appropriations of the House of Representatives a report on—

(A) the resources necessary to establish the Center; and

(B) the manner in which the Center will carry out the functions described in subsection (d).

(2) Requirement.—The report under paragraph (1) shall include an estimate of all potential costs and appropriations necessary to carry out the functions described in subsection (d).

(d) Functions.—The Center shall, for activities regulated under section 60103 of title 49, United States Code, enhance the United States as the leader and foremost expert in LNG operations by—

(1) furthering the expertise of the Federal Government in the operations, management, and regulatory practices of LNG facilities through—

(A) the use of performance-based principles;

(B) experience and familiarity with LNG operational facilities; and

(C) increased communication with LNG experts to learn and support state-of-the-art operational practices;

(2) acting as a repository of information on best practices for the operation of LNG facilities; and

(3) facilitating collaboration among LNG sector stakeholders.

(e) Location.—

(1) In general.—The Center shall be located in close proximity to critical LNG transportation infrastructure on, and connecting to, the Gulf of Mexico, as determined by the Secretary.

(2) Considerations.—In determining the location of the Center, the Secretary shall—

(A) take into account the strategic value of locating resources in close proximity to LNG facilities; and

(B) locate the Center in the State with the largest LNG production capacity, as determined by the total capacity (in billion cubic feet per day) of LNG production authorized by the Federal Energy Regulatory Commission under section 3 of the Natural Gas Act (15 U.S.C. 717b) as of the date of enactment of this Act.

(f) Coordination With TQ Training Center.—In carrying out the functions described in subsection (d), the Center shall coordinate with the Training and Qualifications Training Center of the Administration in Oklahoma City, Oklahoma, to facilitate knowledge sharing among, and enhanced training opportunities for, Federal and State pipeline safety inspectors and investigators.

(g) Joint Operation With Educational Institution.—The Secretary may enter into an agreement with an appropriate official of an institution of higher education—

(1) to provide for joint operation of the Center; and

(2) to provide necessary administrative services for the Center.

Sec. 112. Prioritization of Rulemaking.

(a) Rulemaking.—Not later than 90 days after the date of enactment of this Act, the Secretary shall issue a final rule with respect to the portion of the proposed rule issued on April 8, 2016, entitled “Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines” (81 Fed. Reg. 20722; Docket No. PHMSA–2011–0023) that relates to the consideration of gathering pipelines.

(b) Study.—Not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States shall—

- (1) review the extent to which geospatial and technical data is collected by operators of gathering lines, including design and material specifications;
- (2) analyze information collected by operators of gathering lines when the mapping information described in paragraph (1) is not available for a gathering line; and
- (3) assess any plans and timelines of operators of gathering lines to develop the mapping information described in paragraph (1) or otherwise collect information described in paragraph (2).

(c) Report.—The Comptroller General of the United States shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report on the review required under subsection (b), including any recommendations that the Comptroller General of the United States may have as a result of the review.

Sec. 114. Inspection and Maintenance Plans.

(b) Deadline.—Not later than 1 year after the date of enactment of this Act, each pipeline operator shall update the inspection and maintenance plan prepared by the operator under section 60108(a) of title 49, United States Code, to address the elements described in the amendments to that section made by subsection (a) [see amendments at 49 U.S.C. § 60108(a)-(b)].

(c) Inspection and Maintenance Plan Oversight.—

(1) Study.—The Comptroller General of the United States shall conduct a study to evaluate the procedures used by the Secretary and States in reviewing plans prepared by pipeline operators under section 60108(a) of title 49, United States Code, pursuant to subsection (b) in minimizing releases of natural gas from pipeline facilities.

(2) Report of the Comptroller General of the United States.—Not later than 1 year after the Secretary's review of the operator plans prepared under section 60108(a) of title 49, United States Code, the Comptroller General of the United States shall submit to the Secretary, the Committee on Commerce, Science, and Transportation of the Senate, and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report that—

- (A) describes the results of the study conducted under paragraph (1), including an evaluation of the procedures used by the Secretary and States in reviewing the effectiveness of the plans prepared by pipeline operators under section 60108(a) of title 49, United States Code, pursuant to subsection (b) in minimizing releases of natural gas from pipeline facilities; and
- (B) provides recommendations for how to further minimize releases of natural gas from pipeline facilities without compromising pipeline safety based on observations and information obtained through the study conducted under paragraph (1).

(3) Response of the Secretary.—Not later than 90 days after the date on which the report under paragraph (2) is published, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report that includes a response to the results of the study conducted under paragraph (1) and the recommendations contained in the report submitted under paragraph (2).

(d) Best Available Technologies or Practices.—

(1) Report of the Secretary.—Not later than 18 months after the date of enactment of this Act, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report—

(A) discussing—

- (i) the best available technologies or practices to prevent or minimize, without compromising pipeline safety, the release of natural gas when making planned repairs, replacements, or maintenance to a pipeline facility;

- (ii) the best available technologies or practices to prevent or minimize, without compromising pipeline safety, the release of natural gas when the operator intentionally vents or releases natural gas, including blowdowns; and
 - (iii) pipeline facility designs that, without compromising pipeline safety, mitigate the need to intentionally vent natural gas; and
- (B) recommending a timeline for updating pipeline safety regulations, as the Secretary determines to be appropriate, to address the matters described in subparagraph (A).
- (2) Rulemaking.—Not later than 180 days after the date on which the Secretary submits the report under this subsection, the Secretary shall update pipeline safety regulations that the Secretary has determined are necessary to protect the environment without compromising pipeline safety.

Sec. 115. Consideration of Pipeline Class Location Changes.

- (a) In General.—Not later than 1 year after the date of enactment of this Act, the Administrator of the Pipeline and Hazardous Materials Safety Administration shall—
 - (1) review all comments submitted in response to the advance notice of proposed rulemaking entitled “Pipeline Safety: Class Location Change Requirements” (83 Fed. Reg. 36861 (July 31, 2018));
 - (2) complete any other activities or procedures necessary—
 - (A) to make a determination whether to publish a notice of proposed rulemaking; and
 - (B) if a positive determination is made under subparagraph (A), to advance in the rulemaking process, including by taking any actions required under section 60115 of title 49, United States Code; and
 - (3) consider the issues raised in the report to Congress entitled “Evaluation of Expanding Pipeline Integrity Management Beyond High-Consequence Areas and Whether Such Expansion Would Mitigate the Need for Gas Pipeline Class Location Requirements” prepared by the Pipeline and Hazardous Materials Safety Administration and submitted to Congress on June 8, 2016, including the adequacy of existing integrity management programs.
- (b) Rule of Construction.—Nothing in this section may be construed to require the Administrator of the Pipeline and Hazardous Materials Safety Administration to publish a notice of proposed rulemaking or otherwise continue the rulemaking process with respect to the advance notice of proposed rulemaking described in subsection (a)(1).
- (c) Reporting.—For purposes of this section, the requirements of section 106 shall apply during the period beginning on the date that is 180 days after the date of enactment of this Act and ending on the date on which the requirements of subsection (a) are completed.

Sec. 117. Interstate Drug and Alcohol Oversight.

- (a) In General.—Not later than 18 months after the date of enactment of this Act, the Secretary shall amend the auditing program for the drug and alcohol regulations in part 199 of title 49, Code of Federal Regulations, to improve the efficiency and processes of those regulations as applied to—
 - (1) operators; and
 - (2) pipeline contractors working for multiple operators in multiple States.
- (b) Requirement.—In carrying out subsection (a), the Secretary shall minimize duplicative audits of the same operators, and the contractors working for those operators, by the Administration and multiple State agencies.
- (c) Rule of Construction.—Nothing in this section may be construed to require modification of the inspection or enforcement authority of any Federal agency or State.

Sec. 119. National Academy of Sciences Study on Automatic and Remote-Controlled Shut-Off Valves on Existing Pipelines.

(a) Study.—The Secretary shall enter into an arrangement with the National Academy of Sciences under which the National Academy of Sciences shall conduct a study of potential methodologies or standards for the installation of automatic or remote-controlled shut-off valves on an existing pipeline in—

- (1) a high consequence area (as defined in section 192.903 of title 49, Code of Federal Regulations (or a successor regulation)) for a gas transmission pipeline facility; or
- (2) for a hazardous liquid pipeline facility—
 - (A) a commercially navigable waterway (as defined in section 195.450 of that title (or a successor regulation)); or
 - (B) an unusually sensitive area (as defined in section 195.6 of that title (or a successor regulation)).

(b) Factors for Consideration.—In conducting the study under subsection (a), the National Academy of Sciences shall take into consideration, as applicable—

- (1) methodologies that conform to the recommendations submitted by the National Transportation Safety Board to the Pipeline and Hazardous Materials Safety Administration and Congress regarding automatic and remote-controlled shut-off valves;
- (2) to the extent practicable, compatibility with existing regulations of the Administration, including any regulations promulgated pursuant to docket number PHMSA–2013–0255, relating to the installation of automatic and remote-controlled shutoff valves;
- (3) methodologies that maximize safety and environmental benefits; and
- (4) the economic, technical, and operational feasibility of installing automatic or remote-controlled shut-off valves on existing pipelines by employing such methodologies or standards.

(c) Report.—Not later than 2 years after the date of enactment of this Act, the National Academy of Sciences shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report describing the results of the study under subsection (a).

Sec. 120. Unusually Sensitive Areas.

(c) Update to Regulations.—The Secretary shall complete the revision to regulations required under section 19(b) of the PIPES Act of 2016 (49 U.S.C. 60109 note; Public Law 114–183) (as amended by subsection (a)) by not later than 90 days after the date of enactment of this Act.

Sec. 123. Rule of Construction.

Nothing in this title or an amendment made by this title may be construed to affect the authority of the Administrator of the Environmental Protection Agency under the Clean Air Act (42 U.S.C. 7401 et seq.), the authority of the Secretary of the Interior under the Mineral Leasing Act (30 U.S.C. 181 et seq.), or the authority of any State, to regulate a release of pollutants or hazardous substances to air, water, or land, including through the establishment and enforcement of requirements relating to such release.

Sec. 202. Distribution Integrity Management Plans.

(b) Contents of State Pipeline Safety Program Certifications.—...

- (2) Rulemaking.—The Secretary shall promulgate regulations to require that a State authority with a certification in effect under section 60105 of title 49, United States Code, has a sufficient number of qualified inspectors to ensure safe operations, as determined by the State Inspection

Calculation Tool and other factors determined to be appropriate by the Secretary.

(3) **Deadline.**—Not later than 2 years after the date of enactment of this Act, the Secretary shall promulgate regulations to implement the amendments made by this subsection.

Sec. 205. Pipeline Safety Management Systems.

(a) **In General.**—Not later than 3 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committees on Transportation and Infrastructure and Energy and Commerce of the House of Representatives a report describing—

- (1) the number of operators of natural gas distribution systems who have implemented a pipeline safety management system in accordance with the standard established by the American Petroleum Institute entitled “Pipeline Safety Management System Requirements” and numbered American Petroleum Institute Recommended Practice 1173;
- (2) the progress made by operators of natural gas distribution systems who have implemented, or are in the process of implementing, a pipeline safety management system described in paragraph (1); and
- (3) the feasibility of an operator of a natural gas distribution system implementing a pipeline safety management system described in paragraph (1) based on the size of the operator as measured by—
 - (A) the number of customers the operator has; and
 - (B) the amount of natural gas the operator transports.

(b) **Requirements.**—As part of the report required under subsection (a), the Secretary shall provide guidance or recommendations that would further the adoption of safety management systems in accordance with the standard established by the American Petroleum Institute entitled “Pipeline Safety Management System Requirements” and numbered American Petroleum Institute Recommended Practice 1173.

(c) **Evaluation and Promotion of Safety Management Systems.**—The Secretary and the relevant State authority with a certification in effect under section 60105 of title 49, United States Code, as applicable, shall—

- (1) promote and assess pipeline safety management systems frameworks developed by operators of natural gas distribution systems and described in the report under subsection (a), including—
 - (A) if necessary, using independent third-party evaluators; and
 - (B) through a system that promotes self-disclosure of—
 - (i) errors; and
 - (ii) deviations from regulatory standards; and
- (2) if a deviation from a regulatory standard is identified during the development and application of a pipeline safety management system, certify that—
 - (A) due consideration will be given to factors such as flawed procedures, honest mistakes, or lack of understanding; and
 - (B) the operators and regulators use the most appropriate tools to fix the deviation, return to compliance, and prevent the recurrence of the deviation, including—
 - (i) root cause analysis; and
 - (ii) training, education, or other appropriate improvements to procedures or training programs.

Guidelines for States Participating in the Pipeline Safety Program

Appendix B

Appendix B Interstate Agreements and Guidance Policy

Background

The PHMSA's Office of Pipeline Safety (OPS) employs a collaborative work process between States and OPS benefiting safety oversight and making effective use of existing resources. OPS has engaged states since the inception of the pipeline safety program for the purpose of a more nationally harmonized program. This policy document identifies options available, program prerequisites, and administrative considerations for qualified State agencies interested in supporting OPS in the inspection of interstate pipelines and facilities.

I. Agreement Options Available

OPS provides State agencies participating in the pipeline safety program with opportunities to participate in the inspection of interstate pipelines and facilities through Interstate Agent Agreements or Project Specific Time Defined Cooperative Agreements.

Existing Interstate Agent Agreements

OPS anticipates continuing the existing Interstate Agent Agreements. If there is a determination to not continue with the existing Interstate Agent Agreements OPS will notify the existing Interstate Agents with the reason for the determination and a transition plan before the start of the next inspection year. If an Existing Interstate Agreement is discontinued, OPS will explore if there are project specific time defined interstate inspections which could be performed under an Agreement to support overall safety.

New Applications for Interstate Agents

OPS will consider applications for Interstate Agent Agreements from States meeting the qualification requirements in 60106 of the Pipes Act and interested in supporting OPS in the inspection of interstate pipelines. OPS will consider entering into an Interstate Agent Agreement if the Region Director expresses a need for the Agreement to improve safety; the state has full safety authority over all intrastate pipelines; the state average performance score for the previous two years is 95 or greater; the state is meeting intrastate required inspection days and meeting inspection intervals; the state participation does not detract from the core intrastate program; and inspection staff has completed all training required of federal inspectors. The state incident history will also be considered when deciding whether to enter into an Interstate Agent

Appendix B – Interstate Agreements and Guidance Policy

Agreement. The requirements for interstate inspection activity are generally defined by the Region Director. The Interstate Agent Agreement allows for the State agency to perform inspections of new construction, oversight of rehabilitation projects, integrity management programs, accident investigation, standard inspections, and other inspections and activities identified in the work plan approved by the Region Director.

Project Specific Time Defined Cooperative Agreements

Project Specific Time Defined Cooperative Agreements allow OPS to partner with states for the inspection of specific interstate projects where OPS identifies it needs the support for the specific project, but not all other interstate activities within the state. These projects are typically construction, accident investigation, public complaints, and specialized inspections. The projects may be short term or encompass an entire year. The Agreements may be modified or extended by the Region Director as agreed upon by the Region and State. States interested in participating in interstate pipeline oversight activities but not meeting all the criteria listed in Section II may enter into Project Specific Time-Defined Cooperative Agreements. They may be issued on an annual basis, but typically are of a shorter duration and do not require a formal work plan as for Interstate Agent Agreements. Although program administration requirements under Section III are specific to Interstate Agent Agreements, State agencies working under Project Specific Time Defined Cooperative Agreements are encouraged to comply with them whenever practicable.

II. Criteria for Participation as an Interstate Agent

Eligibility requirements remain the same as in past years for current and previous Interstate Agents.

Intrastate Coverage First Priority

States must be certified and take full intrastate jurisdiction within the natural gas or hazardous liquid program, as applicable, with adequate and trained staff.

No Impact on Intrastate Performance

OPS continues to stress that States focus resources on intrastate facilities as a first priority before apportioning any resources to interstate facilities.

Appendix B – Interstate Agreements and Guidance Policy

Intrastate program participation should not be adversely affected by oversight responsibilities related to interstate pipeline transportation. To qualify for Interstate Agent Agreement status, State programs need to meet and maintain a prerequisite minimum two-year average performance score of 95 for their intrastate program performance score. The staffing level and inspection person-days available for the intrastate program should not be adversely affected.

Damage Prevention and Outreach Activities in Agreements

Participation in the Interstate Program may require a commitment to projects beyond standard compliance areas. These include damage prevention and continued efforts to improve communication with local authorities.

Maintaining Interstate Agent Agreement Status

Participating State agencies must meet the terms of the agreement, follow Standard Operating Procedures and maintain performance on the 60105 Certification for the intrastate program. OPS will notify the State agency if it does not comply with any of these requirements. A State agency will have an opportunity to correct deficiencies and will be provided advance notification commensurate with the level of effort required for correction. If a deficiency still remains uncorrected, the State agency will be notified, at least 30 days in advance, of OPS' intent to terminate, or to decline to renew, an agreement. The State agency will also have the opportunity for a hearing prior to termination or a decision not to renew. Hearings may be held in an OPS Region office or State office with the Director of State Programs, the OPS Deputy Associate Administrator or the PHMSA Associate Administrator. If a State does not meet the performance score or if staffing levels and inspection days are adversely affected by the Agreement OPS may terminate the Agreement without opportunity for a hearing in accordance with Section III C of the Agreement.

Dissemination of Inspection Reports and Incident/Accident Reports

State agencies must refer all requests for information concerning Inspection Reports and Incident/Accident Reports to PHMSA. PHMSA will handle all requests for information.

III. Program Administration

OPS will work to accommodate State interests in its development of Interstate Work Plans and Standard Operating Procedures for each inspection type, associated activities, reporting and record keeping requirements. These Procedures will address the use of OPS inspection forms, reports, and other guidance material as appropriate.

Record Keeping

Interstate inspections are to be documented in the Inspection Assistant (IA) program.

Appendix B – Interstate Agreements and Guidance Policy

Negotiated Work Plans

In addition to a signed Interstate Agent Agreement, each Interstate Agent will also have an annual work plan. The Regional Director will work with the Interstate Agent on an annual basis to establish the work plans to support the various functions authorized under the Agreement, such as new construction, major rehabilitation, accident investigations, integrity management plan reviews, damage prevention projects, and standard inspections and other inspections as determined necessary. For new pipeline construction, the State could be requested to monitor the construction and report noncompliance to OPS. For accident investigations, the State could provide onsite evaluations and witness testing and remedial work. The State may review an operator's integrity management plan, and participate in emergency response planning activities. The State agency may be needed to join in damage prevention projects and outreach activities, such as conducting seminars independently or in conjunction with major pipeline operators. Other options are participation in Federal inspections of company operations and maintenance practices and the monitoring of safety-related condition reports.

To the extent practicable, workload planning will seek to make maximum use of Federal and State resources and avoid duplicative efforts. Estimates of time and effort for each inspection assignment should be agreed upon. Once the inspection year has started, the State agency needs to consult with OPS for any modification to the work plan due to emergency or unanticipated conditions.

Inspection Scheduling

The following timeline provides general goals for developing the work plan and inspection schedule:

- By November 15, initial notification to the states
- By November 30, response back from the states
- By December 15, final discussions about additional activities completed
- By Jan 1-15, Final Letters to the States.

Need for Systems Inspections and Sharing of Resources

OPS revised its inspection approach to include a combination of unit-based and a broader-reaching system-based inspection. Certain aspects of

Appendix B – Interstate Agreements and Guidance Policy

oversight lend themselves to a systemic inspection approach. Other areas should be field validated on a unit-basis. After reviewing and comparing State requests with OPS Region Plans, OPS will draft work plans for state participation in scheduled systems inspections. Consideration will be given to the level of effort needed from Federal and State resources in programming inspection assignments. Once identified, OPS will assign an OPS team coordinator for each interstate operator inspection. The Team Coordinator will harmonize and schedule the inspection activities for greater efficiency and, with input from the State agency, determine the focus of inspections and estimate the time needed to carry out the inspections assigned.

Hours of Service

State inspectors assigned to interstate activities need to be able to participate in inspection activities in accordance with work requirements. On a job site, particularly during construction and repair activities, this may require work performance outside of standard business hours and over weekends and holidays. If the subject inspections warrant working overtime, 24-hour coverage or overnight travel, the interstate agent will be expected to support such requirements.

Training

State Inspectors are required to complete PHMSA required training for the area of emphasis of the inspection performed. Training requirements are outlined in Appendix C of the Guidelines for States Participating in the Pipeline Safety Program.

Guidelines for States Participating in the Pipeline Safety Program

Appendix C

PHMSA

Inspector Training & Qualifications Division

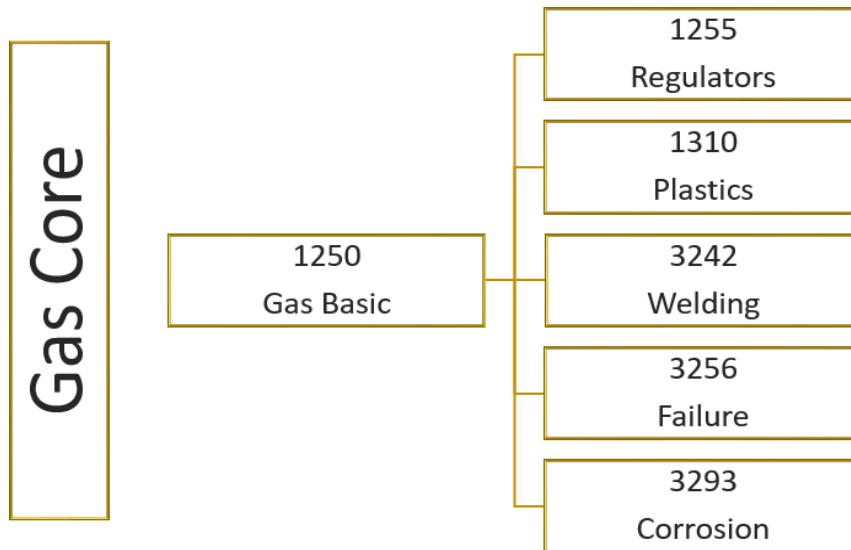
Mandatory Training Requirements

FY 2025

All mandatory courses must be completed within **3 years** from the completion date of the first course taken in the curriculum (successful completion within 5 years). An inspector has an additional 3 years, from the date training is added to the requirements, to complete that specific training (successful completion within 5 years). If new training replaces previous required training and equivalency records are allowed for the new training, then no additional years are permitted.

PHMSA Training and Qualifications

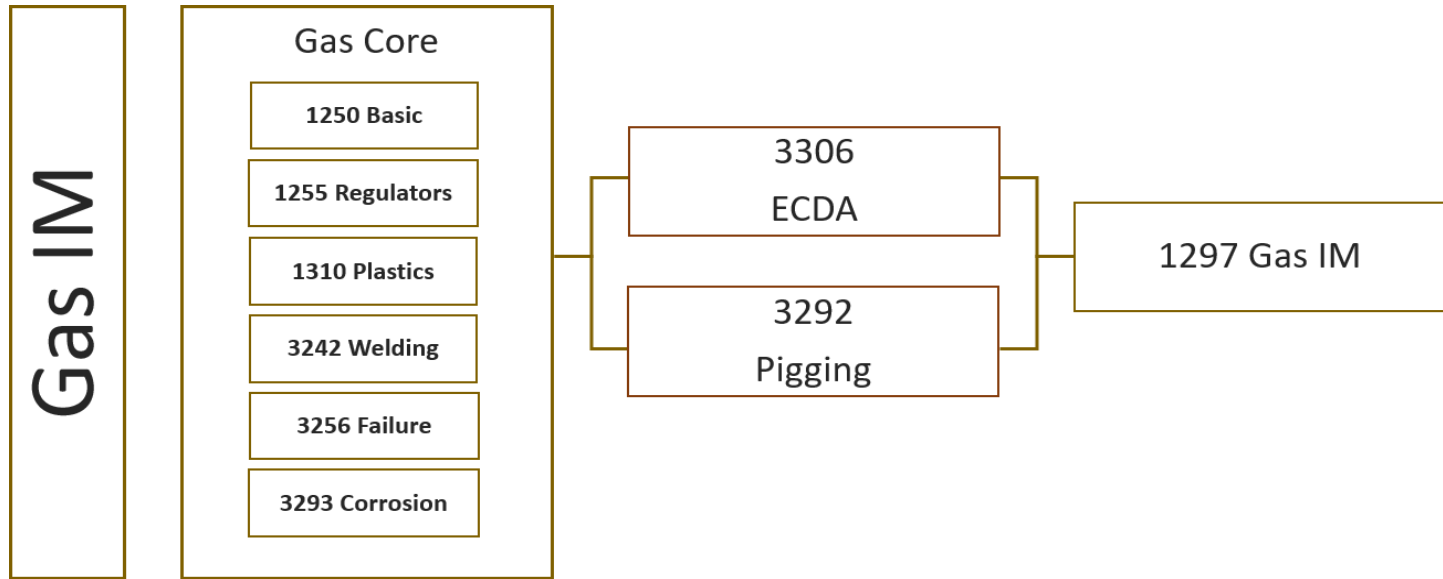
FY2025 Mandatory Training - Gas Core Learning Path



Course	Prerequisites	
	ILT	WBT
PHMSA-PL1250 Safety Evaluation of Gas Pipeline Systems Course		PHMSA-PL1ODOR Natural Gas Odorization
PHMSA-PL1255 Gas Pressure Regulation and Overpressure Protection Course	1250	1265
		PHMSA-PL1GLAW Introduction to Gas Laws PHMSA-PL1PRESS Fundamentals of Gas Pressure Regulators
PHMSA-PL1310 Plastic and Composite Materials Course	1250	PHMSA-PL3PP Fundamentals of Plastic Pipe
PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course	1250	PHMSA-PL3242-DL Introduction to Welding Inspection
PHMSA-PL3256 Pipeline Failure Investigation Techniques Course	1250	
PHMSA-PL3293 Corrosion Control of Pipeline Systems Course	1250	PHMSA-PL3FC Fundamentals of Corrosion

PHMSA Training and Qualifications

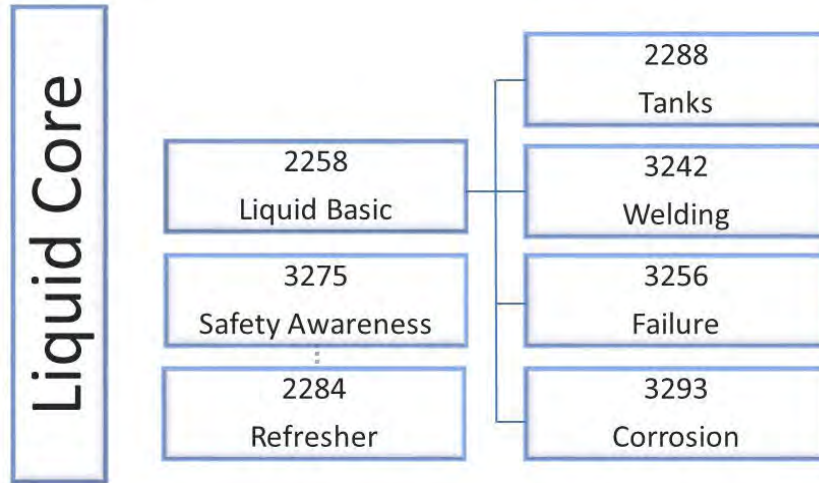
FY2025 Mandatory Training - Gas Integrity Management (IM) Learning Path



Course	Prerequisites		
	ILT		WBT
PHMSA-PL3306 External Corrosion Direct Assessment (ECDA) Field Course	Core		PHMSA-PL3ECDA External Corrosion Direct Assessment
			PHMSA-PL3267-DL Fundamentals of Integrity Management
PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course	Core		PHMSA-PL3HIP The History of Intelligent Pigging
			PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs
PHMSA-PL1297 Gas Integrity Management (IM) Protocol Course	Core	3306 3292	PHMSA-PL3267-DL Fundamentals of Integrity Management
			PHMSA-PL1ICDA Internal Corrosion Direct Assessment
			PHMSA-PL3SCCDA Stress Corrosion Cracking Direct Assessment

PHMSA Training and Qualifications

FY2025 Mandatory Training - Liquid Core Learning Path



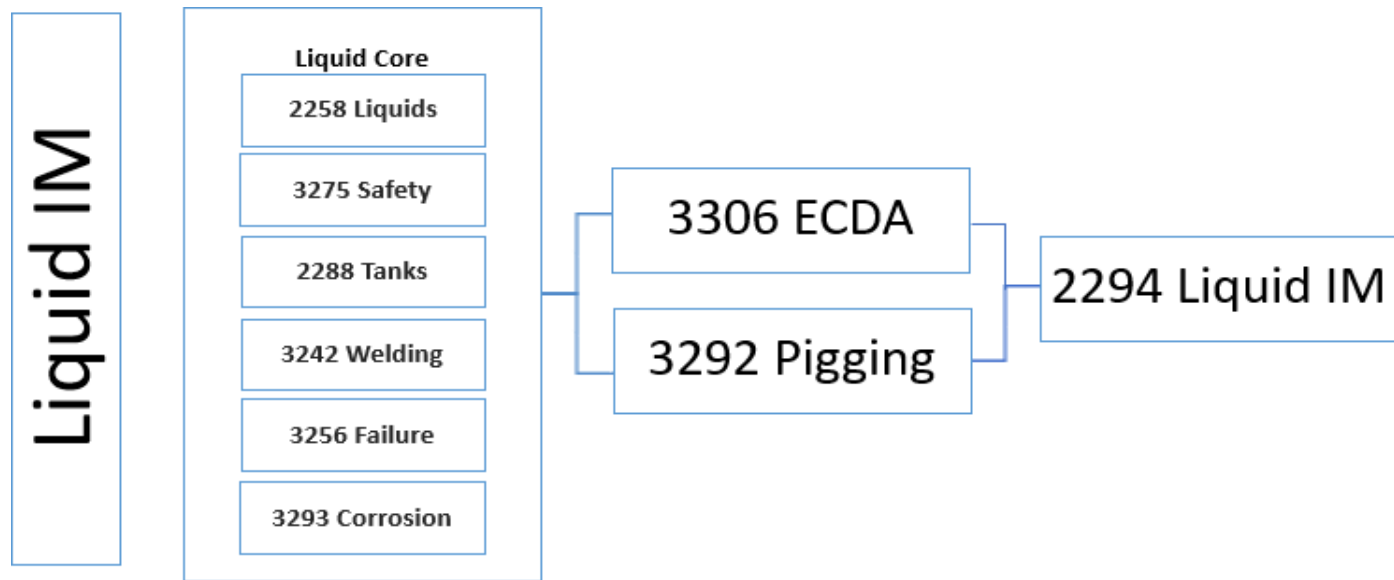
Course	Prerequisites	
	ILT	WBT
PHMSA-PL2258 Safety Evaluation of Hazardous Liquid Pipeline Systems Course		PHMSA-PL2P195 Introduction to Part 195
PHMSA-PL3275 General Pipeline Safety Awareness Course		
PHMSA-PL2288 Safety Evaluation of Breakout Tanks Course	2258	2266
PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course	2258	
PHMSA-PL3256 Pipeline Failure Investigation Techniques Course	2258	
PHMSA-PL3293 Corrosion Control of Pipeline Systems Course	2258	PHMSA-PL3FC Fundamentals of Corrosion
PHMSA-PL2284 (HAZWOPER) Refresher for Pipeline Safety Representatives	3275	

Exception

Affiliations serving states without breakout tanks may request PL2288 Safety Evaluation of Breakout Tanks be waived for their inspectors.

PHMSA Training and Qualifications

FY2025 Mandatory Training - Liquid Integrity Management (IM) Learning Path



Course	Prerequisites		
	ILT		WBT
PHMSA-PL3306 External Corrosion Direct Assessment (ECDA) Field Course	Core		PHMSA-PL3ECDA External Corrosion Direct Assessment
			PHMSA-PL3267-DL Fundamentals of Integrity Management
PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course	Core		PHMSA-PL3HIP The History of Intelligent Pigging
			PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs
PHMSA-PL2294 Safety Evaluation of Hazardous Liquid Pipeline (IM) Programs	Core	3306	PHMSA-PL3267-DL Fundamentals of Integrity Management
		3292	PHMSA-PL3SCCDA Stress Corrosion Cracking Direct Assessment

PHMSA Training and Qualifications

FY2025 Mandatory Training - Additional Training

Course	Prerequisites	
	ILT	WBT/*Course Notes
PHMSA-PL1325 Safety Evaluation of Underground Storage Facilities Course	1250	PHMSA-PL1325-DL Introduction to Underground Natural Gas Storage
		*Inspectors who only inspect UGS facilities do not have to take the instructor-led (ILT) course PL1250.
		*Enrollment is limited to OPS and states with current certification or agreement for underground storage facilities.
PHMSA-PL1265 Gas Rupture Mitigation Valves Course	1250	
PHMSA-PL2266 Hazardous Liquid Rupture Mitigation Valves Course	2258	
PHMSA-PL3322 Evaluation of Operator Qualification (OQ) Programs Course	1250	PHMSA-PL3FOQ Foundations of Operator Qualification (OQ) *Lead OQ inspectors must complete all core mandatory training prior to conducting an OQ inspection.
PHMSA-PL3350 Integrated Inspections (II) Course	1250	*Enrollment is limited to OPS and states acting as interstate agents.
PHMSA-PL3359 Safety Evaluation of Control Room Management	1250	PHMSA-PL3CRM Fundamentals of Control Room Management
PHMSA-PL5342 Safety Evaluation of Liquefied Petroleum Gas (LPG)	1250	
PHMSA-PL1245 Safety Evaluation of Distribution Integrity Management Programs (DIMP) Course	Core	PHMSA-PL3267-DL Fundamentals of Integrity Management
		PHMSA-PL1DIMP Introduction of Distribution Integrity Management Program
PHMSA-PL4253 Liquefied Natural Gas (LNG) Safety Technology and Inspection Course	Core	PHMSA-PL4LNG Fundamentals of Liquefied Natural Gas (LNG)
PHMSA-PL3600 Root Cause/Incident Investigation Course	Core	PHMSA-PL3600-DL Introduction to Root Cause Analysis
Standalone WBTs & Workshops		*Course Notes
PHMSA-PL3PAP Public Awareness Programs for Pipeline Operators		*Available for self-enrollment
PHMSA-PL3DA Drug and Alcohol Testing for the Pipeline Industry		*Available for self-enrollment
PHMSA-PL1RA Introduction to Risk Assessment Methods		*Available for self-enrollment

PHMSA Inspector Training and Qualifications (TQ) Equivalency Training

Active Course	Equivalent Course
PL1250 <i>Safety Evaluation of Gas Pipeline Systems</i>	PL1270 Regulation Compliance Requirements for Gas Pipeline Operators Course (Industry)
PL2284 <i>HAZWOPER Refresher for Pipeline Safety Representatives</i>	Successful completion of either: • PH2284-DL General Safety Awareness Refresher • External Training Course approved by Wayne St. Germain
PL3275 <i>General Pipeline Safety Awareness</i>	Successful completion of: • PH3275 General Safety Awareness for Inspectors and Investigators • External Training Course approved by Wayne St. Germain
PL3600 <i>Root Cause/Incident Investigation</i>	Successful completion of either: • Training conducted by Conger-Elsea, provided by PHMSA HQ, for PHMSA Federal employees from 2007-2008 • PH3600 <i>Root Cause/Incident Investigation</i>
PL2294 <i>Safety Evaluation of Hazardous Liquid Pipeline (IM) Programs Course</i>	PL2305 <i>IM for Small Pipeline Systems</i>
PL3293 <i>Corrosion Control of Pipeline Systems</i>	Successful completion of: • PL3251 <i>Safety Evaluation of Pipeline Corrosion Control Systems I</i> • PL3252 <i>Safety Evaluation of Pipeline Corrosion Control Systems II</i>
PL3359 <i>Safety Evaluation of Control Room Management</i>	Successful completion of: • PL3291 <i>Fundamentals of (SCADA) System Technology and Operation</i> • PL3355 <i>Safety Evaluation of Control Room Management Programs</i>
PL1310 <i>Plastic and Composite Materials</i>	PL3254 <i>Joining of Pipeline Materials</i>
PL3242 <i>Welding and Welding Inspection of Pipeline Materials</i>	PL3254 <i>Joining of Pipeline Materials</i>
PL3267-DL <i>Fundamentals of Integrity Management</i>	Successful completion of both: • PL1297 <i>Gas Integrity Management (IM) Protocol Course</i> or PL2294 <i>Safety Evaluation of Hazardous Liquid Pipeline Integrity Management (IM) Programs</i> • PL3296 <i>Pipeline Reliability Assessment Seminar</i> Or completion of: • PL3267 <i>Fundamentals of Integrity Management</i>
PL3365 <i>Public Awareness Program Effectiveness Evaluation (PAPEE) Seminar</i>	Successful completion of: • PL3PAP <i>Public Awareness Programs for Pipeline Operators</i> • View recording of PL3365 <i>Public Awareness Program Effectiveness Evaluation (PAPEE) Seminar</i> conducted June 2011 • PAPEE Seminar Assessment
PL3322 <i>Evaluation of Operator Qualification (OQ) Programs</i>	Successful completion of either: • PL3290 <i>Operator Qualification (OQ) Seminar</i> • PL3311 <i>Assessment Evaluation for Operator Qualification (OQ) Seminar</i>
PL3256 <i>Pipeline Failure Investigation Techniques</i>	PH3256 <i>Pipeline Failure Investigation Techniques</i>

Guidelines for States Participating in the Pipeline Safety Program

Appendix D

Appendix D

Memorandum of Understanding Between Department of Transportation and National Transportation Safety Board

I. Purpose

The purpose of this Appendix is to establish the relationship between the Office of Pipeline Safety (OPS) and the National Transportation Safety Board (NTSB) within the framework of the DOT-NTSB for the notification of pipeline failures, investigation of accidents, providing services, and program coordination.

II. Background

The OPS is responsible for establishing and enforcing Federal safety regulations, including investigation of accidents, for the transportation of gas and liquid hazardous materials by pipelines. These responsibilities are carried out in response to five Acts. These are (1) Chapter 601; (2) the Transportation of Explosives Act; (3) the Mineral Leasing Act, as amended; (4) the Deepwater Port Act of 1974; and (5) the Transportation Safety Act of 1974. NTSB, by the Independent Safety Board Act of 1974, has responsibility for investigating and determining the probable cause(s) of any pipeline accident in which there is a fatality, substantial property damage (estimated \$100,000), or any other accident which occurs which, in the judgment of the Board, is catastrophic.

This agreement then is established to minimize duplication in efforts and maximize exchange of information as both parties execute their respective investigatory responsibilities.

III. Notification of Pipeline Failures

A representative of OPS will immediately notify, by telephone, NTSB of the occurrence of each pipeline accident which involves one or more fatalities or which causes substantial property damage estimated to be more than \$100,000.

If, in the initial notification, the information regarding the accident is incomplete, OPS will provide follow-up information as appropriate.

IV. Investigation of Accidents

- A. NTSB and OPS will coordinate and notify the other agency of accidents which it will investigate.

- B. When one agency is investigating an accident and the other agency decides to investigate the same accident for its own purposes, the two agencies may jointly participate in the investigation.
- C. In a joint investigation, OPS and NTSB will coordinate their investigative activities so as to avoid duplication of effort and in accordance with the interest and expertise of the agency representatives.
- D. Each agency will be responsible for dealing with the operator, State, local officials and the press within its own area of responsibility.

V. Service

- A. **Investigative.** The assistance of OPS personnel and any agents under contract to OPS may be requested by the NTSB in any investigation. When OPS assistance is required, NTSB will notify OPS as soon as practicable after receipt of initial notification of a pipeline accident and specify the assistance required. All data developed by OPS or its contractors in response to requests for assistance from NTSB will be provided to NTSB, and NTSB will be considered the office of record of public release of such data.
- B. **Furnishing of Studies and Technical Investigations Reports.** The OPS will furnish to NTSB two copies of published studies and technical investigations concerning pipeline operations, design, maintenance, personnel training, and such other studies as are directly concerned with safety in pipeline transportation and accident prevention. Likewise, NTSB will furnish OPS with two copies of all studies and technical investigations.
- C. **Furnishing and Processing Pipeline Safety Data.** Each party of this agreement will furnish pipeline safety data to the other party upon request.
- D. **Furnishing of Accident Investigation and Hearing Reports.** The OPS will furnish NTSB with two copies of on-site or field investigation reports of those accidents of such significance as to prompt the completion of a report. NTSB will furnish OPS with two copies of accident reports at least 5 days in advance of the release of that report.

VI. Program Coordination

Each party of this agreement is invited to participate in or observe the hearings conducted by the other party. Whether the other party will participate or observe will be determined by the inviting party. Copies of the proceedings and subsequent reports will be furnished the invited party.

Guidelines for States Participating in the Pipeline Safety Program

Appendix E

OFFICE OF PIPELINE SAFETY

FAILURE INVESTIGATION POLICY

POLICY NUMBER: PHP-5340.9B

EFFECTIVE DATE: December 11, 2019



**U.S. Department
of Transportation**

**Pipeline and
Hazardous Materials
Safety Administration**

Linda Daugherty

Deputy Associate Administrator for Field Operations,

Office of Pipeline Safety, PHMSA

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1. INTRODUCTION

1.1. PURPOSE

The purpose of this document is to establish the failure investigation standard operating policy (SOP) of the U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS). OPS follows this policy to carry out its responsibilities to properly investigate and document pipeline incidents, identify the failure cause(s), and to communicate findings and trends.

The policy describes the roles and responsibilities of PHMSA OPS's Accident Investigation Division (AID); Preparedness, Emergency Support, and Security Division; Regional Offices; Outreach and Engagement Division; and other OPS Divisions. The policy covers interactions among OPS and PHMSA Executives, the continuously staffed DOT Transportation Operations Center (TOC) located in Washington D.C., State pipeline safety agencies, the NTSB, and other Federal, State, and local agencies during an investigation.

While this SOP provides the framework within which the OPS operates, specific circumstances or needs associated with an individual investigation may lead the Deputy Associate Administrator of Operations or their designee to authorize a deviation from this SOP. The AID is responsible for keeping this policy up to date.

1.2. SCOPE

This failure investigation policy applies to gas and hazardous liquid pipeline, liquefied natural gas (LNG) facility, and natural gas underground storage incidents. The policy covers roles and responsibilities of OPS personnel on the process of conducting investigations from the initial notification throughout the investigation process, including probable cause determination, documentation, reporting, and communication of recommendations.

1.3. AUTHORITIES

1.3.1. Federal Pipeline Safety Statutes, 49 U.S.C. § 60101 et seq.

1.3.2. Pipeline Safety Regulations, 49 Code of Federal Regulations (CFR) Parts 190-199.

1.4. DEFINITIONS

1.4.1. *60105 Certifications* – States may annually submit a certification to DOT prescribing the extent of intrastate facilities that they will regulate per 49 U.S. Code 60105 State pipeline safety program certifications. Facilities may include gas distribution, intrastate LNG, intrastate underground natural gas storage fields, intrastate gas transmission, and intrastate hazardous liquid pipelines. When the incident involves these facilities, the State is the lead regulator and manages all enforcement actions.

1.4.2. *60106 Agreements* – States may annually submit agreements with or without certification to DOT per 49 U.S. Code 60106 State pipeline safety agreements. For agreements without certifications under section 60105, States may have oversight of

intrastate pipelines except enforcement actions. For agreements with certification under section 60106, States may have oversight of interstate pipelines except enforcement actions. When the incident involves these facilities, the AID Director determines if the State or PHMSA is the lead regulator, but the Region manages all enforcement actions.

- 1.4.3. *Accident* – Failure in a pipeline system in which there is a release when transporting hazardous liquid or carbon dioxide, subject to Part 195. Accidents are defined in CFR 49 Part §195.50.
- 1.4.4. *Apparent Cause* – The most probable cause(s) that: explains why the event happened; can reasonably be identified; local or facility management has the control to fix; and for which effective recommendations for corrective action(s) to remedy the problem can be generated if necessarily.
- 1.4.5. *Cause* – Cause means an action or lack of action that directly resulted in the incident.
- 1.4.6. *Contributing Factor* – A factor that by itself does not cause a failure. In some cases, a failure cannot occur without the contributing cause (e.g., multiple contributing causes); in other cases, the contributing factor makes the failure more likely (e.g., a contributing cause and root cause).
- 1.4.7. *Event* – An event is a significant occurrence or happening. As applicable to pipeline safety, an event could be an accident, abnormal condition, incident, equipment failure, human failure, or release.
- 1.4.8. *Enforcement Actions* – PHMSA employs a range of enforcement mechanisms to require pipeline operators to take appropriate and timely remedial or corrective actions for violations of Federal pipeline safety regulations, final orders, special permits, or conditions imposed in writing, as well as for unsafe or unsound conditions. Enforcement actions include corrective action orders (CAOs), safety orders (SOs), consent orders, compliance orders, notices of probable violation (NOPVs), warning letters (WLs), and notices of amendment (NOA) (see 49 CFR Part 190, Subpart B "Enforcement").
- 1.4.9. *Failure* – Failure is a condition in which a human, structure, component, device, or system fails to adequately perform its intended purpose. While a pipeline that is releasing product is the most obvious indication of failure, failure is also defined as the point at which the pipe material is stressed beyond its elastic or yield point. At that point, the material is deformed and does not return to its original shape.
- 1.4.10. *Failure Investigation Report (FIR)* – is a report template used to develop OPS's report about an incident when there is an on-scene investigation. A version of each failure investigation report, without redactions, is posted on PHMSA's PHP [SharePoint](#) site (Deputy AA for Field Operations (PHP-2) >Failure Investigation Reports), and the redacted version is posted to PHMSA's public web site.
- 1.4.11. *Hot Wash* – Hot wash is the "after-action" discussions and evaluations of OPS's (or multiple agencies') performance following an accident investigation.

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- 1.4.12. *Incident* – Incidents are defined in 49 CFR §191.3. Part 192 uses the term ‘incident’ and Part 195 uses the term ‘accident.’ In this document, the term “incident” is used to refer to an event on a pipeline irrespective of the product being transported.
- 1.4.13. *Incident Report* – PHMSA Form 7100 and 7001 series that operators must submit to PHMSA within 30 days of an incident or accident (also referred to as a 30-day report).
- 1.4.14. *Interstate Agent* – State pipeline safety agency with a hazardous liquid or gas transmission 60106 agreement with certification agreement from OPS.
- 1.4.15. *OPS Regional Offices* – Office of Pipeline Safety (OPS) Regional offices are in five regions across the Country. A Regional Director (RD) heads each of the offices. Regional Offices are in Trenton, NJ (Eastern Region); Atlanta, Georgia (Southern Region); Kansas City, Missouri (Central Region); Houston, Texas (Southwest Region); and Lakewood, Colorado (Western Region).
- 1.4.16. *Operator Accident Information Template* - An information collection template completed by the OPS Lead Investigator and AID Data Analyst to support the Region’s development of a CAO Data Report when there is an on-scene investigation ([Appendix H](#)).
- 1.4.17. *Order(s)* – Orders include: CAO, Compliance Order, Order Directing Amendment, Consent Order, and SO.
- 1.4.18. *Region Director* – The head of an OPS Regional Office or a designee appointed by the RD.
- 1.4.19. *Return-to-service Plan* – Previously referred to as an integrity verification and remediation plan or a restart plan.
- 1.4.20. *Root Cause* – The most basic cause(s) that explains why the event happened; that can reasonably be identified; that senior management has the control to fix; and for which effective recommendations for corrective action(s) can (1) remedy the problem, (2) can prevent specific recurrence of the problem, or (3) can preclude occurrence of similar problems. Analysis to determine root cause is typically one level deeper than needed to determine the *Apparent Cause(s)*.
- 1.4.21. *States* – State pipeline safety agencies with 60105 certifications and/or 60106 agreements from OPS.
- 1.4.22. *Summary Report* - The same report template as the FIR but is intended to be an internal PHMSA document.
- 1.4.23. *Time-defined Project Specific Agreements* – Allow a State that is not an interstate agent to inspect or investigate a specific interstate project for a specific time for PHMSA.

2. POLICY & PROCEDURE

2.1. BACKGROUND

AID is OPS's Lead Division responsible for the investigation of incidents on gas and hazardous liquid pipelines, LNG facilities, and underground natural gas storage fields subject to U.S. Code of Federal Regulations, Chapter 49 except those where the State has a 60105 certification. For section 60106 agreements with certification, States may have oversight of interstate pipelines except enforcement actions. When the incident occurs on these interstate facilities, the State Interstate Agent typically will be the lead investigator, but it is ultimately for the AID Director to determine if the State or PHMSA will continue as the lead regulator. The Region manages all enforcement actions for these facilities.

As the agency's National Pipeline Incident Coordinator (NPIC), AID reviews notices of incidents and initiates the investigation of failures. AID validates preliminary information, obtains additional information, evaluates the severity of the incident and the pipeline operator's response, and disseminates the information to internal stakeholders, States, and the NTSB. AID provides continuing updates as needed or requested by stakeholders, and summarizes incidents which have occurred since the previous business day on the Daily Telephonic Investigation Report.

AID is typically PHMSA's Lead Division when OPS deploys on scene. OPS Regions and their Interstate Agents may deploy to investigate pipeline failures irrespective of AID's deployment status. Often it is critical for an OPS Region to become involved during the investigation as the AID does not issue enforcement or oversee return-to-service plans. When AID becomes aware of potential violations, the investigator drafts a Region Enforcement Recommendation Letter ([Appendix I](#)) and the AID Director or OS sends a copy to the RD. When staff deploys on-scene, their roles and responsibilities are delineated in the [Responsibilities Matrix for On-scene Deployments](#). OPS RDs, in conjunction with the Associate Administrator, are responsible for authoring, issuing and tracking orders and enforcement activities that allege an operator did not satisfy a cited requirement for Federally-regulated pipelines and State-regulated pipelines with 60106 Agreements or Time-defined Project Specific Agreements. When OPS deploys on-scene, the AID collects information from the operator via the Operator Accident Information Template ([Appendix H](#)) and provides it to the Region to support their drafting of the Corrective Action Order Data Report. The OPS Lead On-scene Investigator or On-scene Region Inspector reviews the completed form with the operator to validate the information. The Region determines the need to develop and issue any CAO, Notice of Proposed Safety Order (NOPSO), NOPV, Compliance Order, or WL. These activities are done with close coordination among OPS Divisions.

States cooperate with AID on investigations and have primary responsibility for conducting investigations, authoring, issuing and following up on orders and enforcement activities pursuant to their annual 60105 certifications and 60106 agreements. PHMSA may deploy to intrastate pipeline accidents to provide support to States.

When NTSB deploys to an accident investigation, PHMSA will also deploy irrespective of State or PHMSA jurisdiction. PHMSA will serve as the Federal liaison to NTSB.

An accident may not meet deployment criteria yet still be of investigatory interest. The AID Director may determine that an off-scene investigation is warranted. AID produces a summary report for these investigations. Investigation levels are based on the incident's severity, investigatory interest, and availability of resources. Each investigation is made up of multiple phases as shown in the chart below. All investigations include the telephonic investigation phase and the 30-day report review phase. The three levels are:

- Level 1: Primary Investigation - Most investigations are Level 1 - Primary Investigations. Level 1 investigations have two phases, the telephonic investigation and the 30-day report review.
- Level 2: Off-scene Investigation – Off-scene investigations are occasionally conducted at the AID Director's direction when there is investigatory interest in the incident, but it does not meet the criteria of an on-scene deployment or resource constraints do not permit deployment. Level 2 investigations which have three phases: the telephonic investigation, the off-scene investigation, and the 30-day report review. A summary report is written for most off-scene investigations.
- Level 3: On-scene Investigation – On-scene investigations are conducted when the consequences of the incident reach the criteria in [Appendix A](#). On-scene investigations may have one or many staff deployed on scene. Level 3 investigations have three phases: the telephonic investigation, the on-scene investigation, and the 30-day report review. A FIR, as shown in [Appendix G](#), is written post an on-scene investigation. A hot wash may also be conducted.

	Level 1 Primary Investigation	Level 2 Off-scene Investigation	Level 3 On-Scene Investigation
Phase	Telephonic Investigation	Telephonic Investigation	Telephonic Investigation
Phase	N/A	Off-scene Investigation	On-scene Investigation
Phase	30-day Report Review	30-day Report Review	30-day Report Review
Report	N/A	Summary Report	Failure Investigation Report

Within 30 days after an incident, operators are required to submit a written incident report on PHMSA's Form 7100 or 7001. These reports are referred to as 30-day reports. AID, States, and OPS's Operations Services Division oversee the management and data quality of operators' 30-day reports per Incident Report Data Management Policy (PHP-5340.5B).

AID is responsible for the analysis of incident data. Through analysis, AID identifies incident trends and communicates findings with internal stakeholders. AID captures, stores, and manages incident data in the Work Management System (WMS), ODES Regional Review (RR), and AID's common network drive.

Figure 1 provides a high-level overview of the process from receipt of information about a potential failure until the 30-day report review.

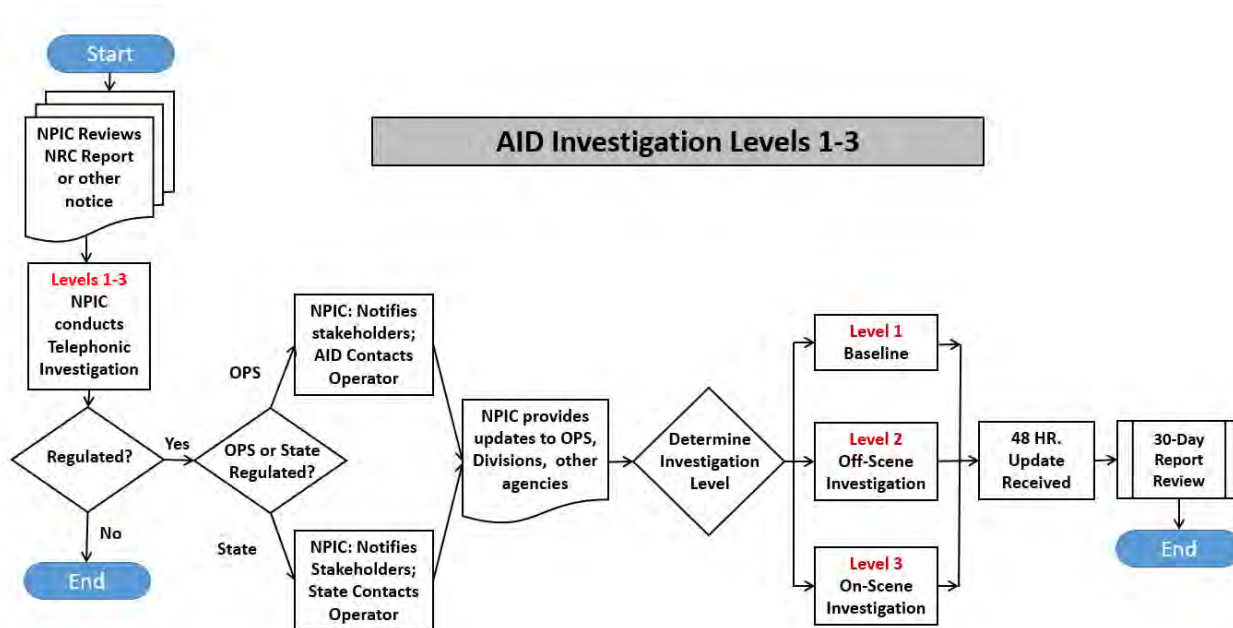


Figure 1: Process Flow from Failure Notification through 30-Day Report Review Phase

2.2. LEVEL 1: PRIMARY INVESTIGATION

A primary investigation consists of two phases: a telephonic investigation ([Section 2.3](#)) and a 30-day report review ([Section 2.7](#)). During the primary investigation, the NPIC determines the regulatory authority of the affected facilities, assesses the severity of the incident, and communicates the status of the operator's response and ongoing events. The NPIC collects initial causal information and seeks to identify if the incident will meet reporting requirements.

2.3. PHASE: TELEPHONIC INVESTIGATION

2.3.1. Telephonic Reporting Requirements for Operators

When an operator discovers an event meeting the reporting requirements of 49 CFR §191.5 or §195.52, the operator must give direct telephonic notice to the National Response Center (NRC) at the earliest practicable moment, but no later than one hour after confirmed discovery. Within 48 hours after the confirmed discovery of an incident, to the extent practicable, an operator must revise or confirm its initial telephonic notice. This is referred to as the 48-hour update. While States may have separate, additional or more stringent telephonic reporting requirements, all operators are required to call the NRC as per Federal reporting requirements.

Under §§192.612 and 195.413, operators are required to notify the NRC when an offshore pipeline in the Gulf of Mexico is exposed or poses a hazard to navigation.

2.3.2. National Pipeline Incident Coordinator (NPIC) On-call Staff Schedule

The AID on-call investigator is referred to as the “NPIC.” NPIC duties are rotated among PHP-8 Accident Investigators. The NPIC on-duty rotation extends one week, from Monday, 12:00 PM Central Time to the following Monday, 12:00 PM Central Time. The outgoing NPIC provides a debriefing to the incoming NPIC about ongoing investigations and transfers the NPIC emergency phone number to the incoming NPIC. The NPIC number is (888) 719-9033.

The NPIC on-call schedule is available on the Accident Investigation Division (PHP-8) - Accident Investigation Division Team Calendar which can be viewed on SharePoint at the [Accident Investigation Division Collaboration Site](#).

2.3.3. Telephonic Notifications from NRC and TOC & PHP Accident/Incident Cadre

Upon receiving a telephonic notification, the NRC enters information about the event into the NRC database. The NRC, using OPS provided guidance criteria, determines if the incident type in the telephonic notification should be classified as “pipeline” or “fixed facilities.” The NRC concurrently emails telephonic notifications meeting criteria in [Appendix D: NRC CRITERIA FOR EMAIL DISTRIBUTION](#) to the TOC-01(OST) and the PHP Accident/Incident Cadre email groups. The NRC sends notifications from two email addresses HQS-PF-flidr-NRC@uscg.mil (during the day) vs. NRC_NIGHTLY@uscg.mil (during the night). The TOC forwards e-mails to the OPS PHP-80 Response email group and staff in OST.

If the TOC becomes aware of an event receiving National media attention, the TOC will call the PHMSA Emergency Coordinator or Preparedness, Emergency Support, and Security Division staff. If the event is pipeline-related, the PHMSA Emergency Coordinator or Preparedness, Emergency Support, and Security Division staff will call the NPIC to request details of the failure and a summary of the operator response. The NPIC will contact the operator and forward the information to the effected region, AID, and Preparedness, Emergency Support, and Security Division upon receipt. If the facility is State regulated, the State will be notified by the NPIC.

See [Section 2.3.5](#) for after-hour notifications from TOC to the NPIC.

2.3.4. Telephonic Notifications to WMS and HMIS/Hazmatatics

After the NRC enters the information into their database, the report is transmitted to PHMSA’s Hazmatatics System (Note: the Hazmatatics System replaced PHMSA’s Hazardous Materials Information System (HMIS) System on April 27, 2018). The Hazmatatics System retransmits the report to PHMSA’s WMS. The WMS uses a series of filters to identify reports that meet two criteria: TOC and National. The TOC criteria are intended to replicate the TOC’s historical criteria. The National criteria are based primarily on regulated operators’ names. If the report does not meet either criteria, the WMS categorizes the report as ‘immaterial.’ Immaterial reports are auto-closed in WMS. PHMSA staff can view NRC reports in WMS soon after the NRC transmits the report, typically 10 to 20 minutes.

State and PHMSA staff can view NRC reports the next-day in Hazmatix, in WMS, and in PDM via the Portal. NRC reports prior to April 28, 2018 are archived in HMIS. NRC reports received on or after December 17, 2017 are in WMS. The PHMSA IT HelpDesk, 202-4354357, provides support for HMIS and Hazmatix. Portal Support PortalSupport@dot.gov provides support for WMS.

2.3.5. After-hours Telephonic Notifications

The NPIC monitors NRC reports via email and WMS between 6 AM and 10 PM Central Time and documents their investigation in WMS. Between the hours of 10 PM and 6 AM Central Time, the NPIC responds to all calls made to the NPIC emergency number. In the event of an incident on an OPS-regulated facility that meets the criteria in [Appendix B](#), the NPIC will notify the relevant Regional RD or Operations Supervisor (OS) by the most expeditious means.

2.3.6. NPIC Telephonic Investigation

The NPIC performs a telephonic investigation of all failure reports that are received via email, telephone call, or WMS. The NPIC's goal is to initiate the investigation within 15 minutes after receipt of an email or immediately after a telephone call from the TOC, Emergency Coordinator, or Preparedness, Emergency Support, and Security Division. The NPIC may make an immediate email statement that they have received the report and are working to gain additional information if they have not been able to secure credible updates or if they are not able to obtain sufficient information within the 15-minute target time. The NPIC documents the telephonic investigation in the WMS.

a. Determine Jurisdiction of Regulated Facilities

The NPIC reviews the NRC report to determine if the event is associated with a facility regulated under 49 CFR Parts 192, 193, or 195. If the facility is non-jurisdictional or non-regulated, the NPIC closes the telephonic investigation. For events associated with regulated facilities, the NPIC determines if OPS or the State is the lead regulator based on their 60105 certifications and 60106 agreements.

b. Assess Report for Off-scene Investigation or On-scene Deployment Criteria

The NPIC reviews the NRC report to make an initial assessment of the severity of the event. If the failure meets the criteria in [Appendix A](#): CRITERIA FOR DEPLOYING ON-SCENE, the NPIC calls the AID Director or OS who determines if an AID investigator will be deployed on-scene. For failures that meet the criteria, the investigation will be elevated to a Level 3 On-scene Investigation and AID will deploy staff on-scene. Exceptions need to be approved by the OPS Deputy Associate Administrator for Field Operations (DAAFO). The AID Director or AID OS call the RD to discuss the accident and to inform them of AID's deployment status. The RD will assess the need to deploy staff to support the Region's work.

On-scene Staff Composition Determination

The decision to deploy and the composition of the staff deployed will be based on the probable scope of the investigation and the magnitude of the tasks, but may also include the following factors: the number of injuries/fatalities/property damage, NTSB involvement, State requests for assistance, previous accidents by the operator, relation to inspections, uniqueness or location of the event, public interest, staff workloads, and training opportunities. Because information about the nature of the accident is often incomplete and may be erroneous at the time of the deployment, the decision about the composition of the staff may change after initial deployment.

When the decision to deploy is made, the AID Director notifies the DAAFO. The AID Director holds an internal coordination call to evaluate team availability and proximity to the site. When OPS is the lead regulator, the AID Director and respective RD discuss the specifics of the event and determine who will immediately deploy on-scene. A team of OPS staff from the AID, Regions, States, and Community Liaisons (CLs) may be deployed to work on the investigation. If there is need to form an on-scene investigation team, the DAAFO will coordinate. Some staff may be deployed on-scene and others may go to the operator's other facilities such as the control center or headquarters depending on their assigned task.

For failures on intrastate pipelines where the State is the lead regulator, OPS typically only participates in the on-scene investigation if an event results in a fatality or significant evacuation of the population, the State requests assistance, or the NTSB/other federal agency deploys.

For failures on interstate pipelines where the State is an interstate agent, the AID Director will decide whether AID or the State will lead the on-scene investigation, but the State will always have the option to participate.

A State may investigate a failure on a pipeline subject to regulation by OPS if the AID Director establishes a time-defined project specific agreement with the State. Details on time-defined project specific agreements are included in PHP-50's document, *Guidelines for States Participating in the Pipeline Safety Program, Appendix B*.

Irrespective of the team composition, the chain of command and communication channels remain the same for OPS staff. The OPS Lead On-scene Investigator reports to the AID Director for all issues related to the incident. All communications to and from the field are channeled through the NPIC. When the State is the lead regulator, they report up through State chain of command and provide the NPIC with updates.

After the on-scene staff has been determined, the NPIC will inform the Preparedness, Emergency Support, and Security Division about the deployment so they can notify PHMSA Executives. The NPIC will also send a notification to the respective region. When the event is on Tribal lands, the AID Director or delegate will immediately notify the Tribe(s) of

PHMSA's intention to investigate.¹ The AID Director follows Policy Number: PHMSA 5301.1A, PHMSA Communications Policy for Inspections and Investigations on Tribal Lands.

Additionally, the NPIC will notify the EPA for all HL events, the United States Coast Guard (USCG) for offshore events, and Bureau of Safety and Environmental Enforcement (BSEE) for events located in the Gulf of Mexico (GOM) when OPS deploys on-scene.

Travel to the accident scene will be initiated without delay.

See [Section 2.5](#) for further information on a Level 3 On-scene Investigation.

If the incident is of special investigatory interest but does not warrant or resource constraints do not permit an on-scene investigation, the AID Director may initiate a Level 2 Off-scene Investigation. See [Section 2.4](#) for further information on off-scene investigations.

The telephonic investigation continues in parallel with on-scene or off-scene investigations.

c. Notification and Updates to Stakeholders

The NPIC disseminates NRC reports (initial and 48-hour update) and serves as the single point of contact for obtaining and sharing information from the operator, the State, or other parties. Depending on the jurisdiction, severity and other characteristics of the failure, the NPIC makes immediate notification to various stakeholders.

The NPIC contacts the State or the operator (or NRC reporting party if no operator is identified), to obtain additional information about the event. There may be multiple requests for additional information or to gain clarity. The NPIC continues to obtain and distribute updates including the 48-hour update until the scene has been made safe, or the incident command center ICC has dissolved, disbanded or shut down. The NPIC monitors the investigation until it is determined if a 30-day report will be required.

The following describes the notification from the NPIC to various stakeholders:

- **Updates to/from States**

When the State is the lead regulator, the State plays an integral role in providing information. The NPIC emails the NRC report to the State and the State contacts the operator. The NPIC clearly communicates the expectations for receiving details of the incident and a summary of the operator response in a timely manner from the State.

¹ The U.S. Department of the Interior, Indian Affairs provides a web site link to a "Tribal Leaders Directory" at <https://www.bia.gov/tribal-leaders-directory>. Additionally, many Tribes provide contact information on their web sites.

For events that are particularly time-sensitive, the NPIC calls the State. If the State cannot be reached promptly, the NPIC contacts the operator directly. For less time sensitive incidents, if the State cannot be reached, the NPIC will wait one hour before directly contacting the operator. The NPIC may call the operator directly when the jurisdiction is uncertain.

- **Updates to Regions**

The NPIC forwards NRC reports and updates to the Region's RD and OSs when incidents occur within their Region, whether the State or OPS is the lead regulator.

- **Updates to Preparedness, Emergency Support, and Security Division**

If the incident meets the criteria in [Appendix B: INCIDENT CRITERIA REQUIRING NOTIFICATION AND UPDATES OF INCIDENTS TO THE PHMSA AND DOT EXECUTIVES](#), the NPIC will immediately send notifications and future updates to Preparedness, Emergency Support, and Security Division. Preparedness, Emergency Support, and Security Division works directly with the NPIC on events that may not meet a known criterion but meets a sensitivity of which the NPIC may not be aware. The NPIC will continue to send updates until the Preparedness, Emergency Support, and Security Division indicates that they have received sufficient information and no longer wish to receive further updates.

- **Updates from Preparedness, Emergency Support, and Security Division to Executives and other Federal Agencies**

The Preparedness, Emergency Support, and Security Division is the single point of contact to provide accident information to PHMSA Executives. The Preparedness, Emergency Support, and Security Division prepares a more formal executive summary of the failure and sends it to PHMSA Executives. The Preparedness, Emergency Support, and Security Division sends a copy of the summary under a separate email. The email address is: PHMSAOPSAccidentUpdate@dot.gov.

If a pipeline could be affected by a train derailment, the NPIC will notify the Preparedness, Emergency Support, and Security Division, who will contact the Federal Railroad Administration (FRA) to ensure the safety of personnel responding to the derailment.

The Preparedness, Emergency Support, and Security Division will send updates to the other Federal agencies within the [National Response Framework](#) (i.e., USCG, EPA, DOE, DOD, DHS) as needed.

- **Updates to Pipeline Safety Policy & Programs (PHP-3) for Natural Gas Underground Storage Events**

AID forwards all natural gas underground storage field NRC reports to the Underground Storage Team email group, List-PHMSA-UGS IMP Team, and the Region. The Eastern Regional Director leads the investigation and the Underground Storage Team is responsible for determining compliance and issuing enforcement of 49 CFR §192.12.

- **Updates to NTSB**

The detailed criteria for notifying the NTSB is in [Appendix C](#): MATRIX OF DEPLOYMENT & EMAIL NOTIFICATION CRITERIA. Generally, when there are any injuries, a fatality, significant evacuations, major property damage, or when the accident occurs in the DC metropolitan area, the NPIC forwards the NRC report, under separate email, to the NTSB to let them know that OPS is investigating. As the investigation unfolds, the updates may or may not continue to be sent to the NTSB. When the Preparedness, Emergency Support, and Security Division sends the PHMSA Executive Notification, the NPIC copies the report into a new email and sends it to the NTSB and copies the AID.

d. 48-hour Update

The NPIC is responsible for confirming that 48-hour update reports have been submitted prior to closing out the WMS telephonic investigation task. WMS links the 48-hour update NRC reports and other NRC reports within WMS and on the daily telephonic investigation report.

The NPIC tracks incidents to determine if a 48-hour update has been submitted in the allotted time and contacts the operator or State, as appropriate, when a 48-hour update has not been submitted in the allotted time. The NPIC summarizes outreach activities to the operator or State within WMS.

2.3.7. Develop Daily Telephonic Investigation Report

The daily telephonic investigation report is a summary of the information gathered during the telephonic investigation for all NRC reports or 48-hour update reports. The daily telephonic report includes all jurisdictional events that have occurred from 8 AM CT the previous day until 8 AM CT the day of the report. The NPIC distributes the report between 7 AM CT to 12 PM CT. The NPIC enters the information in WMS to generate the daily telephonic investigation report. The NPIC emails the report to:

- Associate Administrator, PHP-1 Office of Pipeline Safety
- Deputy Associate Administrator, PHP-2 Office of the DAA for Field Operations
- Deputy Associate Administrator, PHP-3 Office of the DAA for Policy & Programs
- Director for Field Operations, PHP-2 Office of the DAA for Field Operations

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- Management and Program Analyst, PHP-2 Office of the DAA for Field Operations
 - Director of Policy & Programs, PHP-3 Office of the DAA for Policy & Programs
 - Emergency Coordinator, PH-3 Office of the Executive Director and Chief Safety Officer
 - PHMSA Accident Investigation Division
 - PHMSA Preparedness, Emergency Support, and Security Division
 - PHMSA PHP Community Liaisons
 - PHMSA PHP Operations Supervisors
 - PHMSA PHP Regional Directors
 - PHMSA PHP-100 EASTERN
 - PHMSA PHP-200 SOUTHERN
 - PHMSA PHP-300 CENTRAL
 - PHMSA PHP-400 SOUTHWEST
 - PHMSA PHP-500 WESTERN
 - NAPSAR All States
 - NTSB Contacts (RPH20@ntsb.gov)

2.3.8. Conduct a 30-day Report Review

Level 1 investigations include the 30-day report review phase described in [Section 2.7](#).

2.4. LEVEL 2: OFF-SCENE INVESTIGATION

Level 2 investigations follow the same telephonic investigation process of a Level 1 Primary Investigation described in [Section 2.3](#) and the 30-day report review phase described in [Section 2.7](#). The decision to conduct an off-scene investigation is typically made during the telephonic investigation. If the AID Director has determined that AID will conduct an off-scene investigation, the AID investigator contacts the operator to seek additional information. The AID investigator may initiate a data request for documents such as the root cause failure analysis (RCFA), metallurgical report, or a copy of the operator's internal investigation report.

When AID performs an off-scene investigation, they produce a summary report to describe the investigation and findings. After the AID Director approves the summary report, the Investigator uploads the summary report with associated operator reports to AID's SharePoint site. Summary reports are written within 30 business days after all operator information has been obtained.

2.5. LEVEL 3: ON-SCENE INVESTIGATION

Level 3 investigations follow the same telephonic investigation process of a Level 1 Primary Investigation described in [Section 2.3](#) and the 30-day report review process described in [Section 2.7](#). The decision to deploy on-scene and the team composition is typically made during the

telephonic investigation as described in [Section 2.3.6 b](#). Level 3 investigations typically include more extensive data requests. The investigator produces a FIR that is posted internally and to PHMSA's public web site. The FIR is written within 30 business days after all operator data requests have been obtained.

On-scene team members' roles and responsibilities are provided in Table 1: Responsibilities Matrix for On-scene Investigations. The responsibilities for team members depend on who is the lead regulator and the composition of the on-scene team.

- OPS jurisdiction
- State jurisdiction (under 49 USC 60105 State Pipeline Safety Program Certification)
- State jurisdiction (under 49 USC 60106 State Pipeline Safety Agreements)
- NTSB deploys (see [Section 2.6](#) for additional requirements)

Table 1: Responsibilities Matrix for On-scene Deployments

Responsibilities Matrix for Personnel at On-scene Investigations	Lead Investigation	Support Investigation	Write Failure Investigation Report*	Complete CAO Data Report*	Identify Enforcement Actions**	Inspect for Compliance	Lead Oversight of RCFA	Oversight of Enforcements***
OPS jurisdiction								
AID Only	AID	NA	AID	AID	AID	Region	AID	Region
Region Only	Region	NA	Region	Region	Region	Region	Region	Region
AID and Region	AID	Region	AID	Region/ AID	Region/ AID	Region	AID	Region
State jurisdiction (under 60105 certifications)								
State Pipeline Safety Agency Only	State	NA	NA	NA	NA	State	State	State
State and AID	State	AID	NA	NA	NA	State	State	State
State and Region	State	Region	NA	NA	NA	State	State	State
State, AID, and Region	State	Both, AID Lead for PHMSA	NA	NA	NA	State	State	State
State jurisdiction (under 60106 agreements)								
State Pipeline Safety Agency Only	State	NA	State	Region	Region	State	State	Region
State and AID	Event Specific	Event Specific	AID	AID	AID	State	State	Region
State and Region	Event Specific	Event Specific	Region	Region	Region	State	State	Region
State, AID, and Region	Event Specific	Event Specific	AID	Region/ AID	Region/ AID	State	State	Region
NTSB deploys								
State (60105) and AID	NTSB	State	NA	AID	AID	State	NTSB	State
State (Interstate Agent) and AID and/or Region	NTSB	Both, AID Lead for PHMSA	NA	Region and/or AID	Region and/or AID	State	NTSB	Region
AID	NTSB	AID	NA	AID	AID	Region	NTSB	Region
AID and Region	NTSB	Both, AID Lead for PHMSA	NA	Region/AID	Region/AID	Region	NTSB	Region
*Or State's equivalent form. **Violation Report or Region Enforcement Letter Recommendation. ***Including Return-to-Service Plan								

2.6.1. Pre-scene Arrival

Personnel deployed to the failure scene must meet the minimum requirements of PHMSA Safety Manual, Policy Number: PHMSA 3902.2, have the appropriate personal protective equipment (PPE), cell phone, and Government-issued identification, credentials, and computer. Personnel shall follow OPS's Logowear Policy PHP-4410.1A and PHMSA Policy on Proper Use of Credentials Order Number 1600.1. The OPS Lead On-scene Investigator or the NPIC will contact the operator to provide arrival information. If the State is the lead regulator and OPS deploys, the NPIC calls the State to coordinate activities.

The AID Director or OS will discuss the priorities, interactions, roles and responsibilities of each person on-scene and hand-offs if necessary with the team as soon as practicable. Personnel assigned to respond to the accident scene are obligated to reach the scene as quickly and as safely as possible, and to remain at the scene until properly relieved. Any staff deployed on-scene arranges their travel and obtains the necessary authorizations. If they need assistance with travel, they contact their Division's Administrative Assistant during work hours or SATO at any time.

For deployed staff to focus on investigation preparations and to prevent misinformation, communication to and from deployed staff goes through the NPIC. The AID Data Analyst researches the pipelines history to obtain data for the [Operator Accident Information Template \(Appendix H\)](#).

The NPIC and on-scene staff do not release information to the media. Information released to the media should be from PHG.

2.6.2. On-scene Investigation

Upon arrival, the OPS Lead On-scene Investigator will check-in with the ICC (if one exists) or Police/Sheriff and initiate contact with the operator's on-scene personnel and integrate into the ICS. The OPS Lead On-scene Investigator may also contact local or tribal authorities who are involved in the ICC. The OPS Lead On-scene Investigator will request information as to which Federal, State, and local agencies are involved and pass this information onto the NPIC and the CL, if deployed. The Lead On-scene Investigator or CL should identify the channels of information dissemination with the ICC, obtain contact information to receive updates about the response and recovery, and attend meetings with emergency management.

The Lead Investigator will discuss scene safety with the ICC. If the Lead Investigator feels something is not proceeding in the correct manner, they inform the ICC through the proper channels. The Lead Investigator is prepared to communicate PHMSA's role. When the State is the Lead Investigator, PHMSA's role is to support the State's investigation. When NTSB is the Lead Investigator, PHMSA's role is to support NTSB's investigation and serve as the Federal representative. The Lead Investigator meets with the team to communicate safety requirements, discuss logistics coordination, and assign roles and

deliverables. All investigation activity at the scene is under the control of the OPS Lead On-scene Investigator. He/she has the overall authority and responsibility to resolve any issues within the investigation team that may arise on-scene. If the issue cannot be resolved, he/she will elevate the matter to the AID Director.

While on-scene, as soon as practicable, the OPS Lead Investigator will request information from the [Operator Accident Information Template \(Appendix H\)](#) from the operator. The On-scene Investigator emails the NPIC and AID Data Analyst the template with information they have been able to collect. The NPIC collates the information and distributes the form to the same distribution group that notifications have been distributed to under [Section 2.3.7](#).

Anyone deployed to the scene must use extreme care to protect their safety. Appropriate PPE will always be used. Any safety concerns should be promptly conveyed to the NPIC. All investigators will present credentials.

OPS staff deployed to a failure scene may use investigation job aids to support the development of a Failure Investigation Report. The investigator(s) perform their on-scene investigation with the following goals:

- Compile field notes documenting the on-scene activities including those of the team,
- Make preliminary assessment of whether the failure mode could impact other portions of the operator's system or other modes of transportation.
- Assess and communicate to the AID Director and RD the need for enforcement action that may include shutting down the pipeline.
- Assess and communicate to the AID Director and RD the need for a CAO, return-to-service plan to assure the pipeline is returned to service safely.
- Assure the operator is fully cooperating with State and local emergency response officials and Federal agencies, such as the EPA, Coast Guard, and NTSB.
- Assist local emergency response officials with information and access to PHMSA Governmental, International, and Public Affairs (PHG) as needed.
- Ensure the pipeline and other infrastructure potentially affected by, or contributing to, the failure has been assessed.
- Determine if a portion of the failed pipeline needs to be secured for laboratory analysis or if failed equipment performance testing is needed. If laboratory testing is warranted, ensure that the operator uses the Metallurgical Laboratory Failure Examination Protocol ([Appendix E](#)) or equivalent procedure. Oversee the removal and preparation for transport of failed material or equipment.
- Identify and collect factual evidence, take photographs, and conduct interviews.
- Request the status and results of drug and alcohol testing when it is required.
- Collect information to help determine the probable cause, contributing factors, and root causes.
- If control room actions or inactions may have contributed to the failure or exacerbated the consequences, travel to the control room or make request for SCADA records.

At the end of each day of the on-scene investigation, the on-scene team should debrief. The team may review fieldnotes, discuss any issues encountered during the day, and establish work/rest schedules. The OPS Lead On-scene Investigator shall provide an update to the NPIC who distributes them to AID and the Region. The OPS Lead On-scene Investigator and the AID Director discuss the adequacy of resources, well-being and performance of the on-scene staff, emergency travel support, need for technical support, and demobilization plans.

The OPS Lead On-scene Investigator reports all findings promptly to the AID Director and NPIC. The AID Director provides an update to the RD including discussion of any systemic safety issues identified during the investigation. The AID Director and RD will decide if a CAO or SO should be drafted. See *Table 1: Responsibilities Matrix for On-scene Deployment* to identify roles and responsibilities of on-scene team members

2.6.3. Potential Orders

An on-scene investigation is usually conducted before recommending a CAO or Notice of Proposed Safety Order (NOPSO) be issued to provide public safety and protection of the environment. The Region completes the factual portions of the CAO data report within 48 hours of the failure using information from the Operator Accident Information Template ([Appendix H](#)). The CAO data report template and guidance on information to be collected when considering a CAO or NOPSO is available on the PHP-60, Enforcement SharePoint [Page](#).

The RD, PHMSA Counsel (PHC), AID Director, and the DAAFO should agree on the CAO or NOPSO as soon as practicable, but typically within 3 days – not to exceed 10 days of an incident. The AID will work with the Region for the collection of necessary information for the CAO data report to develop the CAO or NOPSO. The order should delineate which OPS Division receives and approves any requirements (e.g., lab analysis, metallurgical plan, RCFA, workplan, excavation plan, return-to-service plan) if it is other than the RD. In some cases, the affected Region, working with AID, may create and issue a formal plan for returning a pipeline to service after a failure.

The Region will develop the return-to-service plan and follow-up on the operator's compliance with the plan. The management of the plan implementation and other actions contained in the CAO or NOPSO will be managed by the affected Region independent of the failure investigation.

AID's primary role is to investigate, identify the need for CAOs or SOs (in partnership with the Region), determine the probable or root cause of the failure, review metallurgical reports, and identify recommendations to reduce the likelihood of recurrence. Other enforcement issues may be recognized by AID personnel during an investigation. When recognized, the AID will note the finding in WMS, complete a Region Enforcement Recommendation Letter ([Appendix I](#)) and submit it to the AID Director for review within

48 hours. The AID Director sends the [Region Enforcement Recommendation Letter](#) to the responsible RD and OS. The RD or OS reviews the [Region Enforcement Recommendation Letter](#) and decides what actions the Region will take if any.

2.6.4. Cooperation with Other Federal and State Agencies While On-scene

OPS will cooperate, coordinate, and share information with all Federal and State agencies investigating failures, especially those involving multiple modes of transportation. OPS will likely take the lead in the failure investigation if the failure was caused by a pipeline facility. Monitoring or directing spill cleanup and product disposal is the responsibility of the Environmental Protection Agency (EPA), U.S. Coast Guard, or other agencies as appropriate for the type of product and location of the failure.

2.6.5. Facility Response Plan (FRP)

The Preparedness and Emergency Support, and Security Division supports the AID by managing the FRP program, which plays a key role in an operator's response to an oil spill due to hazardous liquid pipeline failure, except those under a State Agency with a Certification with PHMSA. On large HL spills, the Preparedness, Emergency Support, and Security Division will review the FRP to ensure that the operator's response to the failure conforms with the operator's approved plan. Preparedness, Emergency Support, and Security Division serves as a subject matter expert (SME) along with input from other response agencies to assist the AID in identifying operational discrepancies and response inadequacies during pipeline failure investigations.

2.6.6. Communication with The Media and Public

Office of Governmental, International and Public Affairs (PHG)

PHG is responsible for liaison with members of Congress, the media, and the public. The AID, through the NPIC, provides updates on failure investigations to the Preparedness, Emergency Support, and Security Division. The Preparedness, Emergency Support, and Security Division provides the update to PHG as needed. Any communication with U.S. DOT Office of Inspector General (OIG), U.S. General Accountability Office (GAO), Congress, Department of Justice (DOJ), Chemical Safety Board (CSB) goes through PHG. AID's involvement with the media is expected to be limited, as these interactions most commonly occur through PHG. Under normal circumstances, the AID investigator should refer media inquiries to PHG (PHMSAPublicAffairs@dot.gov 202-366-4831). However, AID investigators may occasionally need to respond to media questions. Details and guidance for responding to the media are explained in [Appendix F](#) on the PHMSA Media Relations card provided by PHG.

Community Liaisons (PHP-20)

Local Government officials will want to know what is going on in their community. Neighbors living near the pipeline or facility may need information, especially if they are impacted by the incident. When Community Liaisons (CLs) are deployed on-scene to an accident that impacts the surrounding community, there may be a need to establish or maintain communications with the ICC while investigators are in the field. The CL should identify the channels of information dissemination with the ICC, obtain contact information to receive updates about the response and recovery, and attend meetings with emergency management. The AID and the Regions refer members of the public and State, local, and tribal Government officials to PHMSA's Community Liaisons.

2.6.7. Post-scene Activities

When the OPS Lead On-scene Investigator leaves the failure scene and returns to the office, they may continue the investigation. They will continue to provide updates about the incident to the NPIC as necessary. They will provide support for the CAO or SO.

The OPS Lead On-scene Investigator should work with other team members to determine any further activities and develop a plan with assignments if necessary. Depending on the circumstances of each event, the investigator(s) will review and evaluate submitted reports, such as metallurgical reports and RCFA. The Region oversees the implementation of any enforcement actions. AID participates in the review of the RCFA, metallurgical and other reports.

All documents related to the investigation will be stored on AID's network drive (AIDTQ (\\PHMOKCWFS001)). AID manages the investigation information in WMS. All staff must adhere to the policy for documentation within SMART Inspection Policy, PHP-5340.4E. Each failure should have one I03. Regardless of the Region value for an I03, staff from any Division can add Assignments and Days to the Activity.

2.6.8. Hot Wash

A hot wash is the "after-action" discussions and evaluations of OPS's (or multiple agencies') performance following an accident investigation. The main purpose of a hot wash session is to identify the strengths and weaknesses of the OPS response to a given event and to guide future response.

After each deployment, the OPS Lead On-scene Investigator debriefs the AID at their next regularly scheduled staff meeting. When the AID OS identifies the need for a hot wash, a request is made to the OPS Lead Investigator to initiate the meeting. Arrangements should be made as soon as practicable after demobilizing from the scene. The OPS Lead Investigator works with the AID OS and National Safety Coordinator to identify attendees from OPS Divisions, other Federal and State agencies, and operators' responders or personnel otherwise involved in the gathering and dissemination of information. The AID

OS facilitates the meeting and prepares a report as to the items that went well and areas for improvement. The AID Director disseminates the report and a copy is filed with the accident file on AID's common drive.

2.6.9. OPS Failure Investigation Report

Upon conclusion of the investigation, the OPS Lead On-scene Investigator or designee will prepare a Failure Investigation Report (FIR) using the FIR template ([Appendix G](#)) within 30 business days after all operator data requests have been obtained. If the NTSB is investigating the failure, OPS does not publish a report but the Regions proceed with enforcement actions as needed.

The FIR will include the applicable sections listed below. Guidance for each section of the report is included in the template.

1. Operator, Location, and Consequences
2. Executive Summary
3. System Details
4. Events Leading Up to the Failure
5. Emergency Response
6. Summary of Return-to-service
7. Investigation Details
8. Investigation Findings and Contributing Factors
9. Appendices, as needed:
 - a. Maps and Photographs
 - b. NRC Report
 - c. Operator Accident/Incident Report to OPS
 - d. Operator Procedures and Records
 - e. Metallurgical Laboratory Analysis
 - f. Operator's Report on their Failure Investigation
 - g. Root Cause Failure Analysis Report

The FIR author will verify that the apparent cause reported by the operator aligns with the investigation findings. If there are discrepancies, AID will request that the operator file a supplemental report. If the operator refuses to change the cause through a supplemental report, the discrepancy is documented in the Investigation Findings and Contributing Factors section in the FIR.

The FIR does not include probable violations or recommendations. Probable violations are captured in the [Region Enforcement Recommendation Letter \(Appendix I\)](#) and made part of any enforcement action to be developed by the Region. The FIR author shall ensure that the FIR aligns with any enforcement actions. PHC advises that reports with active

enforcement action(s) subject to Freedom of Information Act (FOIA) requirements should not be publicly distributed.

The AID processes FIRs per the Failure Investigation Report Processing and Posting SOP. After the report is approved by the DAAFO, the document is uploaded into WMS and SharePoint (Deputy AA for Field Operations (PHP-2) > [Failure Investigation Reports](#)). The PHMSA Directors will be notified via email that it has been posted. Before loading the report to the PHMSA web site, AID will coordinate a PHC redaction review for personally identifiable information (PII), sensitive security information (SSI), or confidential content. Files posted to the Internet are expected to be readable by software to comply with Section 508 of the Rehabilitation Act of 1973. The body of the report and as many appendices as feasible will be prepared in Microsoft Word. When possible, PDF files will be software readable rather than scanned. The AID will coordinate with the PHMSA webmaster to create the file to be posted to the internet.

2.6.10. PHMSA AID Safety Recommendation Memo

The AID may issue an internal safety recommendation memo, [Appendix J](#), following investigations of pipeline accidents and completion of the FIR. Safety recommendations usually address a specific issue uncovered during an investigation that extends beyond requirements for the specific operator involved in the investigation. The memo will specify how to correct the situation or identify the need for additional study. For example, the memo may include recommend changes or additions to pipeline safety regulations or a recommendation that PHMSA issue an advisory bulletin.

2.6.11. Review of Inspection Assistant (IA) Questions for Failure Cause

The AID Director sends a copy of the FIR to the appropriate PHMSA Team Sponsor who oversees IA questions related to the cause(s) of the incident. The Team reviews the report to determine if there is a need to add or modify any questions based on the findings and reports back to the AID Director and IA Team Sponsor.

2.6. NTSB INVESTIGATION

The Independent Safety Board Act (ISBA), 49 U.S.C. 1901 *et seq.* created the NTSB, and authorized it to investigate various transportation accidents. An amendment to the ISBA gave NTSB investigations priority over investigations conducted by other Federal agencies. OPS or States with certification are not precluded from conducting their own investigations or obtaining information directly from parties involved in or witnesses to an incident. NTSB coordinates resources and prepares the written investigation report.

During NTSB's party designation process, party coordinators and Team members are identified. The OPS Lead On-scene Investigator will be the party coordinator, attend meetings

on PHMSA's behalf, and report back to the AID Director after meetings. NTSB creates Teams, depending on the accident specific circumstances. There will typically be an Operations Team and an Emergency Response Team. There may also be an Integrity Management Team. OPS should attempt to have a representative on each Team. Preferably, the same staff member remains on the Team for the duration of the investigation. PHMSA may obtain information directly from parties involved in, and witnesses to, the failure, provided they do not interfere with the NTSB's investigation. PHMSA does not write a FIR when NTSB deploys.

The OPS does not sign NTSB's form, "Statement of Party Representatives to NTSB Investigation." This form contains pertinent excerpts from 49 CFR Part 831 and explains that by signing the form, the coordinators are obligating and indicating the organizations they represent and that all personnel assigned to the investigative groups understand the rules and that they are willing to abide by them. PHMSA will follow the NTSB's requirements for parties to NTSB investigation except for the prohibition on sharing information during the investigation. NTSB and PHMSA have an understanding that OPS personnel working on an investigation may share information within OPS as needed.

The OPS and States will recognize the NTSB as the lead agency for determining the cause of failures NTSB investigates. The OPS or the State will determine what immediate steps the pipeline operator must take to protect the public and environment, determine if probable violations exist, and issue enforcement actions as necessary.

The OPS and NTSB work under a memorandum of understanding (MOU). The MOU is located on PHMSA's web site.

https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/1975_DOT_NTSB.pdf

2.7. PHASE: 30-DAY REPORT REVIEW

WRITTEN REPORTS FROM THE OPERATOR (Forms 7100 & 7001 INCIDENT REPORTS)

Within 30 days of a reportable incident/accident, the operator is required to submit a written report, PHMSA Form 7100 (for gas incidents) or 7001 (for hazardous liquid accidents), to the OPS under 49 CFR §195.54 (Hazardous Liquid), 49 CFR §191.15 (Transmission, Gathering, LNG, Underground Storage), and 49 CFR §191.9 (Distribution). The operator may submit the report directly through the Online Data Entry System (ODES) or may send the report to OPS for entry into ODES. When the operator obtains new relevant information, they are required to supplement the written report. PHMSA expects operators to submit a final report when the apparent cause has been determined and the report is complete and accurate. After the NPIC receives the operator's 48-hour update report, the AID continues to monitor the investigation until the report has been filed.

The AID, States, and the Operations Systems Division (PHP-6) are responsible for the quality assurance and control of the data that operators submit on PHMSA accident Forms 7100 and 7001 per Incident Report Data Management Policy (PHP-5340.5B). If there are compliance

issues with the 30-day report, the AID completes a Region Enforcement Recommendation Letter ([Appendix I](#)) which the AID Director sends to the RD.

The AID's Incident Report Team Lead is responsible for AID's review of operators' incident forms to ensure the data is complete and accurate. For incidents subject to State regulatory authority, the AID works with the State² to resolve any identified discrepancies or gaps in the report. The AID receives feedback from the State and enter the status in ODES RR³ and WMS.

When the report is complete and accurate, the AID recommends to the State that the report can be closed. If the State concurs, the AID closes the report. If the State does not respond to a repeated request, the AID Incident Report Team Lead can approve closing the report. Closed reports are uploaded into WMS so that the NRC report is linked to the incident report.

For incidents subject to OPS-regulated facilities, the AID works directly with the operator to ensure the data is complete and accurate. The AID follows the same procedure to document the status of the report in ODES RR and WMS.

2.8. DATA ANALYSIS PROGRAM

The AID's Data Analysis Program is under development. This section will be updated when the plan is approved by the AID Director.

The main goal of AID's data analysis program is to move OPS's understanding of incident causes and contributory factors from a reactive mode towards a predictive one. The primary person responsible for incident data analysis is the AID's Program Analyst. Data sources include incident reports, FIRs, and WMS data. The AID will present the results of data analysis in a format that is easy to comprehend and use visualizations and other tools when practicable.

The Data Analyst runs periodic reports to identify instances when operators did not meet the NRC notification or 30-day report reporting requirements. The AID provides the RDs with the results of the AID's evaluation of these reports.

The AID captures, stores, and manages incident data in the WMS, ODES RR, and the AID's shared network drive.

The AID's Program Analyst is also responsible for ensuring that the AID retains records and disposes of paper and electronic records in accordance with its approved National Archives and Records Administration (NARA) records schedules.

² Accident and incident reports can be accessed through the Pipeline Data Mart (PDM).

³ WMS is being enhanced to support the migration of the review of the incident reports. This section will be updated when the new process has been implemented.

2.9. LESSONS LEARNED PROGRAM

The AID's Lessons Learned Program is under development. This section will be updated as additional products are approved by the AID Director. Current product:

- AID Situational Awareness for Employees (SAFE) Bulletin – SAFE Bulletins provide inspectors and other PHMSA employees notifications of incident trends or novel incident causes of recent accidents. The bulletin includes: background information, accident investigation summaries, AID data analysis, contributing factors, regulatory requirements to prevent accidents of the cause, and additional resources.

The AID's primary purpose is to memorialize and disseminate actionable data and information from accident investigations and data analysis to (1) improve pipeline safety and (2) to improve the failure investigation process to stakeholders.

3. ROLES & RESPONSIBILITIES

This section contains a combination of roles and job titles.

3.1. DIRECTOR, ACCIDENT INVESTIGATION DIVISION (PHP-8)

The AID Director is responsible for completion of the investigation and all investigative support functions. The AID Director acts as the liaison between PHMSA and all other agencies and/or entities during an investigation while away from the scene. The Director assumes the final responsibility in the investigation and oversees the completion of all reports which are related to a specific inspection/investigation.

3.2. OPERATIONS SUPERVISOR, ACCIDENT INVESTIGATION DIVISION (PHP-8)

The AID OS conducts the responsibilities of the AID Director as delegated.

3.3. NATIONAL PIPELINE INCIDENT COORDINATOR (PHP-8)

The National Pipeline Incident Coordinator:

- Debriefs incoming NPIC about ongoing investigations;
- Performs telephonic investigation of NRC reports;
- Produces the daily telephonic investigation report; and
- Serves as the point-of-contact for receiving and disseminating communications as a part of an on-scene investigation.
- Reviews the 30-day report for accuracy and completeness.

3.4. OPS LEAD ON-SCENE ACCIDENT INVESTIGATOR (PHP-8 or Region)

The OPS On-scene Accident Investigator is typically an AID Investigator. They are the main point of contact for the investigation while on-scene, to include, coordinator of activities for the agency and takes direct responsibility for completion of the investigation and all investigative support functions. The OPS Lead On-scene Accident Investigator may delegate or act as the primary liaison between the OPS and all other agencies and/or entities while on-scene. They assume the final responsibility for the investigation during the on-scene investigative phase. Prior to any non-investigative OPS personnel being allowed to enter the scene of any incident, the OPS Lead On-scene Investigator confirms that the individual(s) have appropriate training and that appropriate PPE is being worn. Duties include:

- Perform deployment preparations for travel to incident scene;
- Use existing mechanisms (including others through National Incident Management System (NIMS)/Incident Command Structures (ICSs) if necessary) to collect available evidence to enable a thorough investigation;
- Generate and communicate initial and updated information for the NPIC for executive notifications;
- Pursue a determination as to the root cause;
- Serve as the single point of contact between the OPS and the pipeline operator during the investigation. This includes requests for historical data/records, procedures, etc.
- Coordinate efforts and progress with other applicable modal administrations;
- Coordinate with the Regions to draft the CAO data report to provide information for PHC to write CAOs or SOs;
- Refer potential applicable enforcement actions to the AID Director as appropriate; and
- Manage incident record repository.
- Write FIR.

3.5. INCIDENT REPORT TEAM LEAD (PHP-8)

The Incident Report Team Lead provides QA/QC oversight for incident reports to ensure that they are complete and accurate and that they are closed in a reasonable time.

3.6. AID PROGRAM ANALYST (PHP-8)

The AID Program Analyst performs data analysis, generates reports, and is responsible for AID's records management.

3.7. REGIONAL DIRECTORS (PHP-100, 200, 300, 400, 500)

RDs are responsible for issuing enforcement actions and ensuring proper oversight of the implementation of any requirements because of the enforcement actions. They are responsible for their Region's utilization of information from the daily telephonic investigation report and other incident data to support future inspections.

3.8. COMMUNITY LIAISON (PHP-20)

When Community Liaisons are deployed on-scene, their role is to liaison with the public to address their concerns related to the incident. They meet with and disseminate information to the public affected by incidents. They are also responsible for enforcement of compliance with third-party excavation damage requirements.

3.9. OPERATIONS SYSTEMS DIVISION (PHP-6)

The Operations Systems Division produces PHMSA's performance metrics related to incidents. In this role, they are responsible to ensure that operators submit incident data that is consistent with reporting criteria as it relates to the consequences such as fatalities, injuries requiring hospitalization, quantity spilled, and property damage. They lead periodic meetings with the AID and other stakeholders to review incident reports.

3.10. PREPAREDNESS, EMERGENCY SUPPORT, AND SECURITY DIVISION)

Preparedness, Emergency Support, and Security Division is the liaison for PHMSA Executives, PHG, and other Federal agencies such as DHS, DOE, and others entities off-scene.

3.11. DEPUTY ASSOCIATE ADMINISTRATOR OFFICE OF FIELD OPERATIONS (PHP-2)

The DAAFO is responsible for the implementation of this policy and approval of deviations from it. If there is need to form an on-scene investigation team, the DAAFO will coordinate.

3.12. STATE PIPELINE SAFETY AGENCIES

The relationship between the AID and the State provides for the effective use of each entity's resources to investigate pipeline failures on intrastate pipelines and LNG facilities. States "own" the regulatory programs within their respective State under a PHMSA certification or agreement that spells out the limits of each State's regulatory authority. This includes the responsibility and right to complete pipeline failure investigations. The AID supports the State by providing technical assistance when needed and the coordination between the State and PHMSA on information flow.

State pipeline safety agencies are responsible for the investigation, inspection, and enforcement of incidents on pipeline facilities under their 60105 certifications. Under 60106 agreements, States are responsible for the investigation and inspection of pipeline facilities, but Regions manage enforcement. States are responsible for the review and approval for closure of operators' incident reports under 60105 certifications and 60106 agreements.

For large incidents, a State may rely on mutual aid from PHMSA or other State agencies. When mutual aid is sought, States follow the Mutual Aid process provided in PHP-50's document, [Guidelines for States Participating in the Pipeline Safety Program](#).

3.13. PHMSA NATIONAL SAFETY COORDINATOR

The National Safety Coordinator reviews AID lessons learned products before dissemination.

3.14. PHMSA EXECUTIVES

For this policy, the PHMSA Executives include: PHMSA Administrator, Deputy Administrator, Executive Director, Chief Counsel, Associate Administrator for Pipeline Safety, Deputy Associate Administrator for Field Operations, Deputy Associate Administrator for Policy & Programs, Deputy Director Office of Government, International, and Public Affairs, and Emergency Coordinator.

APPENDIX A: OPS CRITERIA TO DEPLOYING ON-SCENE

Before sending OPS staff on-scene, the AID Director will discuss the situation with the DAAFO and RD. Exceptions must be approved by the DAAFO.

All Facilities Subject to Regulation by OPS:

- One or more fatality
- One or more injury(ies) requiring hospitalization
- NTSB deploys
- Major property damage – multiple or critical structures
- Multimodal impact – major interstate highway, waterway, airport, or railroad shutdown
- Pipeline systems with recent failure history
- Washington, DC metropolitan area failures
- National media attention
- Request by RD, DAA, or AA
- To provide on-the-job training for AID staff
- Major supply impacts

Additional Criteria for Hazardous Liquids Pipelines:

- Major spill that reaches a body of water
- Liquid spill over 500 bbl.
- Sensitive areas that have incurred multiple pipeline failures
- Anhydrous ammonia pipeline release in urban area
- LNG/propane peak-shaving and refineries
- LNG/propane peak shaving plant major release with or without fire
- Pump station destruction by any cause

Additional Criteria for Gas Transmission Pipelines:

- Compressor station destruction by any cause

APPENDIX B: INCIDENT CRITERIA REQUIRING NOTIFICATION AND UPDATES OF INCIDENTS TO THE PHMSA AND DOT EXECUTIVE TEAM

Criteria:

Criteria are listed below and are generally presented by category.

Fatalities / Injuries / Evacuations

- Hazardous gas or hazardous liquid transmission pipeline failure with one or more fatalities or injuries
- Natural gas distribution pipeline failure with one or more fatality or injuries
- PHMSA employee death or line-of-duty injury requiring hospitalization
- Significant evacuation of civilian population (100 or more individuals, 50 or more homes)

Environmental / Infrastructure / Safety / Property Impacts

1. Significant environmental impact or property damage; infrastructure destruction or damage; or widespread community impact (including drinking water sources) caused by hazardous materials in transportation, including by pipeline
2. Pipeline hazardous liquid spill over 1,000 barrels (outside of a containment facility)
3. Release of a toxic-by-inhalation (TIH) (e.g., anhydrous ammonia, chlorine, CO₂) of hazardous material or other hazardous materials requiring an evacuation of over ½ mile or affecting a populated area greater than 50 individuals
4. Explosion potentially related to pipeline or hazardous materials transportation; use some discretion on reporting explosions that are potentially pipeline related – try to rule out other causes
5. Major disruption of supply of energy products involving the transportation infrastructure (e.g., major interstate highway, railroad, airport, waterway) expected to last more than 24 hours resulting from an incident involving hazardous gas or liquid pipelines or hazardous materials in transportation
6. LNG plant incident involving significant damage or major release (with or without a fire)
7. LNG carrier incidents during loading or unloading involving release of product, particularly relating to shutdown of operations

Incident of Potential National Significance / Sensitivity / Media and External Interest

Notes: These criteria should be applied with judgment. If uncertain, err on the side of submitting an initial report for PHMSA Executive Team awareness. These criteria may already be captured for an incident based on other criteria presented in the previous two sections and, therefore, may be incorporated as part of immediate reporting on that incident.

1. Any hazmat transportation incident for which the NTSB, or other safety oversight agency has launched an investigation team

2. Hazardous gas or liquid transmission pipeline potentially affected by natural (e.g., hurricane, earthquake) or manmade disasters
3. An incident requiring the need for an emergency special permit issued by PHMSA
4. Sensitive areas that have incurred multiple pipeline failures
5. Incidents involving hazardous gas and liquid pipeline systems with recent failure history; any event having previous significant incident history
6. Strong indication that the incident is expanding/cascading such that criteria contained herein may be met
7. Suspected noteworthy criminal or terrorist acts involving pipeline infrastructure or hazardous materials in transportation
8. Major National Capital Region (NCR) pipeline failure or hazardous materials transportation incident
9. National media attention
10. Potential political interest; or if requested by a senior State or local official (e.g., Governor; Mayor; member of Congress).

APPENDIX C: MATRIX OF DEPLOYMENT & EMAIL NOTIFICATION CRITERIA

Pipeline Type - OPS Lead Regulator	Event	OPS Deploys	AID Emails Preparedness, Emergency Support, and Security Division	AID Emails NTSB
All	One or more fatality	OPS Lead Regulator	x	x
All (including State Lead Regulator)	One or more injuries requiring hospitalization	OPS Lead Regulator	x	x
All	Significant evacuation of civilian population (100 or more individuals, 50 or more homes)		x	x
All	Major property damage (public or operator)– multiple or critical structures		x	x
All	Pipeline systems with recent failure history; any event having previous significant incident history.	OPS Lead Regulator	x	
All	Multimodal impact – major interstate highway, waterway, airport, or railroad shutdown	OPS Lead Regulator	x	
All	Major supply impacts	OPS Lead Regulator	x	
HL	Major spill that reaches a body of water	OPS Lead Regulator	x	
HL	Liquid spill over 500 bbl.	OPS Lead Regulator	x	
GT/HL	Pipeline release of toxic product (e.g., anhydrous ammonia, CO ₂ , chlorine) in urban area	OPS Lead Regulator	Evacuation of over ½ mile or affecting a populated area greater than 50 individuals	x
LNG/HL	LNG/propane peak-shaving facility	OPS Lead Regulator	x	

All	Washington, DC metropolitan area failures	OPS Lead Regulator	x	x

Pipeline Type - OPS Lead Regulator	Event	OPS Deploys	AID Emails Preparedness, Emergency Support, and Security Division	AID Emails NTSB
All	NTSB deploys	OPS Lead Regulator	x	
All	National media attention	OPS Lead Regulator	x	
All	Request by AID Director, RD, DAA, or AA	OPS Lead Regulator	x	
All	To provide on-the-job training for AID staff	OPS Lead Regulator		
All	Hazardous gas or liquid transmission pipeline potentially affected by natural (e.g., hurricane, earthquake) or manmade disasters		x	
All	An incident requiring the need for an emergency special permit issued by PHMSA		x	
All	Strong indication that the incident is expanding/cascading such that criteria contained herein may be met		x	
All	Suspected noteworthy criminal or terrorist acts involving pipeline infrastructure or hazardous materials in transportation		x	
LNG	LNG carrier incidents during loading or unloading involving release of product, particularly relating to shutdown of operations		x	
GT/GG/HL	Refineries		x	
All	As requested by the Preparedness, Emergency Support, and Security Division		x	

All	PHMSA employee death or line-of-duty injury requiring hospitalization		x	

APPENDIX D: NRC CRITERIA FOR EMAIL DISTRIBUTION

HQS-PF-fldr-NRC@uscg.mil (email address NRC emails from during the day) - The reports are not filtered specific to PHMSA reporting.

NRC_NIGHTLY@uscg.mil (email address NRC emails from each night) - The NRC NIGHTLY is a nightly transmission of all NRC reports taken the previous day. The NRC NIGHTLY may include additional reports that were not sent during the day. The criteria used for this report is in plain text below, followed by the actual code in the NRC's software application, IRIS.

Criteria:

All incidents reported to the NRC (No Drills)

AND

(Type of incident = Pipeline

OR

Incident Cause = Explosion

OR

Description of Incident has the word EXPLOSION in the text

OR

Reported Chris Code = 'ONG'

OR

Suspected Responsible Company has the word PIPELINE in its name)

Where:

COM.SEQNOS=C.SEQNOS AND C.SEQNOS = DET.SEQNOS(+) AND COM.SEQNOS =
INC.SEQNOS (+) AND C.SEQNOS = RS.SEQNOS AND C.SEQNOS = MI.SEQNOS(+) AND
C.CALL_TAKER = P.USERID(+) AND RS.REPORTING_CONFIDENTIAL <> 'Y' AND
C.CALLTYPE = 'INC' AND (COM.TYPE_OF_INCIDENT = 'PIPELINE' OR
COM.INCIDENT_CAUSE = 'EXPLOSION' OR COM.DESRIPTION_OF_INCIDENT LIKE
'%EXPLOSION%' OR MI.CHRIS_CODE = 'ONG' OR RS.RESPONSIBLE_COMPANY LIKE
'%PIPELINE%') AND C.DATE_TIME_RECEIVED BETWEEN :START_DATE AND :END_DATE

*** Required information to issue the initial CAO.**

APPENDIX E: METALLURGICAL LABORATORY FAILURE EXAMINATION PROTOCOL

The screenshot shows the PHMSA website header with the United States Department of Transportation logo, PHMSA logo, and navigation links: ABOUT PHMSA, SAFETY, REGULATIONS AND COMPLIANCE, RESOURCES. A search bar and links for Sign-Up for Email Alerts and Newsroom are also present. The breadcrumb trail reads: Home » Pipeline Field Operations » Accident Investigation Division. The left sidebar contains links: Who We Are, Incident Reporting, Data & Statistics, Accident Maps, Pipeline Failure Causes, and Contact OPS AID. The main content area features the title 'Metallurgical Laboratory Failure Examination Protocol PDF' with a download icon and filename 'metlabfailureprotocol-04-04-2019.pdf'. Below the title is an accessibility statement: 'DOT is committed to ensuring that information is available in appropriate alternative formats to meet the requirements of persons who have a disability. If you require an alternative version of files provided on this page, please contact PHMSA-Accessibility@dot.gov'. To the right of the title are social media share buttons for Facebook, Twitter, Google+, and a general share button.

United States Department of Transportation

PHMSA
Pipeline and Hazardous Materials
Safety Administration

Sign-Up for Email Alerts | Newsroom

Search PHMSA site

ABOUT PHMSA SAFETY REGULATIONS AND COMPLIANCE RESOURCES

Home » Pipeline Field Operations » Accident Investigation Division

Who We Are
Incident Reporting
Data & Statistics
Accident Maps
Pipeline Failure Causes
Contact OPS AID

Metallurgical Laboratory Failure Examination Protocol PDF

metlabfailureprotocol-04-04-2019.pdf

DOT is committed to ensuring that information is available in appropriate alternative formats to meet the requirements of persons who have a disability. If you require an alternative version of files provided on this page, please contact PHMSA-Accessibility@dot.gov

Share

<https://www.phmsa.dot.gov/incident-reporting/accident-investigation-division/metallurgical-laboratory-failure-examination-protocol-pdf>

APPENDIX F: PHMSA's MEDIA RELATIONS LIST OF DO'S AND DON'TS

Do's

- Be prepared
- Remain calm
- Identify yourself as the PHMSA spokesperson
- Ask reporters for a business card
- Speak only for PHMSA (not operators, industry or yourself)
- Setup a safe, secure briefing area, and position yourself so that you have a line of exit
- Give a clear, high-level statement of the facts; transition into the steps PHMSA is taking
- Stay focused on the point you wish to make rather than the reporter's questions
- Show compassion & concern
- Speak in short, clear points without jargon or technical detail

Don'ts

- Provide estimates of either cause or costs
- Assign blame
- Speculate or provide comparisons or "war stories"
- Be afraid to say, "I don't have an answer for that now."
- Allow reporters or sightseers to wander around an incident site unescorted
- Discuss confidential information within earshot of persons you don't know
- Lose your temper, weep or show any raw emotions; television especially thrives on emotion
- Speak off the record; assume that everything you say will be used in the reporter's story
- Say "no comment."
- Forget that you are representing PHMSA

APPENDIX G: FAILURE INVESTIGATION REPORT (FIR) TEMPLATE

DOT US Department of Transportation
PHMSA Pipeline and Hazardous Materials Safety Administration
OPS Office of Pipeline Safety
[Which] Region

Principal Investigator

Senior Accident Investigator [optional]

AID Director

Date of Report mm/dd/yyyy

Subject Failure Investigation Report – [Operator & 3-word summary – same as page 2 thru end header]

Operator, Location, and Consequences

Date of Failure mm/dd/yyyy

Commodity Released

City, County, State

OpID and Operator Name

Unit # & Unit Name

SMART Activity #

Milepost / Location

Type of Failure [Leak/Rupture and Cause]

Fatalities

Injuries

Description of the [HCA?]
Impacted Area

Total Costs [Sum all sub-categories on the operator's written report, including the cost of lost gas, if applicable]

[Guidance for each section of the report is included on the following pages. Recognizing that each failure is unique, the contents of the report should be driven by the unique circumstances of the failure and not by the guidance. Every issue for which guidance is provided may not need to be included in the report.]

Executive Summary

[Brief summary of the accident and investigation – what happened and why. Summarize Investigation Findings and Contributing Factors. Do not reference appendices in this section – leave the details for later sections.]

System Details

[Description of pipeline system and unit involved in the failure, including age of the system. Describe how the system functions within the overall infrastructure of the operator – who supplies the system and who does the system send to. Describe any supply impacts resulting from the failure. For pipe, include MAOP, MOP, and pipe specifications. For facilities, describe them. Previous pipeline system history relevant to failure.]

Events Leading Up to the Failure

[Set the stage by describing pipeline operations prior to the failure. Compare operating pressure to MOP/MAOP. Were construction or maintenance projects relevant to the failure? Who, how, and when discovered by operator.]

Emergency Response

[Summary of response by the operator and its contractors, especially if OPA plan implemented for liquid spill. Shutdown and flow control. Immediate notification to PHMSA through the NRC. Note any problems exacerbated by either operator or community emergency responders. Other Federal and State Agencies responding.]

Summary of Return-to-service

[Actions taken by the operator to safely return the pipeline to service, such as pipe repair, replacement, and reduced operating pressure. If a CAO or SO was issued, summarize the requirements.]

Investigation Details

[Add sub-sections as needed for complex failures. Pipeline system was described earlier, but now describe failure location in detail, especially HCA impacts. Adequacy of emergency response. Control room and SCADA relevant to failure. Persons interviewed and relevant information learned. Records, especially ILI results, and procedures reviewed. Summarize laboratory testing results, but don't rely exclusively on them. Describe what you found as well as what you ruled out.]

Investigation Findings and Contributing Factors

[If root cause analysis was conducted, state root causes. If no root cause analysis, state apparent cause. List all facts pertinent to identifying the cause. Describe all contributing factors. Do not describe probable violations, just the facts.]

Appendices

[Order of appendices depends on when they “appear” in the report.]

- A Map and Photographs [see separate template .doc]
- B NRC Report [To obtain the publicly releasable version of a NRC report, send an email to nrc@uscg.mil indicating that you need a publicly releasable NRC report and the Report #]. Save the email to pdf.
- C Operator Accident/Incident Report to PHMSA [.pdf from WMS, ODES or PDM, do not scan]
- D Operator Procedures and Records
- E Laboratory Analysis [include file received from operator]
- F Operator Failure Investigation Report [include file received from operator]

[Create the report and each appendix as separate .doc or .pdf file in Adobe - Create, Merge all Files in a Single PDF Document, Reduce File Size]

APPENDIX H: OPERATOR ACCIDENT INFORMATION TEMPLATE

Accident Information

The purpose of this document is to collect primary information immediately following an unintentional release of product.

I. GENERAL INFORMATION Operator

Name:

OPID:

Operator's contact person(s): *[Person communicating with PHMSA on this incident]*

Name:

Title:

Telephone:

Fax:

Email:

Operator's Executive Officer: *[Generally a President or VP]*

Name:

Title:

Mailing Address:

Telephone:

Fax:

Email:

II. PRELIMINARY ACCIDENT INFORMATION

Date of Failure:

Time of Failure: *[Include a.m. or p.m., time zone, and Standard or Daylight Savings Time]*

NRC Report #: *[Provide for each NRC report - If no report, state "No NRC Report Filed"]*

NRC Report Date:

NRC Report Time:

Fires, injuries, fatalities, or evacuations reported? *[If yes, describe below]*

Life and property: *[Describe and quantify (to the extent practical) any impacts to life and/or property (fatalities, injuries, destroyed buildings, evacuations, etc.) that resulted from the*

pipeline failure and explosions or fires (if any) caused by the pipeline failure, taking into account known population densities, growth patterns, class locations, and HCAs]

Environment: *[Describe and quantify (to the extent practical) any impacts to the environment that resulted from the pipeline failure such as any product that ran into a river, stream, creek, lake, pond, or another sensitive receptor. Describe and quantify (to the extent practical) any impacts to the environment that resulted from fires or explosions (if any) caused by the pipeline failure or due to restoration and/or clean-up activities at or near the failure scene.]*

Description of Failure: *[Brief description of the events leading up to, during, and immediately after the failure. Clearly differentiate facts from estimates.]*

Example: At approximately 10:40 p.m. CST on May 5, 2013, the operator's control room personnel observed a sudden pressure drop on their SCADA screens indicating a possible failure on the XYZ pipeline. The control room personnel notified the local district office at 10:45 p.m. Five minutes later, observations by the operator's field personnel confirmed a failure of the XYZ pipeline and the release of an undetermined volume of natural gas. The failure resulted in the ejection of approximately 20 feet of 36-inch pipe, which landed on the pipeline right-of-way approximately 50 feet from the failure location. The failure happened in a remote location. There were no reported injuries, fatalities, or evacuations and there was no ignition of the escaping gas.

Initial Response to Control the Discharge: *[Brief description of actions taken to control the discharge and to shut-in the pipeline. Include pump/compressor stations shut down, upstream and downstream block valves closed (manually or automatically), and other pertinent facts.]*

Failure Scene Information:

Mile Post, Station, or other pipeline system identifier of the failure location:

State or Offshore BOEM Region: *[i.e., Alaska, Atlantic, Gulf of Mexico, or Pacific]*

County/Parish or Offshore Area: *[i.e., Viosca Knoll, Beaufort Sea, Bowers Basin, etc.]*

Nearest city or town to failure scene; approximate distance/direction to the town:

Product discharged:

Product Type:

Estimate of Volume Released: *[Provide latest update, if available. Explain if unavailable.]*

Pipeline System:

Pipeline System Name: *[Use operator's terminology]*

Pipeline System Description: *[Provide a brief description of the overall pipeline system including its approximate total mileage and throughput, if available.]*

Example: The Sample Pipeline System consists of approximately 8,500 miles of natural gas transmission pipelines with a capacity of approximately 9.1 BCF/D. The pipeline system includes three parallel pipelines (Line A, Line B & Line C) in a common right-of-way. As a major provider of natural gas along the East Coast, the system transports natural gas from the Gulf Coast to 12 Southeast and Atlantic Seaboard States, and to major metropolitan areas in Virginia and Pennsylvania.

Failed Pipeline: *[Generally a subset of the pipeline system described above. It could, however, be the entire system especially for the smaller pipeline systems.]*

Pipeline Name:

Product(s) Transported:

Year(s) Pipeline Constructed:

Failed Pipeline Description: *[Provide a description of the specific pipeline that failed, which is either a subset of the pipeline system described above or the entire system itself. The intent is to cover the operational section of the pipeline where the failure occurred. The description should start at a logical point of origin (compressor/pump station, main line valve, pipe junction, etc.) upstream of the failure scene and terminate at a logical point downstream of the failure scene. Include specific facilities along the pipeline and use mile post and/or stationing (as necessary) to clarify the location of facilities. Include the States, counties/parishes, and cities through which the pipeline passes. For offshore pipelines, provide the upstream platform and (for pipelines outside State waters) provide the BOEM Region and offshore areas through which the pipeline passes.]*

Example: The failure occurred at mile post (MP) 55.2 on Operator's Sample Pipeline System 20-inch Line A in Florida. Line A is one of three parallel natural gas transmission pipelines in a common right-of-way. In south Florida, Line A runs southerly from MLV 10-1 at Mayberry Junction (MP 10.1) through Compressor Station 11 (MP 40.5) to Compressor Station 12 (MP 78). There are 5 main line block valves in this pipeline segment; MLV 10-1 (MP 10.1), MLV 10-2 (MP 38), MLV 112 (MP 43.6), MLV 11-3 (MP 50.6) and MLV 11-4 (MP 64.8). Line A passes through portions of Orange, Osceola, Brevard, and St. Lucie Counties, Florida.

Failed Pipe: *[Data from the actual joint of pipe that failed on the failed pipeline]*

Nominal Diameter:

Wall thickness:

Grade:

Coating:

Seam Type:

Manufacturer:

Year Manufactured:

Impressed current CP System: *[Yes or No]*

Failed Component: *[If a component failed, provide details of the failed component.]*

Failed Pipe Pressure Data: *[At the point of failure, if known.]*

MAOP/MOP: *[The intent is to obtain the MAOP/MOP at the point of failure. If the reported MAOP/MOP is not at the point of failure, describe the location where the MAOP/ MOP pertains and its relative position to the point of failure.]*

Example: The MAOP of 985 psig is at the discharge of Compressor Station X at mile post 10, which is located 7.5 miles upstream of the point of failure at mile post 17.5.

When was MAOP/MOP established?

How was the MAOP/MOP established? *[Design, hydrostatic testing, grandfather, other]*

Operating pressure at the time of failure? *[The intent is to obtain the pressure at the point of failure. However, this usually must be calculated using upstream and/or downstream pressure readings and pressure gradients. If unable to obtain the pressure at the point of failure, list the available upstream and/or downstream pressure readings and describe where these pressure readings were taken relative to the point of failure.]*

Example: The operating pressure of 980 psig is at the discharge of Compressor Station X at mile post 10, which is located 7.5 miles upstream of the point of failure at mile post 17.5.

III. CURRENT STATUS – PLANS FOR CONTINUED OPERATION OR RESTART Current

Status and of Failed Pipeline:

Shut-in: Yes *[Describe the shut-in pipeline using specific end points such as valves, compressor/pump stations, etc. along with mile post and/or stationing. Also, explain if other segments of the failed pipeline remain in operation.]*

Shut-in: No

Restart Plan:

Date failed pipeline was or is planned to be returned to service:

Maximum pressure at which the pipeline is (or will) operate:

Is or will there be a pressure restriction in place? *[Explain any pressure restrictions in place relative to MAOP/MOP and operating pressure at the time of the failure.]*

Repairs planned, initiated, or completed: *[Briefly describe]*

Potential Risks or Threats if Continued Operation or Restart of the Failed Pipeline:

Life and property: *Describe and quantify (to the extent practical) any potential impacts (i.e., risks) to life and/or property that could result along the ROW of failed pipeline from the continued operation (or restart) of the failed pipeline.*

Environment: *Taking into account known geological conditions, soil characteristics, HCAs, unusually sensitive areas, etc., describe and quantify (to the extent practical) any potential impacts (i.e., risks) to the environment that could result from the continued operation (or restart) of the failed pipeline. Describe any expected environmental impacts due to restoration and/or clean-up activities at or near the failure scene such as significant soil removal or groundwater treatment.*

Current Status of Other Pipelines in Common ROW: *[If the pipeline system has multiple pipelines in a common ROW, describe the status of the parallel pipelines (operating, shut-in, under pressure reduction, etc.).]*

IV. PRELIMINARY INVESTIGATION

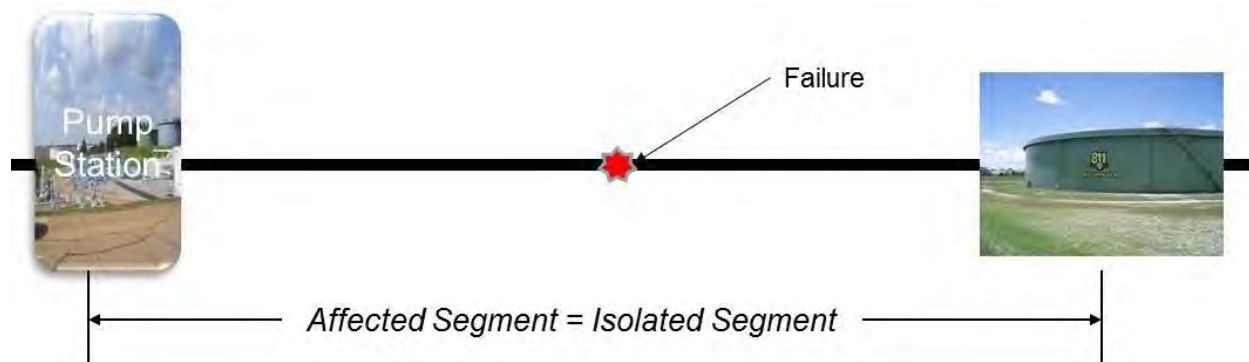
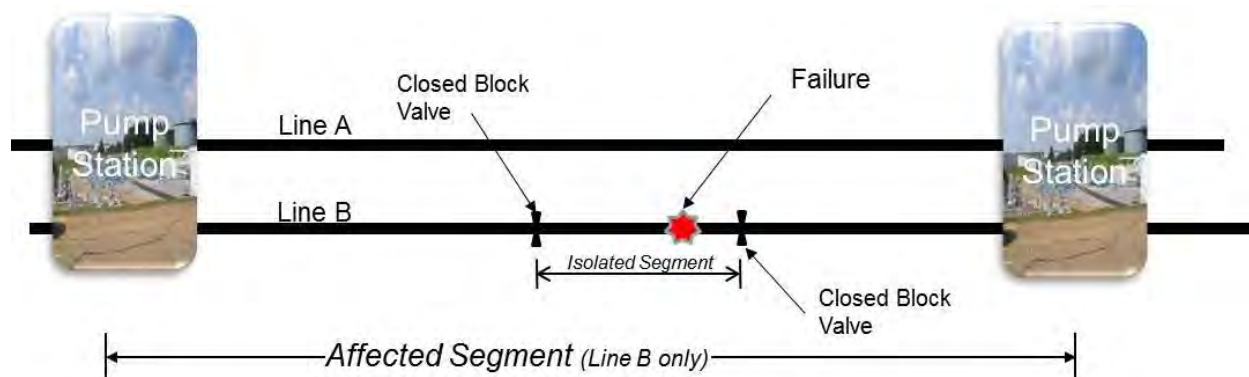
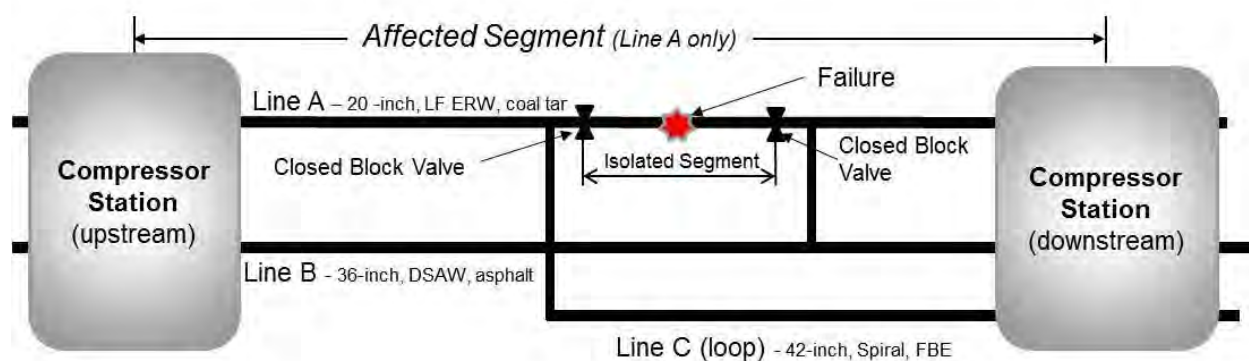
Initial Suspected Cause: *[Describe any suspected cause noted during preliminary investigations such as visual inspections in the ditch, ILI reviews, etc.]*

Example: Line A between Mayberry Junction and Compressor Station 12 was constructed of 20-inch OD x 0.250-inch w.t., X-52 low frequency electric resistance welded (LF ERW) pipe manufactured by Youngstown Sheet and Tube in 1959. Pipe manufactured prior to 1970 with LF ERW longitudinal seams are a known threat to pipeline integrity under certain conditions. A visual inspection of the failed pipe by personnel on-scene appeared to show longitudinal seam failure as a probable cause of the failure.

Previous History of Significant Releases from the Failed Pipeline: *[Describe any previous significant discharge events on the failed pipeline where a failure analysis was performed.]*

Prior Assessments of the Failed Pipeline: *[Describe and quantify (to the extent practical) any prior assessments (hydrostatic testing, ILIs, close-interval surveys, direct assessments, other) involving the failed pipeline. Provide the limits (mile post, stationing, other method, of the assessments.)]*

Examples:



APPENDIX I: REGION ENFORCEMENT RECOMMENDATION LETTER TEMPLATE

OFFICE OF PIPELINE SAFETY
ACCIDENT INVESTIGATION DIVISION
RECOMMENDATION OF PROBABLE VIOLATION
CFR PART "[192 / 193 / 195]"

[click to enter Date]

"[Name of Region Director]"

"[Region Name]" Region Director

"[Region address]"

Dear "[Name of Region Director]" :

On "[date or range of dates of on-site investigation]", an Investigator with the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), Accident Investigation Division conducted an investigation of the "[Company name]" failure of the "[Name the failed system]" at [City, State].

"[Briefly describe the system. The who, what, where, when, etc.]"

The cause of the release was "[Describe the cause and contributing factors]" .

The following are potential violation identified during the investigation.

Operator, Location, & Consequences

Date of Failure

Commodity Released

City, County, State

OpID & Operator Name

Unit # & Unit Name

SMART Activity #

Milepost / Location

Type of Failure

Fatalities

Injuries

**Description of the Area
Impacted**

Property Damage

1. [cite the regulation and title]

[quote the regulation]

[describe the probable violation]

The first sentence in this section should describe the allegation by using the same language and terminology from the regulation. Phrase the allegation in terms of the operator's failure to take a required action, or in terms of the operator doing something that was prohibited. When describing the operator's conduct, use the past tense to relate actions that occurred prior to the notice letter being issued. For example, a probable violation of §192.74(a) would be stated "ACME Gas Company failed to inspect and partially operate transmission line valves that might be required during an emergency at intervals not exceeding 15 months, but at least once per calendar year." Then, describe the specific facts and circumstances that you intend to rely upon as proof of the alleged violation. Finally, briefly describe how these facts become a violation of the regulation.

[state the specific evidence upon which the probable violation is based]

Or, a description of the evidence may be included in the paragraph(s) above.

2. [cite the regulation and title]

[quote the regulation]

[describe the probable violation]

Please let us know if you have questions with respect to this matter.

Sincerely,

Peter Katchmar

Director, Accident Investigation Division

Pipeline and Hazardous Materials Safety Administration

Enclosures: Failure Investigation Report

cc: PHP-8 Investigator's First Initial and Last Name

**APPENDIX J: PHMSA AID SAFETY RECOMMENDATION MEMO
TEMPLATE/EXAMPLE**



U. S. Department of Transportation

Pipeline and Hazardous Materials Safety Administration

Memorandum

ACCIDENT: CITY, STATE, PRODUCT RELEASED ACCIDENT DATE

ACTION: FOR DAAFO REVIEW

DATE: (REPORT DATE)

FROM: (NAME) AID DIRECTOR

TO: (NAME) DAAFO

RE: PHMSA AID INTERNAL SAFETY RECOMMENDATION

Executive Summary

On 4/2/2010, a release occurred on the Bridger Lake, LLC (Bridger Lake) 6" crude oil line near Robertson, WY. PHMSA's investigation revealed that the pipeline failed due to the line being over pressured by pumping against a closed valve. Bridger Lake maintained that this line was an unregulated rural gathering line. PHMSA maintained that this line is an interstate transmission line as defined in 49 CFR §195.1(a)(2). PHMSA issued a Corrective Action Order (CAO) to Bridger Lake on April 30, 2010. The line was repaired on April 11, 2010, but has not been restarted since the release.

Conclusions

PHMSA finds that the root cause of this failure was that there was no mechanical over-pressure protection provided to protect the 6-inch transmission pipeline.

Contributory Causes

1. PHMSA Inspector took the operator's word that this line was a gravity line which would have made it an unregulated facility.
2. No procedures for end-of-month shut down of the LACT units to perform the monthly gauging to prevent someone from turning on the LACT units while the end of line valve was shut. There were no LOTO procedures for the LACT units or physical overpressure protections designed into the system which are a very basic hazard barrier required to protect a pipeline.
3. Previous damage to the pipe - the pipeline ruptured at a dent in the pipe near MP 16.5.

Recommendations

1. Do not conduct jurisdictional or regulatory oversight interpretation over the phone. Inspectors need to follow up with field verification.
2. Inspectors conducting inspections on downstream pipelines should confirm the regulatory status of all feeder lines during the course of their inspections. In this case, the Bridger Lake Pipeline fed into the Plains All-American Pipeline System and was obviously jurisdictional.
3. Our inspectors need to look at the big picture when conducting field and record inspections.
4. Issue a CAO like we did and schedule for periodic inspections if and when the pipeline comes back on line. Note: PHMSA issued a CAO to Bridger Lake LLC and has since entered into a Consent Agreement.
5. PHMSA's Engineering Group should consider disseminating this event to all Regions in an effort to educate all PHMSA Inspectors on the importance of an operator having procedures specific enough to prevent little mistakes from becoming large events with large consequences.

Guidelines for States Participating in the Pipeline Safety Program

Appendix F

Appendix F – State Program Certification/Agreement Status

CY2025

STATES PARTICIPATING IN THE FEDERAL/STATE COOPERATIVE GAS AND HAZARDOUS LIQUID PIPELINE SAFETY PROGRAMS

NATURAL GAS PROGRAM

State Agencies Under Section 60105(a) Certification (51)

Alabama	Louisiana	Ohio
Arizona	Maine	Oklahoma
Arkansas PSC	Maryland	Oregon
Arkansas Oil and Gas	Massachusetts	Pennsylvania
California PUC ¹	Michigan	Puerto Rico
Colorado ⁶	Minnesota	Rhode Island
Connecticut	Mississippi ⁹	South Carolina
Delaware	Missouri ²	South Dakota
District of Columbia	Montana	Tennessee
Florida PSC ³	Nebraska	Texas
Georgia	Nevada	Utah
Idaho ⁷	New Hampshire	Vermont
Illinois	New Jersey	Virginia ⁴
Indiana ⁸	New Mexico	Washington
Iowa	New York	West Virginia
Kansas	North Carolina	Wisconsin ⁵
Kentucky	North Dakota	Wyoming

State Agencies Under Section 60106(a) Agreement (7)

California Public Utilities Commission (Municipal operators)
Colorado Public Utilities Commission (Municipal operators)
Idaho Public Utilities Commission (All Pipelines)
Indiana Utility Regulatory Commission (All Pipelines)
Mississippi Public Service Commission (All Pipelines)
Missouri Public Service Commission (All Pipelines)
Virginia State Corporation Commission (Municipal operators)

State Agencies Acting as Interstate Agents (8)

Arizona	Michigan	Ohio
Connecticut	Minnesota	Washington
Iowa	New York	

HAZARDOUS LIQUID PROGRAM

State Agencies Under Section 60105(a) Certification (15)

Alabama	Maryland	Pennsylvania
Arizona	Minnesota	Texas
California (Fire Marshal)	New York	Virginia
Indiana	New Mexico	Washington
Louisiana	Oklahoma	West Virginia

State Agencies Acting as Interstate Agents (5)

Arizona	New York	Washington
Minnesota	Virginia	

¹ California PUC does not exercise jurisdiction over operators of non-utility owned intrastate gas transmission pipelines, gathering pipelines, any offshore facilities and Master Meter facilities that do not serve Mobile Home Parks. California PUC has a 60106 agreement for oversight of operators of Municipal facilities.

² Missouri PSC does not exercise jurisdiction over LPG operators and has a 60106 agreement for maximum civil penalties not meeting certification requirements.

³ Florida PSC does not exercise jurisdiction over LPG operators.

⁴ Virginia SCC has a 60106 agreement for oversight of operators of Municipal facilities.

⁵ Wisconsin does not exercise jurisdiction over LPG operators.

⁶ Colorado PUC has a 60106 agreement for oversight of operators of Municipal facilities.

⁷ Idaho PUC has a 60106 agreement for maximum civil penalties not meeting certification requirements.

⁸ Indiana URC has a 60106 agreement for maximum civil penalties not meeting certification requirements.

⁹ Mississippi PSC has a 60106 agreement for maximum civil penalties not meeting certification requirements.

Guidelines for States Participating in the Pipeline Safety Program

Appendix G

This content is from the eCFR and is authoritative but unofficial.

Title 2 — Grants and Agreements

Subtitle A — Office of Management and Budget Guidance for Federal Financial Assistance

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PART 200—UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS

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Subpart A—Acronyms and Definitions

ACRONYMS

§ 200.0 Acronyms.

- (a) CAS Cost Accounting Standards
- (b) CFR Code of Federal Regulations
- (c) F&A Facilities and Administration
- (d) FAC Federal Audit Clearinghouse

- (e) FAIN Federal Award Identification Number
- (f) FAR Federal Acquisition Regulation
- (g) FASB Financial Accounting Standards Board
- (h) FFATA Federal Funding Accountability and Transparency Act of 2006 or Transparency Act, Public Law 109-282, as amended (See 31 U.S.C. 6101, statutory note)
- (i) FOIA Freedom of Information Act
- (j) FR Federal Register
- (k) GAAP Generally Accepted Accounting Principles
- (l) GAGAS Generally Accepted Government Auditing Standards
- (m) GASB Government Accounting Standards Board
- (n) GAO Government Accountability Office
- (o) GSA General Services Administration
- (p) IBS Institutional Base Salary
- (q) IHE Institutions of Higher Education
- (r) IRC Internal Revenue Code
- (s) ISDEAA Indian Self-Determination and Education and Assistance Act
- (t) MTC Modified Total Cost
- (u) MTDC Modified Total Direct Cost
- (v) NFE Non-Federal Entity
- (w) NOFO Notice of Funding Opportunity
- (x) OMB Office of Management and Budget
- (y) PII Personally Identifiable Information
- (z) PMS Payment Management System
- (aa) SAM System for Award Management (*SAM.gov*)
- (bb) UEI Unique Entity Identifier
- (cc) U.S.C. United States Code
- (dd) VAT Value Added Tax

§ 200.1 Definitions.

The following is a list of definitions of key terms frequently used in 2 CFR part 200. Definitions found in Federal statutes or regulations that apply to particular programs take precedence over the following definitions. However, where the following definitions implement specific statutory requirements that apply government-wide, such as the Single Audit Act, the following definitions take precedence over Federal regulations. For purposes of this part, the following definitions apply:

- Acquisition cost** means the (total) cost of the asset including the cost to ready the asset for its intended use. For example, acquisition cost for equipment means the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired. Acquisition costs for software include those development costs capitalized in accordance with generally accepted accounting principles (GAAP). Ancillary charges such as taxes, duty, protective in transit insurance, freight, and installation may be included in or excluded from the acquisition cost in accordance with the recipient's or subrecipient's regular accounting practices.
- Advance payment** means a payment that a Federal agency or pass-through entity makes by any appropriate payment mechanism and payment method before the recipient or subrecipient disburses the funds for program purposes.
- Allocation** means the process of assigning a cost, or a group of costs, to one or more cost objective(s), in reasonable proportion to the benefit provided or other equitable relationship. The process may entail assigning a cost(s) directly to a final cost objective or through one or more intermediate cost objectives.
- Assistance Listings** refer to the publicly available listing of Federal assistance programs managed and administered by the General Services Administration (GSA) at [SAM.gov](https://www.sam.gov).
- Assistance Listing number** means a unique number assigned to identify an Assistance Listing.
- Assistance Listing program title** means the title that corresponds to the Assistance Listing number.
- Audit finding** means deficiencies which the auditor is required to report in the schedule of findings and questioned costs. (See § 200.516(a))
- Auditee** means any non-Federal entity that must be audited under this part. (See § 200.501)
- Auditor** means an auditor who is a public accountant or a Federal, State, local government, or Indian Tribe audit organization that meets the general standards specified for external auditors in generally accepted government auditing standards (GAGAS). The term auditor does not include internal auditors of nonprofit organizations.
- Budget** means the financial plan for the Federal award that the Federal agency or pass-through entity approves during the Federal award process or in subsequent amendments to the Federal award. It may include the Federal and non-Federal share or only the Federal share, as determined by the Federal agency or pass-through entity.
- Budget period** means the time interval from the start date of a funded portion of an award to the end date of that funded portion, during which recipients and subrecipients are authorized to incur financial obligations of the funds awarded, including any funds carried forward or other revisions pursuant to § 200.308.
- Capital assets** means:
- (1) Tangible or intangible assets used in operations having a useful life of more than one year which are capitalized in accordance with GAAP. Capital assets include:
 - (i) Land, buildings (facilities), equipment, and intellectual property (including software), whether acquired by purchase, construction, manufacture, exchange, or through a lease accounted for as financed purchase under Government Accounting Standards Board (GASB) standards or a finance lease under Financial Accounting Standards Board (FASB) standards; and

(ii) Additions, improvements, modifications, replacements, rearrangements, reinstallations, renovations, or alterations to capital assets that materially increase their value or useful life (not ordinary repairs and maintenance).

(2) For purpose of this part, capital assets do not include intangible right-to-use assets (per GASB) and right-to-use operating lease assets (per FASB). For example, assets capitalized that recognize a lessee's right to control the use of property or equipment for a period of time under a lease contract. See § 200.465.

Capital expenditures means expenditures to acquire capital assets or expenditures to make additions, improvements, modifications, replacements, rearrangements, reinstallations, renovations, or alterations to capital assets that materially increase their value or useful life.

Central service cost allocation plan means the documentation identifying, accumulating, and allocating or developing billing rates based on the allowable costs of services provided by a State, local government, or Indian Tribe to its departments and agencies on a centralized basis. The costs of these services may be allocated or billed to users.

Claim means, depending on the context, either:

(1) A written demand or assertion by one of the parties to a Federal award seeking as a matter of right:

(i) The payment of money;

(ii) The adjustment or interpretation of the terms and conditions of the Federal award; or

(iii) Other relief arising under or relating to a Federal award.

(2) A request for payment not in dispute when submitted.

Class of Federal awards means a group of Federal awards either awarded under a specific program or group of programs or to a specific type of recipient or group of recipients to which specific provisions or exceptions may apply.

Closeout means the process by which the Federal agency or pass-through entity determines that all applicable administrative actions and all required work of the Federal award have been completed and takes actions as described in § 200.344.

Cluster of programs means a grouping of closely related programs that share common compliance requirements. The types of clusters of programs are research and development (R&D), student financial aid (SFA), and other clusters. “Other clusters” are defined by OMB in the compliance supplement or designated by a State for Federal awards the State provides to its subrecipients that meet the definition of a cluster of programs. When designating “other clusters,” a State must identify the Federal awards included in the cluster and advise the subrecipients of compliance requirements applicable to the cluster, consistent with § 200.332. A cluster of programs must be considered one program when determining major programs as described in § 200.518, and with the exception of R&D as described in § 200.501(d), whether a program-specific audit may be elected.

Cognizant agency for audit means the Federal agency designated to carry out the responsibilities described in § 200.513(a). The cognizant agency for audit is not necessarily the same as the cognizant agency for indirect costs. A list of Federal agency Single Audit contacts can be found on the Federal Audit Clearinghouse (FAC) website.

Cognizant agency for indirect costs means the Federal agency responsible for reviewing, negotiating and approving cost allocation plans or indirect cost proposals on behalf of all Federal agencies. The cognizant agency for indirect cost is not necessarily the same as the cognizant agency for audit. For assignments of cognizant agencies, see the following:

- (1) For Institutions of Higher Education (IHEs): Appendix III, paragraph C.11.
- (2) For nonprofit organizations: Appendix IV, paragraph C.2.a.
- (3) For State and local governments: Appendix V, paragraph F.1.
- (4) For Indian Tribes: Appendix VII, paragraph D.1.

Compliance supplement means an annually updated authoritative source of information for auditors that identifies existing important compliance requirements that the Federal Government expects to be considered as part of an audit. Auditors use it to understand the Federal program's objectives, procedures, and compliance requirements, as well as audit objectives and suggested audit procedures for determining compliance with the relevant Federal program.

Computing devices means machines that acquire, store, analyze, process, and publish data and other information electronically, including accessories (or "peripherals") for printing, transmitting and receiving, or storing electronic information. See also the definitions of *supplies* and *information technology systems* in this section.

Contract means, for the purpose of Federal financial assistance, a legal instrument by which a recipient or subrecipient conducts procurement transactions under a Federal award. For additional information on subrecipient and contractor determinations, see § 200.331. See also the definition of *subaward* in this section.

Contractor means an entity that receives a contract.

Continuation funding means the second or subsequent budget period within an identified period of performance.

Cooperative agreement means a legal instrument of financial assistance between a Federal agency and a recipient or between a pass-through entity and subrecipient, consistent with 31 U.S.C. 6302-6305:

- (1) Is used to enter into a relationship the principal purpose of which is to transfer anything of value to carry out a public purpose authorized by a law of the United States (see 31 U.S.C. 6101(3)); and not to acquire property or services for the Federal Government or pass-through entity's direct benefit or use;
- (2) Is distinguished from a grant in that it provides for substantial involvement of the Federal agency or pass-through entity in carrying out the activity contemplated by the Federal award.
- (3) The term does not include:
 - (i) A cooperative research and development agreement as defined in 15 U.S.C. 3710a; or
 - (ii) An agreement that provides only:
 - (A) Direct United States Government cash assistance to an individual;
 - (B) A subsidy;
 - (C) A loan;

(D) A loan guarantee; or

(E) Insurance.

Corrective action means action taken by the auditee that:

- (1) Corrects identified deficiencies;
- (2) Produces recommended improvements; or
- (3) Demonstrates that audit findings are either invalid or do not warrant auditee action.

Cost allocation plan means a central service or public assistance cost allocation plan.

Cost objective means a program, function, activity, award, organizational subdivision, contract, or work unit for which cost data are desired and for which provision is made to accumulate and measure the cost of processes, products, jobs, and capital projects. A cost objective may be a major function of the recipient or subrecipient, a particular service or project, a Federal award, or an indirect cost activity, as described in subpart E. See also the definitions of *final cost objective* and *intermediate cost objective* in this section.

Cost sharing means the portion of project costs not paid by Federal funds or contributions (unless authorized by Federal statute). This term includes *matching*, which refers to required levels of cost share that must be provided. See § 200.306.

Disallowed cost means charges to a Federal award that the Federal agency or pass-through entity determines to be unallowable in accordance with applicable Federal statutes, regulations, the provisions of this part, or the terms and conditions of the Federal award.

Discretionary award means an award in which the Federal agency, in keeping with specific statutory authority that enables the agency to exercise judgment (“discretion”), selects the recipient or the amount of Federal funding awarded through a competitive process or based on merit of proposals. A discretionary award may be selected on a non-competitive basis, as appropriate.

Equipment means tangible personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost that equals or exceeds the lesser of the capitalization level established by the recipient or subrecipient for financial statement purposes, or \$10,000. See the definitions of *capital assets*, *computing devices*, *general purpose equipment*, *information technology systems*, *special purpose equipment*, and *supplies* in this section.

Expenditures means charges made by a recipient or subrecipient to a project or program for which a Federal award is received.

- (1) The charges may be reported on a cash or accrual basis as long as the methodology is disclosed and consistently applied.
- (2) For reports prepared on a cash basis, expenditures are the sum of:
 - (i) Cash disbursements for direct charges for property and services;
 - (ii) The amount of indirect expense charged;
 - (iii) The value of third-party in-kind contributions applied; and
 - (iv) The amount of cash advance payments and payments made to subrecipients.
- (3) For reports prepared on an accrual basis, expenditures are the sum of:

- (i) Cash disbursements for direct charges for property and services;
- (ii) The amount of indirect expense incurred;
- (iii) The value of third-party in-kind contributions applied; and
- (iv) The net increase or decrease in the amounts owed by the recipient or subrecipient for:
 - (A) Goods and other property received;
 - (B) Services performed by employees, contractors, subrecipients, and other payees; and
 - (C) Programs for which no current services or performance are required, such as annuities, insurance claims, or other benefit payments.

Federal agency means an "agency" as defined at 5 U.S.C. 551(1) and further clarified by 5 U.S.C. 552(f). The term generally refers to the agency that provides a Federal award directly to a recipient unless the context indicates otherwise. See also definitions of Federal award and recipient.

Federal Audit Clearinghouse (FAC) means the repository of record designated by OMB where non-Federal entities must transmit the information required by subpart F.

Federal award has the meaning, depending on the context, in either paragraph (1) or (2) of this definition:

- (1)
 - (i) The Federal financial assistance that a recipient receives directly from a Federal agency or indirectly from a pass-through entity, as described in § 200.101; or
 - (ii) The cost-reimbursement contract under the Federal Acquisition Regulation that a non-Federal entity receives directly from a Federal agency or indirectly from a pass-through entity, as described in § 200.101.
- (2) The instrument setting forth the terms and conditions. The instrument is the grant agreement, cooperative agreement, other agreement for assistance covered in paragraph (2) of the definition of *Federal financial assistance* in this section, or the cost-reimbursement contract awarded under the Federal Acquisition Regulations.
- (3) Federal award does not include other contracts that a Federal agency uses to buy goods or services from a contractor or a contract to operate government-owned, contractor- operated (GOCO) facilities.
- (4) See also definitions of Federal financial assistance, grant agreement, and cooperative agreement.

Federal award date means the date when the authorized official of the Federal agency signed (physically or digitally) the Federal award or when an alternative, consistent with the requirements of 31 U.S.C. 1501, is reached with the recipient.

Federal financial assistance means:

- (1) Assistance that recipients or subrecipients receive or administer in the form of:
 - (i) Grants;
 - (ii) Cooperative agreements;
 - (iii) Non-cash contributions or donations of property (including donated surplus property);

- (iv) Direct appropriations;
 - (v) Food commodities; and
 - (vi) Other financial assistance (except assistance listed in paragraph (2) of this definition).
- (2) For § 200.203 and subpart F of this part, *Federal financial assistance* also includes assistance that recipients or subrecipients receive or administer in the form of:
- (i) Loans;
 - (ii) Loan Guarantees;
 - (iii) Interest subsidies; and
 - (iv) Insurance.
- (3) For § 200.216, Federal financial assistance includes assistance that recipients or subrecipients receive or administer in the form of:
- (i) Grants;
 - (ii) Cooperative agreements;
 - (iii) Loans; and
 - (iv) Loan Guarantees.
- (4) Federal financial assistance does not include amounts received as reimbursement for services rendered to individuals as described in § 200.502(h) and (i).
- (5) For part 184 of this title, in addition to the forms of assistance listed in paragraph (1) of this definition, *Federal financial assistance* also includes assistance that recipients or subrecipients receive or administer in the form of:
- (i) Loans; and
 - (ii) Loan Guarantees.

Federal interest means, for purposes of § 200.330 or when used in connection with the acquisition or improvement of real property, equipment, or supplies under a Federal award, the dollar amount that is the product of the:

- (1) The percentage of Federal participation in the total cost of the real property, equipment, or supplies; and
- (2) Current fair market value of the property, improvements, or both, to the extent the costs of acquiring or improving the property were included as project costs.

Federal program means:

- (1) All Federal awards which are assigned a single Assistance Listings Number.
- (2) When no Assistance Listings Number is assigned, all Federal awards from the same agency made for the same purpose must be combined and considered one program.
- (3) Notwithstanding paragraphs (1) and (2) of this definition, a cluster of programs. The types of clusters of programs are:

- (i) Research and development (R&D);
- (ii) Student financial aid (SFA); and
- (iii) "Other clusters," as described in the definition of *cluster of programs* in this section. *Federal share* means the portion of the Federal award costs paid using Federal funds.

Final cost objective means a cost objective that has allocated to it both direct and indirect costs and, in the recipient's or subrecipient's accumulation system, is one of the final accumulation points, such as a particular award, internal project, or other direct activity of a recipient or subrecipient. See also the definitions of *cost objective* and *intermediate cost objective* in this section.

Financial obligations means orders placed for property and services, contracts and subawards made, and similar transactions that require payment by a recipient or subrecipient under a Federal award that will result in expenditures by a recipient or subrecipient under a Federal award.

Fixed amount award means a type of grant or cooperative agreement pursuant to which the Federal agency or pass-through entity provides a specific amount of funding without regard to actual costs incurred under the Federal award. This type of Federal award reduces some of the administrative burden and record-keeping requirements for both the recipient or subrecipient and the Federal agency or pass-through entity. Accountability is based primarily on performance and results. See §§ 200.102(c), 200.101(b), 200.201(b), and 200.333.

For-profit organization generally means an organization or entity organized for the purpose of earning a profit. The term includes but is not limited to:

- (1) An "S corporation" incorporated under subchapter S of the Internal Revenue Code;
- (2) A corporation incorporated under another authority;
- (3) A partnership;
- (4) A limited liability company or partnership; and
- (5) A sole proprietorship.

Foreign organization means an entity that is:

- (1) A public or private organization located in a country other than the United States and its territories that is subject to the laws of the country in which it is located, irrespective of the citizenship of project staff or place of performance;
- (2) A private nongovernmental organization located in a country other than the United States that solicits and receives cash contributions from the general public;
- (3) A charitable organization located in a country other than the United States that is nonprofit and tax-exempt under the laws of the country where it is registered and is not a university, college, accredited degree-granting institution of education, private foundation, hospital, an organization engaged exclusively in research or scientific activities, church, synagogue, mosque or other similar entities organized primarily for religious purposes; or
- (4) An organization located in a country other than the United States not recognized as a foreign public entity.

Foreign public entity means:

- (1) A foreign government or foreign governmental entity;
- (2) A public international organization, which is an organization entitled to enjoy privileges, exemptions, and immunities as an international organization under the International Organizations Immunities Act (22 U.S.C. 288-288f);
- (3) An entity owned (in whole or in part) or controlled by a foreign government; or
- (4) Any other entity consisting wholly or partially of one or more foreign governments or foreign governmental entities.

General purpose equipment means equipment that is not limited to research, medical, scientific, or other technical activities. Examples include office equipment and furnishings, modular offices, telephone networks, information technology equipment and systems, air conditioning equipment, reproduction and printing equipment, and motor vehicles. See also the definitions of *equipment* and *special purpose equipment* in this section.

Generally accepted accounting principles (GAAP) has the meaning specified in accounting standards issued by the Government Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB).

Generally accepted government auditing standards (GAGAS), also known as the Yellow Book, means generally accepted government auditing standards issued by the Comptroller General of the United States, which apply to financial audits.

Grant agreement or grant means a legal instrument of financial assistance between a Federal agency and a recipient or between a pass-through entity and a subrecipient, consistent with 31 U.S.C. 6302, 6304:

- (1) Is used to enter into a relationship, the principal purpose of which is to transfer anything of value to carry out a public purpose authorized by a law of the United States (see 31 U.S.C. 6101(3)); and not to acquire property or services for the Federal agency or pass-through entity's direct benefit or use;
- (2) Is distinguished from a cooperative agreement in that it does not provide for substantial involvement of the Federal agency in carrying out the activity contemplated by the Federal award.
- (3) Does not include an agreement that provides only:
 - (i) Direct United States Government cash assistance to an individual;
 - (ii) A subsidy;
 - (iii) A loan;
 - (vi) A loan guarantee; or
 - (v) Insurance.

Highest-level owner means the entity that owns or controls an immediate owner of an applicant or that owns or controls one or more entities that control an immediate owner of an applicant. No entity owns or exercises control of the highest-level owner as defined in the Federal Acquisition Regulations (FAR) (48 CFR 52.204-17).

Hospital means a facility licensed as a hospital under the law of any State or a facility operated as a hospital by the United States, a State, or a subdivision of a State.

Improper payment means a payment that should not have been made or that was made in an incorrect amount under statutory, contractual, administrative, or other legally applicable requirements. The term improper payment includes: any payment to an ineligible recipient; any payment for an ineligible good or service; any duplicate payment; any payment for a good or service not received, except for those payments where authorized by law; any payment that is not authorized by law; and any payment that does not account for credit for applicable discounts. See OMB Circular A-123 Appendix C, *Requirements for Payment Integrity Improvement* for additional definitions and guidance on the requirements for payment integrity.

Indian Tribe means any Indian Tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. Chapter 33), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians. See 25 U.S.C. 5304(e). This includes any Indian Tribe identified in the annually published Bureau of Indian Affairs list of "Indian Entities Recognized and Eligible to Receive Services" and other entities that qualify as an Alaska Native village or regional village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act.

Indirect cost means those costs incurred for a common or joint purpose benefitting more than one cost objective and not readily assignable to the cost objectives specifically benefitted, without effort disproportionate to the results achieved. It may be necessary to establish multiple pools of indirect costs to facilitate equitable distribution of indirect expenses to the cost objectives served. Indirect cost pools must be distributed to benefitted cost objectives on basis that will produce an equitable result in consideration of relative benefits derived. For Institutions of Higher Education (IHE), the term facilities and administrative (F&A) cost is often used to refer to indirect costs.

Indirect cost rate proposal means the documentation prepared by a recipient to substantiate its request to establish an indirect cost rate as described in appendices III through VII and appendix IX to this part.

Information technology systems means computing devices, ancillary equipment, software, firmware, and related procedures, services (including support services), and resources. See also the definitions of *computing devices* and *equipment* in this section.

Institution of Higher Education (IHE) is defined at 20 U.S.C. 1001.

Intangible property means property having no physical existence, such as trademarks, copyrights, data (including data licenses), websites, IP licenses, trade secrets, patents, patent applications, and property such as loans, notes and other debt instruments, lease agreements, stocks and other instruments of property ownership of either tangible or intangible property, such as intellectual property, software, or software subscriptions or licenses. **Intermediate cost objective** means a cost objective that is used to accumulate indirect costs or service center costs that are subsequently allocated to one or more indirect cost pools or final cost objectives. See this section's definitions of *cost objective* and *final cost objective*.

Internal control for recipients and subrecipients means processes designed and implemented by recipients and subrecipients to provide reasonable assurance regarding the achievement of objectives in the following categories:

- (1) Effectiveness and efficiency of operations;
- (2) Reliability of reporting for internal and external use; and
- (3) Compliance with applicable laws and regulations.

Loan means a Federal loan or loan guarantee received or administered by a recipient or subrecipient, except as used in this section's definition of *program income*.

- (1) The term “direct loan” means a disbursement of funds by the Federal Government to a non-Federal borrower under a contract that requires the repayment of such funds with or without interest. The term includes the purchase of, or participation in, a loan made by another lender and financing arrangements that defer payment for more than 90 days, including the sale of a Federal Government asset on credit terms. The term does not include the acquisition of a federally guaranteed loan in satisfaction of default claims or the price support loans of the Commodity Credit Corporation.
- (2) The term “direct loan obligation” means a binding agreement by a Federal agency to make a direct loan when specified conditions are fulfilled by the borrower.
- (3) The term “loan guarantee” means any Federal Government guarantee, insurance, or other pledges for the payment of all or a part of the principal or interest on any debt obligation of a non-Federal borrower to a non-Federal lender but does not include the insurance of deposits, shares, or other withdrawable accounts in financial institutions.
- (4) The term “loan guarantee commitment” means a binding agreement by a Federal agency to make a loan guarantee when specified conditions are fulfilled by the borrower, the lender, or any other party to the guarantee agreement.

Local government means any unit of government within a State, including a:

- (1) County;
- (2) Borough;
- (3) Municipality;
- (4) City;
- (5) Town;
- (6) Township;
- (7) Parish;
- (8) Local public authority, including any public housing agency under the United States Housing Act of 1937;
- (9) Special district;
- (10) School district;
- (11) Intrastate district;
- (12) Council of governments, whether or not incorporated as a nonprofit corporation under State law; and
- (13) Any other agency or instrumentality of a multi-, regional, or intra-State or local government.

Major program means a Federal program determined by the auditor to be a major program in accordance with § 200.518 or a program identified as a major program by a Federal agency or pass-through entity in accordance with § 200.503(e).

Management decision means the Federal agency's or pass-through entity's written determination, provided to the auditee, of the adequacy of the auditee's proposed corrective actions to address the findings based on its evaluation of the audit findings and proposed corrective actions.

Micro-purchase means an individual procurement transaction for supplies or services, the aggregate amount of which does not exceed the micro-purchase threshold. Micro-purchases comprise a subset of a recipient's or subrecipient's small purchases using informal procurement methods as set forth in § 200.320.

Micro-purchase threshold means the dollar amount at or below which a recipient or subrecipient may purchase property, or services using micro-purchase procedures (see § 200.320). Generally, except as provided in § 200.320, the micro-purchase threshold for procurement activities administered under Federal awards is not to exceed the amount set by the FAR at 48 CFR part 2, subpart 2.1, unless a higher threshold is requested by the recipient or subrecipient and approved by the cognizant agency for indirect costs.

Modified Total Direct Cost (MTDC) means all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$50,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs, and the portion of each subaward in excess of \$50,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs and with the approval of the cognizant agency for indirect costs.

Non-discretionary award means an award made by the Federal agency to specific recipients in accordance with statutory, eligibility, and compliance requirements, such that in keeping with specific statutory authority, the Federal agency cannot exercise judgment ("discretion"). A non-discretionary award amount could be specifically determined or by formula.

Non-Federal entity (NFE) means a State, local government, Indian Tribe, Institution of Higher Education (IHE), or nonprofit organization that carries out a Federal award as a recipient or subrecipient.

Nonprofit organization means any organization that:

- (1) Is operated primarily for scientific, educational, service, charitable, or similar purposes in the public interest;
- (2) Is not organized primarily for profit;
- (3) Uses net proceeds to maintain, improve, or expand the organization's operations; and
- (4) Is not an IHE.

Notice of funding opportunity means a formal announcement of the availability of Federal funding through a financial assistance program from a Federal agency. The notice of funding opportunity provides information on the award, such as who is eligible to apply, the evaluation criteria for selecting a recipient or subrecipient, the required components of an application, and how to submit the application. The notice of funding opportunity is any paper or electronic issuance that an agency uses to announce a funding opportunity, whether it is called a "program announcement," "notice of funding availability," "broad agency announcement," "research announcement," "solicitation," or some other term.

Office of Management and Budget (OMB) means the Executive Office of the President, Office of Management and Budget.

Oversight agency for audit means the Federal agency that provides the predominant amount of funding directly (direct funding) (as listed on the schedule of expenditures of Federal awards, see § 200.510(b)) to a recipient or subrecipient unless OMB designates a specific cognizant agency for audit. When the direct funding represents less than 25 percent of the total Federal expenditures (as direct and sub-awards) by the recipient or subrecipient, then the Federal agency with the predominant amount of total funding is the designated oversight agency for audit. When there is no direct funding, the Federal agency that is the predominant source of pass-through funding must assume the oversight responsibilities. The duties of the oversight agency for audit and the process for any reassignments are described in § 200.513(b).

Participant generally means an individual participating in or attending program activities under a Federal award, such as trainings or conferences, but who is not responsible for implementation of the Federal award. Individuals committing effort to the development or delivery of program activities under a Federal award (such as consultants, project personnel, or staff members of a recipient or subrecipient) are not participants. Examples of participants may include community members participating in a community outreach program, members of the public whose perspectives or input are sought as part of a program, students, or conference attendees.

Participant support costs means direct costs that support participants (see definition for *Participant* in § 200.1) and their involvement in a Federal award, such as stipends, subsistence allowances, travel allowances, registration fees, temporary dependent care, and per diem paid directly to or on behalf of participants.

Pass-through entity means a recipient or subrecipient that provides a subaward to a subrecipient (including lower tier subrecipients) to carry out part of a Federal program. The authority of the pass-through entity under this part flows through the subaward agreement between the pass-through entity and subrecipient.

Performance goal means a measurable target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate. In some instances (for example, discretionary research awards), this may be limited to the requirement to submit technical performance reports (to be evaluated in accordance with agency policy).

Period of performance means the time interval between the start and end date of a Federal award, which may include one or more budget periods. Identification of the period of performance in the Federal award consistent with § 200.211(b)(5) does not commit the Federal agency to fund the award beyond the currently approved budget period.

Personal property means property other than real property. It may be tangible or intangible.

Personally Identifiable Information (PII) means information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. Some PII is available in public sources such as telephone books, websites, and university listings. The definition of PII is not attached to any single category of information or technology. Instead, it requires a case-by-case assessment of the specific risk that an individual can be identified. Non-PII can become PII whenever additional information is made publicly available, in any medium and from any source, that could be used to identify an individual when combined with other available information.

Prior approval means the written approval obtained in advance by an authorized official of a Federal agency or pass-through entity of certain costs or programmatic decisions.

Program income means gross income earned by the recipient or subrecipient that is directly generated by a supported activity or earned as a result of the Federal award during the period of performance except as provided in § 200.307(c). Program income includes but is not limited to income from fees for services performed, the use or rental of real or personal property acquired under Federal awards, the sale of commodities or items fabricated under a Federal award, license fees, and royalties on patents and copyrights, and principal and interest on loans made with Federal award funds. Interest earned on advances of Federal funds is not program income. Except as otherwise provided in Federal statutes, regulations, or the terms and conditions of the Federal award, program income does not include rebates, credits, discounts, and interest earned on any of them. See § 200.407. See also 35 U.S.C. 200-212 "Disposition of Rights in Educational Awards," which applies to inventions made under Federal awards.

Project cost means total allowable costs incurred under a Federal award and all cost sharing, including third-party contributions.

Property means real property or personal property. See this section's definitions of *real property* and *personal property*.

Protected Personally Identifiable Information (Protected PII) means PII (see definition in this section), except for PII that must be disclosed by law. Examples of PII include, but are not limited to, social security number; passport number; credit card numbers; clearances, bank numbers; biometrics; date and place of birth; mother's maiden name; criminal, medical and financial records; and educational transcripts.

Questioned cost has the meaning given in paragraphs (1) through (3).

- (1) **Questioned cost** means an amount, expended or received from a Federal award, that in the auditor's judgment:
 - (i) Is noncompliant or suspected noncompliant with Federal statutes, regulations, or the terms and conditions of the Federal award;
 - (ii) At the time of the audit, lacked adequate documentation to support compliance; or
 - (iii) Appeared unreasonable and did not reflect the actions a prudent person would take in the circumstances.
- (2) The questioned cost amount under (1)(ii) is calculated as if the portion of a transaction that lacked adequate documentation were confirmed noncompliant.
- (3) There is no questioned cost solely because of:
 - (i) Deficiencies in internal control; or
 - (ii) Noncompliance with the reporting type of compliance requirement (described in the compliance supplement) if this noncompliance does not affect the amount expended or received from the Federal award.
- (4) **Known questioned cost** means a questioned cost specifically identified by the auditor. Known questioned costs are a subset of likely questioned costs.
- (5) **Likely questioned cost** means the auditor's best estimate of total questioned costs, not just the known questioned costs. Likely questioned costs are developed by extrapolating from audit evidence obtained, for example, by projecting known questioned costs identified in an audit sample

to the entire population from which the sample was drawn. In evaluating the effect of questioned costs on the opinion on compliance, the auditor considers the likely questioned costs, not just the known questioned costs.

- (6) Questioned costs are not improper payments until reviewed and confirmed to be improper payments as defined in OMB Circular A-123 Appendix C.

Real property means land, including land improvements, structures, and appurtenances thereto, and legal interests in land, including fee interest, licenses, rights of way, and easements. Real property excludes moveable machinery and equipment.

Recipient means an entity that receives a Federal award directly from a Federal agency to carry out an activity under a Federal program. The term recipient does not include subrecipients or individuals that are participants or beneficiaries of the award.

Renewal award means a Federal award for which the start date is contiguous with, or closely follows, the end of the expiring Federal award. The start date of a renewal award begins a new and distinct period of performance.

Research and Development (R&D) means all basic and applied research activities and all development activities performed by a recipient or subrecipient. The term research also includes activities involving the training of individuals in research techniques where such activities use the same facilities as other research and development activities and where such activities are not included in the instruction function. "Research" is the systematic study directed toward fuller scientific knowledge or understanding of the subject studied. "Development" is the systematic use of knowledge and understanding gained from research to produce useful materials, devices, systems, or methods, including designing and developing prototypes and processes.

Simplified acquisition threshold means the dollar amount below which a recipient or subrecipient may purchase property or services using small purchase methods (see § 200.320). Recipients and subrecipients adopt small purchase procedures to expedite the purchase of items at or below the simplified acquisition threshold. The simplified acquisition threshold set in the FAR at 48 CFR part 2, subpart 2.1 is used in this part as the simplified acquisition threshold for secondary procurement activities administered under Federal awards. The recipient or subrecipient is responsible for determining an appropriate simplified acquisition threshold, which is less than or equal to the dollar value established in the FAR, based on internal controls, an evaluation of risk, and its documented procurement procedures. Recipients and subrecipients should also determine if local government purchasing laws apply. This threshold must never exceed the dollar value established in the FAR.

Special purpose equipment means equipment that is used only for research, medical, scientific, or other similar technical activities. Examples of special purpose equipment include microscopes, x-ray machines, surgical instruments, spectrometers, and associated software. See also the definitions of *equipment* and *general purpose equipment* in this section.

State means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any agency or instrumentality thereof exclusive of local governments.

Student Financial Aid (SFA) means Federal awards under those programs of general student assistance, such as those authorized by Title IV of the Higher Education Act of 1965, as amended (20 U.S.C. 1070-1099d), which the U.S. Department of Education administers, and similar programs provided by other Federal agencies. It does not include Federal awards under programs that provide fellowships or similar Federal awards to students on a competitive basis or for specified studies or research.

Subaward means an award provided by a pass-through entity to a subrecipient for the subrecipient to contribute to the goals and objectives of the project by carrying out part of a Federal award received by the pass-through entity. It does not include payments to a contractor, beneficiary, or participant. A subaward may be provided through any form of legal agreement consistent with criteria in with § 200.331, including an agreement the pass-through entity considers a contract.

Subrecipient means an entity that receives a subaward from a pass-through entity to carry out part of a Federal award. The term subrecipient does not include a beneficiary or participant. A subrecipient may also be a recipient of other Federal awards directly from a Federal agency.

Subsidiary means an entity in which more than 50 percent of the entity is owned or controlled directly by a parent corporation or through another subsidiary of a parent corporation.

Supply means all tangible personal property other than those described in the *equipment* definition. A computing device is a supply if the acquisition cost is below the lesser of the capitalization level established by the recipient or subrecipient for financial statement purposes or \$10,000, regardless of the length of its useful life. See this section's definitions of *computing devices* and *equipment*.

Telecommunications cost means the cost of using communication technologies such as mobile phones, landlines, and the internet.

Termination means the action a Federal agency or pass-through entity takes to discontinue a Federal award, in whole or in part, at any time before the planned end date of the period of performance. Termination does not include discontinuing a Federal award due to a lack of available funds.

Third-party in-kind contributions means the value of non-cash contributions (*meaning*, property or services) that:

- (1) Benefit a project or program funded by a Federal award; and
- (2) Are contributed by non-Federal third parties, without charge, to a recipient or subrecipient under a Federal award.

Unliquidated financial obligation means financial obligations incurred by the recipient or subrecipient but not paid (liquidated) for financial reports prepared on a cash basis. For reports prepared on an accrual basis, these are financial obligations incurred by the recipient or subrecipient but for which expenditures have not been recorded.

Unobligated balance means the amount of funds under a Federal award that the recipient or subrecipient has not obligated. The amount is computed by subtracting the cumulative amount of the recipient's or subrecipient's unliquidated financial obligations and expenditures under the Federal award from the cumulative amount of funds the Federal agency or pass-through entity authorized the recipient or subrecipient to obligate.

Voluntary committed cost sharing means cost sharing specifically pledged voluntarily in the proposal's budget on the part of the recipient or subrecipient, which becomes a binding requirement of the Federal award. See § 200.306.

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Subpart B—General Provisions

§ 200.100 Purpose.

(a) *Purpose.*

- (1) This part establishes uniform administrative requirements, cost principles, and audit requirements for Federal awards. Federal agencies must not impose additional requirements except as allowed in §§ 200.102, 200.211, or unless specifically required by Federal statute, regulation, or Executive order.
 - (2) This part provides Federal agencies with the policy for collecting and submitting information on all Federal financial assistance programs to the Office of Management and Budget (OMB) and communicating this information to the public. It also establishes Federal policies related to the delivery of this information to the public, including through the use of electronic media. It also sets forth how the General Services Administration (GSA), OMB, and Federal agencies implement the Federal Program Information Act (31 U.S.C. 6101-6106).
- (b) **Administrative requirements.** Subparts B through D set forth the uniform administrative requirements for Federal financial assistance. This includes establishing requirements for Federal agencies management of Federal financial assistance programs before a Federal award is made, and requirements that Federal agencies may impose on recipients and subrecipients throughout the lifecycle of a Federal award.
- (c) **Cost principles.** Subpart E establishes principles for determining allowable costs incurred by recipients and subrecipients under Federal awards. These principles are for the purpose of cost determination. They do not address the circumstances nor dictate the extent of Federal Government funding of a particular program or project.
- (d) **Single Audit Requirements and Audit Follow-up.** Subpart F is issued pursuant to the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507). Subpart F sets forth the standards for achieving consistency and uniformity among Federal agencies for the audit of non-Federal entities expending Federal awards. Subpart F also provides the policies and procedures for Federal agencies or pass-through entities when using the results of these audits.

§ 200.101 Applicability.

(a) *General applicability to Federal agencies.*

- (1) Subparts A through F apply to Federal agencies that make Federal awards to non-Federal entities. As provided in paragraph (a)(2), subparts A through E may also apply to Federal agencies that make Federal awards to other entities.
- (2) Federal agencies must apply subparts A through F of this part to non-Federal entities unless a particular section of this part or Federal statute provides otherwise. Federal agencies may apply subparts A through E of this part to Federal agencies, for-profit organizations, foreign public entities, or foreign organizations as permitted in agency regulations or program statutes, except when a Federal agency determines that the application of these subparts would be inconsistent with the international responsibilities of the United States or the laws of a foreign government. Subpart F only applies to non-Federal entities as defined in the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507). Federal agencies should apply the requirements to all recipients in a consistent and equitable manner to the extent permitted within applicable statutes, regulations, and policies.

- (3) Throughout subparts A through F, the word “must” indicates a requirement. The words “should” or “may” indicate a recommended approach and permit discretion.
- (4) Throughout subparts A through E, when the word “or” is used between the terms “recipient” and “subrecipient,” any requirements or recommendations in the relevant provisions of this part apply to the recipient, the subrecipient, or both, as applicable. The use of “or” between recipient and subrecipient does not mean that applicable requirements or recommendations only apply to one of these entities unless the context clearly indicates otherwise.

(b) *Applicability to Federal financial assistance.*

- (1) Paragraphs (b)(2) through (b)(5) of this section describe what portions of this part apply to specific types of Federal financial assistance. Paragraphs (d) and (e) of this section explain additional exceptions related to governing provisions and Federal program applicability. The terms and conditions of Federal awards (including this part) flow down to subawards to subrecipients unless a particular section of this part or the terms and conditions of the Federal award specifically indicate otherwise. Pass-through entities must comply with the requirements described in subpart D, §§ 200.331 through 200.333, and any other sections of this part addressing pass-through entities.
- (2) Subpart A (Acronyms and Definitions) and subpart B (General Provisions) apply to all Federal financial assistance, except that §§ 200.111 (English language), 200.112 (Conflict of interest), and 200.113 (Mandatory disclosures) do not apply to agreements for loans, loan guarantees, interest subsidies, and insurance.
- (3) Subpart C (Pre-Federal Award Requirements and Contents of Federal Awards) and subpart D (Post Federal Award Requirements) only apply to grants and cooperative agreements with the following exceptions:
 - (i) Section 200.203 (Requirement to provide public notice of Federal financial assistance programs) also applies to agreements for loans, loan guarantees, interest subsidies, and insurance;
 - (ii) Section 200.216 (Prohibition on certain telecommunications and video surveillance equipment or services) applies to loans and grants (see Pub. L. 115-232, Div. A, Title VIII, § 889, as amended); and
 - (iii) Sections 200.303 (Internal controls) and 200.331 through 200.333 (Subrecipient monitoring and management) also apply to all types of Federal financial assistance.
- (4) Subpart E (Cost Principles) applies to grants and cooperative agreements, but does not apply to the following:
 - (i) Food commodities provided through grants and cooperative agreements;
 - (ii) Fixed amount awards, except for §§ 200.400(g), 200.402 through 200.405, and 200.407(d), which do apply;
 - (iii) Agreements for loans, loan guarantees, interest subsidies, and insurance; and
 - (iv) Federal awards to hospitals (see Appendix IX—Hospital Cost Principles).
- (5) Subpart F (Audit Requirements) only applies to the following items when awarded to a non-Federal entity:
 - (i) Grants and cooperative agreements (including fixed amount awards);

- (ii) Contracts and subcontracts awarded under the FAR (except for fixed price contracts and subcontracts);
 - (iii) Agreements for loans, loan guarantees, interest subsidies, and insurance; and
 - (iv) Any other form of Federal financial assistance as defined by the Single Audit Act Amendment of 1996 (codified at 31 U.S.C. 7501-7507).
- (c) **Applicability to different types of contracts and subcontracts awarded by a Federal agency to a non-Federal entity under the Federal Acquisition Regulations (FAR).**
 - (1) Paragraphs (c)(2) and (c)(3) of this section describe what portions of this part apply to specific types of contracts and subcontracts awarded by a Federal agency to a non-Federal entity. See also paragraph (b)(5)(ii) on audit requirements. For both paragraphs (c)(2) and (c)(3):
 - (i) In cases of conflict between the requirements of applicable portions of this part and the terms and conditions of the contract, the terms and conditions of the contract and the FAR prevail.
 - (ii) When the Cost Accounting Standards (CAS) are applicable to the contract or subcontract, they also take precedence over this part.
 - (iii) In addition, costs that are identified as unallowable under 41 U.S.C. 4304(a) and as stated in the FAR (48 CFR part 31, subpart 31.2, and 48 CFR 31.603) are always unallowable.
 - (2) **Cost-reimbursement contract under the FAR awarded to a non-Federal entity.** When a non-Federal entity is awarded a cost-reimbursement contract under the FAR, only subpart D, §§ 200.331 through 200.333, and subparts E and F are applicable.
 - (3) **Fixed-price contract or subcontract under the FAR awarded to a non-Federal entity.** When a non-Federal entity is awarded a fixed-price contract or subcontract under the FAR, only subpart A, subpart B (except for §§ 200.111, 200.112, and 200.113), subpart D (only at § 200.303 and §§ 200.331 through 200.333), and subpart E are applicable to the contract, except that subpart E is not applicable to fixed-price contracts and subcontracts that are not negotiated.
- (d) **Governing provisions.** With the exception of subpart F, which is required by the Single Audit Act, Federal statutes or regulations govern in any circumstances where they conflict with the provisions of this part. For agreements with Indian Tribes, this includes the provisions of the Indian Self-Determination and Education and Assistance Act (ISDEAA), as amended (see 25 U.S.C. 5301-5423).
- (e) **Program applicability.** Except for §§ 200.203, 200.216, and 200.331 through 200.333, the requirements in subparts C, D, and E do not apply to the following programs:
 - (1) The block grant awards authorized by the Omnibus Budget Reconciliation Act of 1981 (including Community Services), except to the extent that subpart E apply to subrecipients of Community Services Block Grant funds pursuant to 42 U.S.C. 9916(a)(1)(B);
 - (2) Federal awards to local education agencies under 20 U.S.C. 7702-7703b, (portions of the Impact Aid program);
 - (3) Payments under the Department of Veterans Affairs' State Home Per Diem Program (38 U.S.C. 1741); and
 - (4) Federal awards authorized under the Child Care and Development Block Grant Act of 1990, as amended:

- (i) Child Care and Development Block Grant (42 U.S.C. 9858).
- (ii) Child Care Mandatory and Matching Funds of the Child Care and Development Fund (42 U.S.C. 9858).

(f) **Additional program applicability.** Except for §§ 200.203 and 200.216, the guidance in subpart C does not apply to the following programs:

- (1) Entitlement Federal awards to carry out the following programs of the Social Security Act:
 - (i) Temporary Assistance for Needy Families (Title IV-A of the Social Security Act, 42 U.S.C. 601-619);
 - (ii) Child Support Enforcement and Establishment of Paternity (Title IV-D of the Social Security Act, 42 U.S.C. 651-669b);
 - (iii) Federal Payments for Foster Care, Prevention, and Permanency (Title IV-E of the Act, 42 U.S.C. 670-679c);
 - (iv) Aid to the Aged, Blind, and Disabled (Titles I, X, XIV, and XVI-AABD of the Act, as amended);
 - (v) Medical Assistance (Medicaid) (Title XIX of the Act, 42 U.S.C. 1396-1396w-5) not including the State Medicaid Fraud Control program authorized by Section 1903(a)(6)(B) of the Social Security Act (42 U.S.C. 1396b(a)(6)(B)); and
 - (vi) Children's Health Insurance Program (Title XXI of the Act, 42 U.S.C. 1397aa-1397mm).
- (2) A Federal award for an experimental, pilot, or demonstration project that is also supported by a Federal award listed in paragraph (f)(1) of this section.
- (3) Federal awards under subsection 412(e) of the Immigration and Nationality Act and subsection 501(a) of the Refugee Education Assistance Act of 1980 (Pub. L. 96-422, 94 Stat. 1809), for cash assistance, medical assistance, and supplemental security income benefits to refugees and entrants and the administrative costs of providing the assistance and benefits (8 U.S.C. 1522(e)).
- (4) Entitlement awards under the following programs of The National School Lunch Act:
 - (i) National School Lunch Program (Section 4 of the Act, 42 U.S.C. 1753);
 - (ii) Commodity Assistance (Section 6 of the Act, 42 U.S.C. 1755);
 - (iii) Special Meal Assistance (Section 11 of the Act, 42 U.S.C. 1759a);
 - (iv) Summer Food Service Program for Children (Section 13 of the Act, 42 U.S.C. 1761); and
 - (v) Child and Adult Care Food Program (Section 17 of the Act, 42 U.S.C. 1766).
- (5) Entitlement awards under the following programs of The Child Nutrition Act of 1966:
 - (i) Special Milk Program (Section 3 of the Act, 42 U.S.C. 1772);
 - (ii) School Breakfast Program (Section 4 of the Act, 42 U.S.C. 1773); and
 - (iii) State Administrative Expenses (Section 7 of the Act, 42 U.S.C. 1776).
- (6) Entitlement awards for State Administrative Expenses under The Food and Nutrition Act of 2008 (Section 16 of the Act, 7 U.S.C. 2025).
- (7) Non-discretionary Federal awards under the following non-entitlement programs:

- (i) Special Supplemental Nutrition Program for Women, Infants and Children (Section 17 of the Child Nutrition Act of 1966) 42 U.S.C. 1786;
- (ii) The Emergency Food Assistance Programs (Emergency Food Assistance Act of 1983) 7 U.S.C. 7501 note; and
- (iii) Commodity Supplemental Food Program (Section 5 of the Agriculture and Consumer Protection Act of 1973) 7 U.S.C. 612c note.

§ 200.102 Exceptions.

- (a) **OMB class exceptions.** Except for subpart F, OMB may allow exceptions from requirements of this part for classes of Federal awards, recipients, or subrecipients when the exceptions are not prohibited by statute. For example, Federal agencies may request exceptions in support of innovative program designs that apply a risk-based, data-driven framework to alleviate select compliance requirements and hold recipients accountable for good performance. See also § 200.206. Federal agencies may also request exceptions in emergency situations. When OMB allows an exception to requirements of this part, the Federal agency remains responsible for ensuring the exception is applied to Federal awards in a manner consistent with Federal statutes and regulations.
- (b) **Statutory and regulatory exceptions.** A Federal agency may adjust requirements to a class of Federal awards, recipients, or subrecipients when required by Federal statutes or regulations, except for the requirements in subpart F. Except for provisions in subpart F, when a Federal statute requires exceptions to requirements of this part for a class of Federal awards, recipients, or subrecipients, a Federal agency does not need OMB approval to allow those exceptions. See also § 200.106.
- (c) **Federal agency exceptions.** Federal agencies may allow exceptions to requirements of this part on a case-by-case basis for individual Federal awards, recipients, or subrecipients, except when the exceptions are prohibited by law or other approval is expressly required by this part. Only the cognizant agency for indirect costs may authorize exceptions related to cost allocation plans or indirect cost rate proposals. A Federal agency may also apply less restrictive requirements when issuing fixed amount awards (see § 200.1), except for those requirements imposed by statute or in subpart F.

§ 200.103 Authorities.

This part is issued under the following authorities.

- (a) Subparts B through D are authorized under 31 U.S.C. 503 (the Chief Financial Officers Act, Functions of the Deputy Director for Management); the Federal Program Information Act (Pub. L. 95-220 and Pub. L. 98-169, as amended, codified at 31 U.S.C. 6101-6106); the Federal Grant and Cooperative Agreement Act of 1977 (Pub. L. 95-224, as amended, codified at 31 U.S.C. 6301-6309); 41 U.S.C. 1101-1131 (the Office of Federal Procurement Policy Act); Reorganization Plan No. 2 of 1970 and Executive Order 11541 ("Prescribing the Duties of the Office of Management and Budget and the Domestic Policy Council in the Executive Office of the President"); and the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507).
- (b) Subpart E is authorized under the Budget and Accounting Act of 1921, as amended; the Budget and Accounting Procedures Act of 1950, as amended (31 U.S.C. 1101-1126); the Chief Financial Officers Act of 1990 (31 U.S.C. 503-504); Reorganization Plan No. 2 of 1970; and Executive Order 11541, "Prescribing the Duties of the Office of Management and Budget and the Domestic Policy Council in the Executive Office of the President." OMB also relies on authority under 31 U.S.C. 503 and 31 U.S.C. 6307.

- (c) Subpart F is authorized under the Single Audit Act Amendments of 1996 (codified at 31 U.S.C. 7501-7507). OMB also relies on authority under 31 U.S.C. 503 and 31 U.S.C. 6307.

§ 200.104 Supersession.

This part superseded previous OMB guidance issued under Title 2, subtitle A, chapter II of the Code of Federal Regulations and certain OMB circulars related to uniform administrative requirements, cost principles, and audit requirements for Federal awards.

§ 200.105 Effect on other issuances.

- (a) ***Superseding inconsistent requirements.*** For Federal awards made subject to this part by a Federal agency, this part takes precedence over any administrative requirements, program manuals, handbooks, and other non-regulatory materials that are inconsistent with the requirements of this part upon implementation by the Federal agency, except to the extent that they are required by statute or authorized in accordance with § 200.102.
- (b) ***Imposition of requirements on recipients.*** Agencies may only impose legally binding requirements on recipients and subrecipients through:
- (1) Notice and public comment procedures through an approved agency process, including as authorized by this part, other statutes, or regulations; or
 - (2) Incorporating requirements into the terms and conditions of a Federal award as permitted by Federal statute, regulation, or this part.

§ 200.106 Agency implementation.

The specific requirements and responsibilities of Federal agencies, non-Federal entities, recipients, and subrecipients are set forth in this part. Federal agencies making Federal awards to non-Federal entities must implement the language in subparts C through F of this part in codified regulations unless different provisions are required by Federal statute or are approved by OMB.

§ 200.107 OMB responsibilities.

OMB will review Federal agency regulations and implementation of this part. OMB will provide interpretations of policy requirements and assistance to ensure effective, efficient, and consistent implementation. Any exceptions will be subject to approval by OMB and only with adequate justification from the Federal agency.

§ 200.108 Inquiries.

Inquiries from Federal agencies concerning this part may be directed to OMB. Inquiries from recipients or subrecipients should be addressed to the Federal agency, the cognizant agency for indirect costs, the cognizant agency for audit, or the pass-through entity as appropriate.

§ 200.109 Review date.

OMB will review this part periodically.

§ 200.110 Effective date.

- (a) The standards set forth in this part affecting the administration of Federal awards by Federal agencies become effective once implemented by Federal agencies or when any future amendment to this part becomes final.
- (b) Existing negotiated indirect cost rates will remain in place until they expire. The effective date of changes to indirect cost rates must be based upon the date a newly re-negotiated rate goes into effect for the recipient's or subrecipient's fiscal year. Therefore, for indirect cost rates and cost allocation plans, the revisions to this part (as of the publication date for revisions to this guidance) become effective in generating proposals and negotiating a new rate (when the rate is re-negotiated).

§ 200.111 English language.

- (a) All Federal financial assistance announcements, applications, and Federal award information should be in the English language and must be in terms of U.S. dollars. However, Federal agencies, recipients, and subrecipients may issue or translate a Federal award or other documents into another language. A Federal agency may translate formal or informal announcements of the availability of Federal funding through a financial assistance program, such as a notice of funding opportunity, when translations may serve to increase the pool of applicants or the participation of a specific community (for example, programs administered in foreign countries where the primary language is not English). Federal agencies must maintain an official controlling English version of the Federal financial assistance announcement and the Federal award, including the terms and conditions.
- (b) Applications, reports, and official correspondence may be submitted in languages other than English if specified in the notice of funding opportunity or the terms and conditions of the Federal award.
- (c) In the event of inconsistency between English and another language, the English language meaning will control. When a significant portion of the recipient's or subrecipient's employees administering a Federal award are not fluent in English, the Federal award should be provided in English and the language(s) with which employees are more familiar.

§ 200.112 Conflict of interest.

Federal agencies must establish conflict of interest policies for Federal awards. A recipient or subrecipient must disclose in writing any potential conflict of interest to the Federal agency or pass-through entity in accordance with the established Federal agency policies.

§ 200.113 Mandatory disclosures.

An applicant, recipient, or subrecipient of a Federal award must promptly disclose whenever, in connection with the Federal award (including any activities or subawards thereunder), it has credible evidence of the commission of a violation of Federal criminal law involving fraud, conflict of interest, bribery, or gratuity violations found in Title 18 of the United States Code or a violation of the civil False Claims Act (31 U.S.C. 3729-3733). The disclosure must be made in writing to the Federal agency, the agency's Office of Inspector General, and pass-through entity (if applicable). Recipients and subrecipients are also required to report matters related to recipient integrity and performance in accordance with Appendix XII of this part. Failure to make required disclosures can result in any of the remedies described in § 200.339. (See also 2 CFR part 180, 31 U.S.C. 3321, and 41 U.S.C. 2313.)

Subpart C—Pre-Federal Award Requirements and Contents of Federal Awards

§ 200.200 Purpose.

Sections 200.201 through 200.217 prescribe instructions and other pre-award matters to be used by Federal agencies in the program planning, announcement, application, and award processes.

§ 200.201 Use of grants, cooperative agreements, fixed amount awards, and contracts.

- (a) **Federal awards.** The Federal agency or pass-through entity must decide on the appropriate type of agreement for a Federal award (for example, a grant, cooperative agreement, subaward, or contract) in accordance with this guidance. See the Federal Grant and Cooperative Agreement Act (31 U.S.C. 6301-6309).
- (b) **Fixed amount awards.** The Federal agency or pass-through entity (see § 200.333) may use fixed amount awards (see the definition of *fixed amount awards* in § 200.1) for which the following conditions apply:
 - (1) The Federal award amount is negotiated using the cost principles (or other pricing information) as a guide. See § 200.101(b)(4)(ii) for further information on which provisions in subpart E (cost principles) apply to fixed amount awards. The Federal agency or pass-through entity may use fixed amount awards if the project scope has measurable goals and objectives and if accurate cost, historical, or unit pricing data is available to establish a fixed budget based on a reasonable estimate of actual costs. Budgets for fixed amount awards are negotiated with the recipient or subrecipient and the total amount of Federal funding is determined in accordance with the recipient's or subrecipient's proposal, available pricing data, and subpart E. Accountability must be based on performance and results, which can be communicated in performance reports or through routine monitoring. There is no expected routine monitoring of the actual costs incurred by the recipient or subrecipient under the Federal award. Therefore, no financial reporting is required. This does not absolve the recipient or subrecipient from the record retention requirements contained in §§ 200.334 through 200.338; nor does it absolve the recipient or subrecipient of the responsibilities of making records available for review during an audit. See § 200.101(b)(5)(i). Payments must be based on meeting specific requirements of the Federal award. Some of the ways in which the Federal award may be paid include, but are not limited to:
 - (i) In several partial payments. The amount of each payment as well as the "milestone" or event triggering the payment, should be agreed to in advance and included in the Federal award;
 - (ii) On a unit price basis. The defined unit(s) or price(s) should be agreed to in advance and included in the Federal award; or
 - (iii) In one payment at the completion of the Federal award.
 - (2) A fixed amount award must not be used in programs that require cost sharing.
 - (3) A fixed amount award may generate and use program income in accordance with the terms and conditions of the Federal award; however, the requirements of § 200.307 do not apply.
 - (4) At the end of a fixed amount award, the recipient or subrecipient must certify in writing to the Federal agency or pass-through entity that the project was completed as agreed to in the Federal award, or identify those activities that were not completed, and that all expenditures were incurred in accordance with § 200.403. When the required activities were not carried out, including fixed amount awards paid on a unit price basis under 200.201(b)(1)(ii), the amount of the Federal award must be

reduced by the amount that reflects the activities that were not completed in accordance with the Federal award. When the required activities were completed in accordance with the terms and conditions of the Federal award, the recipient or subrecipient is entitled to any unexpended funds.

- (5) Periodic reports may be established for fixed amount awards.
- (6) Prior approval requirements that apply to fixed amount awards are § 200.308(f) (paragraphs 1 through 3, 6 through 8, and 10) and § 200.333.

§ 200.202 Program planning and design.

- (a) The Federal agency must design a program and create an Assistance Listing before announcing the Notice of Funding Opportunity. A program must be designed:
 - (1) With clear goals and objectives that provide meaningful results and be consistent with the Federal authorizing legislation of the program;
 - (2) To measure performance based on the goals and objectives developed during program planning and design. Performance measures may differ depending on the type of program. See § 200.301 for more information on performance measurement;
 - (3) To align with the strategic goals and objectives within the Federal agency's performance plan and support the Federal agency's performance measurement, management, customer service initiatives, and reporting as required by Part 6 of OMB Circular A-11 (Preparation, Submission, and Execution of the Budget);
 - (4) To align with the Program Management Improvement Accountability Act (Pub. L. 114-264) as well as the Foundations for Evidence-Based Policymaking Act (Pub. L. 115-435), as applicable; and
 - (5) To encourage applicants to engage, when practicable, during the design phase, members of the community that will benefit from or be impacted by a program.
- (b) Federal agencies should develop programs in consultation with communities benefiting from or impacted by the program. In addition, Federal agencies should consider available data, evidence, and evaluation results from past programs and make every effort to extend eligibility requirements to all potential applicants. Federal agencies are encouraged to coordinate with other agencies during program planning and design, particularly when the goals and objectives of a program or project align with those of other agencies.

§ 200.203 Requirement to provide public notice of Federal financial assistance programs.

- (a) The Federal agency must maintain an accurate list of Federal programs in the Assistance Listings maintained by the General Services Administration (GSA) at [SAM.gov](https://www.sam.gov).
 - (1) The Assistance Listings is the comprehensive government-wide source of Federal financial assistance program information produced by the executive branch of the Federal Government.
 - (2) The information that the Federal agency must submit to GSA for approval by OMB is listed in paragraph (b). GSA must prescribe the format for the submission in coordination with OMB.
 - (3) The Federal agency must assign the appropriate Assistance Listing before making the Federal award unless exigent circumstances require otherwise (for example, timing requirements imposed by a Federal statute).

- (b) To the extent practicable, the Federal agency must create, update, and manage Assistance Listing entries based on the authorizing statute for the program and comply with additional guidance provided by GSA (in consultation with OMB) to ensure consistent and accurate information is available to prospective applicants. Assistance Listings should be communicated to the public in plain language. Accordingly, Federal agencies must submit the following information to GSA when creating an Assistance Listing:
- (1) **Program Description, Purpose, Goals, and Measurement.** A brief summary of the statutory or regulatory requirements of the program and its intended outcome. Where appropriate, the program description, purpose, goals, and performance measurement should align with the strategic goals and objectives within the Federal agency's performance plan and should support the Federal agency's performance measurement, management, customer experience initiatives, and reporting as required by Part 6 of OMB Circular A-11;
 - (2) **Identification.** Identification of whether the program will issue Federal awards on a discretionary or non-discretionary basis;
 - (3) **Projected total amount of funds available for the program.** Estimates based on previous year funding are acceptable if current appropriations are not available at the time of the submission;
 - (4) **Anticipated source of available funds.** The statutory authority for funding the program and the agency, sub-agency, or specific program unit that will issue the Federal awards (to the extent possible) and associated funding identifier (for example, Treasury Account Symbol(s));
 - (5) **General eligibility requirements.** The statutory, regulatory, or other eligibility factors or considerations that determine the applicant's qualification for Federal awards under the program (for example, type of recipient); and
 - (6) **Applicability of Single Audit Requirements.** Applicability of Single Audit Requirements as required by subpart F.

§ 200.204 Notices of funding opportunities.

The Federal agency must announce specific funding opportunities for Federal financial assistance that will be openly competed. The term openly competed means opportunities that are not directed to one or more specifically identified applicants. To the extent possible, the Federal agency should communicate opportunities to the public in plain language to ensure the announcement is accessible to diverse communities of eligible applicants, including underserved communities. The Federal agency should also make efforts to limit the length and complexity of the announcement and only include the information that is necessary for the effective communication of the program objectives. Federal agencies may offer pre-application technical assistance or provide clarifying information for funding opportunities. However, Federal agencies must ensure these resources are made accessible and widely available to all potential applicants (for example, by posting answers to questions and requests on *Grants.gov*). The Federal agency should make every effort to identify in the NOFO all eligible applicants (for example, different types of nonprofit organizations such as labor unions and tribal organizations). The following information must be provided in a public notice:

- (a) **Summary information in notices of funding opportunities.** The Federal agency must display the following information on *Grants.gov*, in a location preceding the full text of the announcement:
- (1) Federal Agency Name;
 - (2) Funding Opportunity Title;

- (3) Announcement Type (whether the funding opportunity is the initial announcement or a modification of a previously announced opportunity);
 - (4) Funding Opportunity Number (required, if the Federal agency has assigned a number to the funding opportunity announcement);
 - (5) Assistance Listing Number(s);
 - (6) Funding Details. To the extent appropriate, the total amount of funding that the Federal agency expects to award, the anticipated number of awards, and the expected dollar values of individual awards, which may be a range or average;
 - (7) Key Dates. Key dates include due dates for submitting applications or Executive Order 12372 submissions, as well as for any letters of intent or preapplications. For any announcement issued before a program's application materials are available, key dates also include the date on which those materials will be released; and any other additional information, as deemed applicable by the Federal agency. If possible, the Federal agency should provide an anticipated award date. If the NOFO states that applications will be evaluated on a "rolling" basis (that is, at different points during a specified period of time), the Federal agency should provide an estimate of the time needed to process an application and notify the applicant of the Federal agency's decision;
 - (8) Executive Summary. A brief description that is written in plain language and summarizes the goals and objectives of the program, the target audience, and eligible applicants. The text of the executive summary should not exceed 500 words; and
 - (9) Agency contact information.
- (b) **Availability period.** The Federal agency should make all funding opportunities available for application for at least 60 calendar days. However, the Federal agency may modify the availability period of an opportunity as needed. For example, extending the period may be necessary to provide technical assistance to an applicant pool that was not anticipated when the announcement was made or has less experience with applying for Federal financial assistance. The Federal agency may also determine that an availability period of less than 60 days is sufficient for a particular funding opportunity. However, no funding opportunity should be available for less than 30 calendar days unless the Federal agency determines that exigent circumstances justify this.
- (c) **Full text of funding opportunities.**
- (1) The Federal agency must include the information in Appendix I for every funding opportunity.
 - (2) Federal agencies should ensure that funding opportunities are written using plain language. To the extent possible Federal agencies must streamline opportunities to make them accessible, particularly for funding opportunities that are new, targeted to underserved communities, or intended to reach inexperienced applicants.
 - (3) To reduce application burden, Federal agencies should consider whether programmatic or administrative requirements specific to the agency, program, or funding opportunity must be met at the time of application or as a requirement of receiving a Federal award.

§ 200.205 Federal agency review of merit of proposals.

Unless prohibited by Federal statute, the Federal agency must design and execute a merit review process of applications for discretionary Federal awards. The objective of a merit review process is to select recipients most likely to be successful in delivering results based on the program objectives as outlined in section § 200.202. A

merit review is an objective process of evaluating Federal award applications in accordance with the written standards of the Federal agency. These standards should identify the number of people the agency requires to participate in the merit review process and provide opportunities for a diverse group of participants, including those representing underserved communities. The merit review process explained in this section must be described or incorporated by reference in the applicable funding opportunity. See appendix I to this part. See also § 200.204. The Federal agency must also periodically review its merit review process.

§ 200.206 Federal agency review of risk posed by applicants.

(a) *Review of OMB-designated repositories of government-wide data.*

- (1) Prior to making a Federal award, the Federal agency is required to review eligibility information for applicants and financial integrity information for applicants available in OMB-designated databases per the Payment Integrity Information Act of 2019 (Pub. L. 116-117), the “Do Not Pay Initiative” (31 U.S.C. 3354), and 41 U.S.C. 2313.
- (2) The Federal agency is required to review the responsibility and qualification records available in the non-public segment of the System for Award Management (SAM.gov) prior to making a Federal award where the Federal share is expected to exceed the simplified acquisition threshold, defined at 41 U.S.C. 134, over the period of performance. See 41 U.S.C. 2313. The Federal agency must consider all of the information available in SAM.gov with regard to the applicant and any immediate highest-level owner, predecessor (meaning, an organization that is replaced by a successor), or subsidiary, identified for that applicant in SAM.gov. See Public Law 112-239, National Defense Authorization Act for Fiscal Year 2013; 41 U.S.C. 2313(d). The information in the system for a prior recipient of a Federal award must demonstrate a satisfactory record of administering programs or activities under Federal financial assistance or procurement awards, and integrity and business ethics. The Federal agency may make a Federal award to a recipient that does not fully meet these standards if it is determined that the information is not relevant to the Federal award under consideration or there are specific conditions that can appropriately mitigate the risk associated with the recipient in accordance with § 200.208.

(b) *Risk Assessment.*

- (1) The Federal agency must establish and maintain policies and procedures for conducting a risk assessment to evaluate the risks posed by applicants before issuing Federal awards. This assessment helps identify risks that may affect the advancement toward or the achievement of a project's goals and objectives. Risk assessments assist Federal managers in determining appropriate resources and time to devote to project oversight and monitor recipient progress. This assessment may incorporate elements such as the quality of the application, award amount, risk associated with the program, cybersecurity risks, fraud risks, and impacts on local jobs and the community. If the Federal agency determines that the Federal award will be made, specific conditions that address the assessed risk may be implemented in the Federal award. The risk criteria to be evaluated must be described in the announcement of the funding opportunity described in § 200.204.
- (2) In evaluating risks posed by applicants, the Federal agency should consider the following items:
 - (i) **Financial stability.** The applicant's record of effectively managing financial risks, assets, and resources;

- (ii) **Management systems and standards.** Quality of management systems and ability to meet the management standards prescribed in this part;
 - (iii) **History of performance.** The applicant's record of managing previous and current Federal awards, including compliance with reporting requirements and conformance to the terms and conditions of Federal awards, if applicable;
 - (iv) **Audit reports and findings.** Reports and findings from audits performed under subpart F or the reports and findings of any other available audits, if applicable; and
 - (v) **Ability to effectively implement requirements.** The applicant's ability to effectively implement statutory, regulatory, or other requirements imposed on recipients of Federal awards.
- (c) **Adjustments to the Risk Assessment.** The Federal agency may modify the risk assessment at any time during the period of performance, which may justify changes to the terms and conditions of the Federal award. See § 200.208.
- (d) **Suspension and debarment compliance.** The Federal agency must comply with the government-wide suspension and debarment guidance in 2 CFR part 180 and individual Federal agency suspension and debarment requirements in title 2 of the Code of Federal Regulations. Federal agencies must also require recipients to comply with these requirements. These requirements restrict making Federal awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from receiving Federal awards or participating in Federal awards.

§ 200.207 Standard application requirements.

- (a) **Paperwork clearances.** The Federal agency may only use application information collections approved by OMB under the Paperwork Reduction Act of 1995 and OMB's implementing regulations in 5 CFR part 1320 and in alignment with OMB-approved, government-wide data elements available from the OMB-designated standards lead. Examples of application information collections approved by OMB include the Standard Forms 424 (SF-424), which is available on *Grants.gov*, and the Biographical Sketch Common Form (OMB Control Number 3145-0279), which Federal agencies should use to collect biographical sketches and other disclosure information from award applicants. OMB will authorize additional information collections only on a limited basis and consistent with these requirements.
- (b) **Information collection.** The Federal agency may inform applicants that they do not need to provide certain information already being collected through other means.

§ 200.208 Specific conditions.

- (a) Federal agencies are responsible for ensuring that specific Federal award conditions and performance expectations are consistent with the program design (See § 200.202 and § 200.301).
- (b) The Federal agency or pass-through entity may adjust specific conditions in the Federal award based on an analysis of the following factors:
- (1) Review of OMB-designated repositories of government-wide data (for example, *SAM.gov*) or review of its risk assessment (See § 200.206);
 - (2) The recipient's or subrecipient's history of compliance with the terms and conditions of Federal awards;
 - (3) The recipient's or subrecipient's ability to meet expected performance goals as described in § 200.211; or

- (4) A determination of whether a recipient or subrecipient has inadequate financial capability to perform the Federal award.
- (c) Specific conditions may include the following:
 - (1) Requiring payments as reimbursements rather than advance payments;
 - (2) Withholding authority to proceed to the next phase until receipt of evidence of acceptable performance;
 - (3) Requiring additional or more detailed financial reports;
 - (4) Requiring additional project monitoring;
 - (5) Requiring the recipient or subrecipient to obtain technical or management assistance; or
 - (6) Establishing additional prior approvals.
- (d) Prior to imposing specific conditions, the Federal agency or pass-through entity must notify the recipient or subrecipient as to:
 - (1) The nature of the specific condition(s);
 - (2) The reason why the specific condition(s) is being imposed;
 - (3) The nature of the action needed to remove the specific condition(s);
 - (4) The time allowed for completing the actions; and
 - (5) The method for requesting the Federal agency or pass-through entity to reconsider imposing a specific condition.
- (e) Any specific conditions must be promptly removed once the conditions that prompted them have been satisfied.

§ 200.209 Certifications and representations.

Unless prohibited by the U.S. Constitution, Federal statutes, or regulations, a Federal agency or pass-through entity is authorized to require a recipient to submit annual certifications and representations. Submission may be required more frequently if a recipient or subrecipient fails to meet a requirement of a Federal award. When a recipient is provided an exception to the requirements of 2 CFR 25.110, the recipient must submit the appropriate assurance form (for example, SF-424B).

§ 200.210 Pre-award costs.

For requirements on costs incurred by the applicant prior to the start date of the period of performance of the Federal award, see § 200.458.

§ 200.211 Information contained in a Federal award.

The Federal award must include the following information:

- (a) **Federal award performance goals.** Where applicable, performance goals, indicators, targets, and baseline data must be included in the Federal award. The Federal agency must also specify in the terms and conditions of the Federal award how performance will be assessed, including the timing and scope of expected performance. See §§ 200.202 and 200.301 for more information on Federal award performance goals.
- (b) **General Federal award information.** The Federal agency must include the following information in each Federal award:
 - (1) Recipient Name (which must match the name associated with its unique entity identifier as defined at 2 CFR 25.400);
 - (2) Recipient's Unique Entity Identifier;
 - (3) Unique Federal Award Identification Number (FAIN);
 - (4) Federal Award Date (see Federal award date in § 200.1);
 - (5) Period of Performance Start and End Date;
 - (6) Budget Period Start and End Date;
 - (7) Amount of Federal Funds Obligated by this Action;
 - (8) Total Amount of Federal Funds Obligated;
 - (9) Total Approved Cost Sharing, where applicable;
 - (10) Total Amount of the Federal Award including approved Cost Sharing;
 - (11) Budget Approved by the Federal Agency;
 - (12) Federal Award Description (to comply with statutory requirements (for example, FFATA));
 - (13) Name of the Federal agency (including contact information for the awarding official);
 - (14) Assistance Listings Number and Title;
 - (15) Identification of whether the Award is R&D; and
 - (16) Indirect Cost Rate for the Federal award (including if the de minimis rate is charged per § 200.414).
- (c) **General terms and conditions.**
 - (1) Federal agencies must incorporate the following general terms and conditions either in the Federal award or by reference, as applicable:
 - (i) **Administrative requirements.** Administrative requirements implemented by the Federal agency as specified in this part.
 - (ii) **National policy requirements.** These include statutory, executive order, other Presidential directive, or regulatory requirements that apply by specific reference and are not program-specific. See § 200.300 Statutory and national policy requirements.
 - (iii) **Recipient integrity and performance matters.** When the total Federal share of the Federal award may include more than \$500,000 over the period of performance, the Federal agency must include the terms and conditions available in Appendix XII. See also § 200.113.

(iv) **Future budget periods.** When it is anticipated that the period of performance will include multiple budget periods, the Federal agency must indicate that subsequent budget periods are subject to the availability of funds, program authority, satisfactory performance, and compliance with the terms and conditions of the Federal award.

(v) **Termination provisions.** Federal agencies must inform recipients of the termination provisions in § 200.340, including the applicable termination provisions in the Federal agency's regulations or terms and conditions of the Federal award.

(2) The Federal award must incorporate, by reference, all general terms and conditions of the Federal award, which must be maintained on the Federal agency's website.

(3) The Federal agency must provide a copy of the full text of the general terms and conditions if a recipient requests it.

(4) The Federal agency must maintain an archive of previous versions of the general terms and conditions, with effective dates, for use by a recipient, auditors, or others. The archive should be located on the Federal agency's website in the same place where current terms and conditions are available.

(d) **Federal award specific terms and conditions.** The Federal agency must include in each Federal award any specific terms and conditions that are in addition to the general terms and conditions. See also § 200.208. For loan and loan guarantee programs, the Federal agency must specify whether or not the Federal award has continuing compliance requirements. Whenever practicable, these specific terms and conditions should also be available on the Federal agency's website and in notices of funding opportunities (as outlined in § 200.204).

(e) **Federal agency requirements.** Any other information required by the Federal agency.

§ 200.212 Public access to Federal award information.

(a) Except as noted in paragraph (c) of this section, the Federal agency must publish the required Federal award information on *USAspending.gov* in accordance with the guidance provided by OMB and the U.S. Department of the Treasury's Government-wide Spending Data Model (GSDM).

(b) All responsibility and qualification records posted in *SAM.gov* will be publicly available after a waiting period of 14 calendar days, except for:

(1) Past performance reviews required by Federal Government contractors (See Federal Acquisition Regulation (FAR) 48 CFR part 42, subpart 42.15);

(2) Information that was entered prior to April 15, 2011; or

(3) Information that is withdrawn during the 14-calendar day waiting period by a Federal agency.

(c) Nothing in this section may be construed as requiring the publication of information otherwise exempt under the Freedom of Information Act (5 U.S.C. 552), or controlled unclassified information pursuant to Executive Order 13556.

§ 200.213 Reporting a determination that an applicant is not qualified for a Federal award.

(a) The Federal agency must report in *SAM.gov* if it does not make a Federal award to an applicant because it determines that the applicant does not meet the minimum qualification standards as described in § 200.206(a)(2). The Federal agency must report that determination only if all of the following apply:

- (1) The only basis for the determination is the applicant's prior record of performance on administering Federal awards or its record of integrity and business ethics, as described in § 200.206(a)(2) (meaning, the applicant was determined to be qualified based on all factors other than those two standards); and
 - (2) The total Federal share of the Federal award was expected to exceed the simplified acquisition threshold over the period of performance.
- (b) The Federal agency is not required to report a determination that an applicant is not qualified for a Federal award if they issue the Federal award in accordance with the requirements of § 200.208.
- (c) If the Federal agency reports a determination that an applicant is not qualified for a Federal award, the Federal agency also must notify the applicant that:
- (1) The determination was made and reported in *SAM.gov*. The notification from the Federal agency to the applicant should also provide a brief explanation for the determination;
 - (2) The information will be kept in the system for a period of five years from the date of the determination and then archived (See section 872 of Public Law 110-417, as amended, codified at 41 U.S.C. 2313);
 - (3) Each Federal agency that considers making a Federal award to the applicant during that five-year period will consider that information in determining the applicant's qualification to receive a Federal award when the total Federal share of a Federal award is expected to exceed the simplified acquisition threshold over the period of performance;
 - (4) The applicant may review the responsibility and qualification records accessible in *SAM.gov* and comment on any information the system contains about the applicant; and
 - (5) Federal agencies must consider the applicant's comments in determining whether the applicant is qualified for a future Federal award.
- (d) If the Federal agency enters information into *SAM.gov* about a determination that an applicant is not qualified for a Federal award and subsequently:
- (1) Learns that any of that information is erroneous, the Federal agency must correct the information in the system within three business days; and
 - (2) Obtains an update to that information that could be helpful to other Federal agencies, the Federal agency should amend the information in the system within 30 days.
- (e) Federal agencies must not post any information that will be made publicly available in the non-public segment of the responsibility and qualification records that is covered by a disclosure exemption under the Freedom of Information Act. If a recipient asserts within seven calendar days to a Federal agency that some or all of the publicly available information is covered by a disclosure exemption under the Freedom of Information Act, the Federal agency that posted the information must remove the posting within seven calendar days of receiving the assertion. Prior to reposting the releasable information, the Federal agency must resolve the issue in accordance with the agency's Freedom of Information Act procedures.

§ 200.214 Suspension and debarment.

Recipients and subrecipients are subject to the nonprocurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, as well as 2 CFR part 180. The regulations in 2 CFR part 180 restrict making Federal awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from receiving or participating in Federal awards.

§ 200.215 Never contract with the enemy.

Federal agencies, recipients, and subrecipients are subject to the guidance implementing Never Contract with the Enemy in 2 CFR part 183. The guidance in 2 CFR part 183 affects covered contracts, grants, and cooperative agreements that are expected to exceed \$50,000 during the period of performance, are performed outside the United States and its territories, and are in support of a contingency operation in which members of the Armed Forces are actively engaged in hostilities.

§ 200.216 Prohibition on certain telecommunications and video surveillance equipment or services.

- (a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:
 - (1) Procure or obtain covered telecommunications equipment or services;
 - (2) Extend or renew a contract to procure or obtain covered telecommunications equipment or services;
or
 - (3) Enter into a contract (or extend or renew a contract) to procure or obtain covered telecommunications equipment or services.
- (b) As described in section 889 of Public Law 115-232, “covered telecommunications equipment or services” means any of the following:
 - (1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);
 - (2) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);
 - (3) Telecommunications or video surveillance services provided by such entities or using such equipment;
 - (4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country;
- (c) For the purposes of this section, “covered telecommunications equipment or services” also include systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

- (d) In implementing the prohibition under section 889 of Public Law 115-232, heads of executive agencies administering loan, grant, or subsidy programs must prioritize available funding and technical support to assist affected businesses, institutions, and organizations as is reasonably necessary for those affected entities to transition from covered telecommunications equipment or services, to procure replacement equipment or services, and to ensure that communications service to users and customers is sustained.
- (e) When the recipient or subrecipient accepts a loan or grant, it is certifying that it will comply with the prohibition on covered telecommunications equipment and services in this section. The recipient or subrecipient is not required to certify that funds will not be expended on covered telecommunications equipment or services beyond the certification provided upon accepting the loan or grant and those provided upon submitting payment requests and financial reports.
- (f) For additional information, see section 889 of Public Law 115-232 and § 200.471.

§ 200.217 Whistleblower protections.

An employee of a recipient or subrecipient must not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body described in paragraph (a)(2) of 41 U.S.C. 4712 information that the employee reasonably believes is evidence of gross mismanagement of a Federal contract or grant, a gross waste of Federal funds, an abuse of authority relating to a Federal contract or grant, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a Federal contract (including the competition for or negotiation of a contract) or grant. The recipient and subrecipient must inform their employees in writing of employee whistleblower rights and protections under 41 U.S.C. 4712. See statutory requirements for whistleblower protections at 10 U.S.C. 4701, 41 U.S.C. 4712, 41 U.S.C. 4304, and 10 U.S.C. 4310.

Subpart D—Post Federal Award Requirements

§ 200.300 Statutory and national policy requirements.

- (a) The Federal agency or pass-through entity must manage and administer the Federal award in a manner so as to ensure that Federal funding is expended and associated programs are implemented in full accordance with the U.S. Constitution, applicable Federal statutes and regulations—including provisions protecting free speech, religious liberty, public welfare, and the environment, and those prohibiting discrimination—and the requirements of this part. The Federal agency or pass-through entity must communicate to a recipient or subrecipient all relevant requirements, including those contained in general appropriations provisions, and incorporate them directly or by reference in the terms and conditions of the Federal award.
- (b) In administering Federal awards that are subject to a Federal statute prohibiting discrimination based on sex, the Federal agency or pass-through entity must ensure that the award is administered in a way that does not unlawfully discriminate based on sexual orientation or gender identity if the statute's prohibition on sex discrimination encompasses discrimination based on sexual orientation and gender identity consistent with the Supreme Court's reasoning in *Bostock v. Clayton County*, 140 S. Ct. 1731 (2020).
- (c) In administering awards in accordance with the U.S. Constitution, the Federal agency must take account of the heightened constitutional scrutiny that may apply under the Constitution's Equal Protection guarantee for government action that provides differential treatment based on protected characteristics.

§ 200.301 Performance measurement.

- (a) The Federal agency must measure the recipient's performance to show achievement of program goals and objectives, share lessons learned, improve program outcomes, and foster the adoption of promising practices. The Federal agency should establish program goals and objectives during program planning and design (see § 200.202). The Federal agency should clearly communicate the specific program goals and objectives in the Federal award, including how the Federal agency will measure the achievement of the goals and objectives, the expected timeline, and information on how the recipient must report the achievement of program goals and objectives. The Federal agency should also clearly communicate in the Federal award any expected outcomes (such as outputs, service performance, or public impacts of any of these), indicators, targets, baseline data, or data collections that the recipient is responsible for measuring and reporting. The Federal agency must ensure all requirements for measuring performance align with the Federal agency's strategic goals, strategic objectives, or performance goals relevant to a program (see OMB Circular A-11, Preparation, Submission, and Execution of the Budget Part 6).
- (b) When establishing performance reporting frequency and content, the Federal agency should consider what information will be necessary to measure the recipient's progress, to identify promising practices of recipients, and build the evidence upon which the Federal agency makes program and performance decisions. The Federal agency should not require additional information that is not necessary for measuring program performance and evaluation. See § 200.329 for more information on reporting program performance.
- (c) The Federal agency should also specify in the Federal award any requirements of the recipients' participation in federally funded evaluations.

§ 200.302 Financial management.

- (a) Each State must expend and account for the Federal award in accordance with State laws and procedures for expending and accounting for the State's funds. All recipient and subrecipient financial management systems, including records documenting compliance with Federal statutes, regulations, and the terms and conditions of the Federal award, must be sufficient to permit the preparation of reports required by the terms and conditions; and tracking expenditures to establish that funds have been used in accordance with Federal statutes, regulations, and the terms and conditions of the Federal award. See § 200.450.
- (b) The recipient's and subrecipient's financial management system must provide for the following (see §§ 200.334, 200.335, 200.336, and 200.337):
 - (1) Identification of all Federal awards received and expended and the Federal programs under which they were received. Federal program and Federal award identification must include, as applicable, the Assistance Listings title and number, Federal award identification number, year the Federal award was issued, and name of the Federal agency or pass-through entity.
 - (2) Accurate, current, and complete disclosure of the financial results of each Federal award or program in accordance with the reporting requirements in §§ 200.328 and 200.329. When a Federal agency or pass-through entity requires reporting on an accrual basis from a recipient or subrecipient that maintains its records other than on an accrual basis, the recipient or subrecipient must not be required to establish an accrual accounting system. This recipient or subrecipient may develop accrual data for its reports based on an analysis of the documentation on hand.

- (3) Maintaining records that sufficiently identify the amount, source, and expenditure of Federal funds for Federal awards. These records must contain information necessary to identify Federal awards, authorizations, financial obligations, unobligated balances, as well as assets, expenditures, income, and interest. All records must be supported by source documentation.
- (4) Effective control over and accountability for all funds, property, and assets. The recipient or subrecipient must safeguard all assets and ensure they are used solely for authorized purposes. See § 200.303.
- (5) Comparison of expenditures with budget amounts for each Federal award.
- (6) Written procedures to implement the requirements of § 200.305.
- (7) Written procedures for determining the allowability of costs in accordance with subpart E and the terms and conditions of the Federal award.

§ 200.303 Internal controls.

The recipient and subrecipient must:

- (a) Establish, document, and maintain effective internal control over the Federal award that provides reasonable assurance that the recipient or subrecipient is managing the Federal award in compliance with Federal statutes, regulations, and the terms and conditions of the Federal award. These internal controls should align with the guidance in “Standards for Internal Control in the Federal Government” issued by the Comptroller General of the United States or the “Internal Control-Integrated Framework” issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).
- (b) Comply with the U.S. Constitution, Federal statutes, regulations, and the terms and conditions of the Federal award.
- (c) Evaluate and monitor the recipient's or subrecipient's compliance with statutes, regulations, and the terms and conditions of Federal awards.
- (d) Take prompt action when instances of noncompliance are identified.
- (e) Take reasonable cybersecurity and other measures to safeguard information including protected personally identifiable information (PII) and other types of information. This also includes information the Federal agency or pass-through entity designates as sensitive or other information the recipient or subrecipient considers sensitive and is consistent with applicable Federal, State, local, and tribal laws regarding privacy and responsibility over confidentiality.

§ 200.304 Bonds.

- (a) Where the Federal Government guarantees or insures the repayment of money borrowed by the recipient, the Federal agency may require adequate bonding and insurance if the bonding and insurance requirements of the recipient are not deemed adequate to protect the interest of the Federal Government.
- (b) The Federal agency may require adequate fidelity bond coverage where the recipient lacks coverage to protect the interest of the Federal Government.
- (c) Where bonds, insurance, or both are required in the situations described above, the bonds and insurance must be obtained from companies holding certificates of authority issued by the U.S. Department of Treasury (see 31 CFR part 223).

§ 200.305 Federal payment.

- (a) **Payments for States.** Payments for States are governed by Treasury-State Cash Management Improvement Act (CMIA) agreements and default procedures codified at 31 CFR part 205 and Treasury Financial Manual (TFM) 4A-2000, "Overall Disbursing Rules for All Federal Agencies."
- (b) **Payments for recipients and subrecipients other than States.** For recipients and subrecipients other than States, payment methods must minimize the time elapsing between the transfer of funds from the Federal agency or the pass-through entity and the disbursement of funds by the recipient or subrecipient regardless of whether the payment is made by electronic funds transfer or by other means. See § 200.302(b)(6). Except as noted in this part, the Federal agency must require recipients to use only OMB-approved, government-wide information collections to request payment.
 - (1) The recipient or subrecipient must be paid in advance, provided it maintains or demonstrates the willingness to maintain both written procedures that minimize the time elapsing between the transfer of funds and disbursement by the recipient or subrecipient, and financial management systems that meet the standards for fund control and accountability as established in this part. Advance payments to a recipient or subrecipient must be limited to the minimum amounts needed and be timed with actual, immediate cash requirements of the recipient or subrecipient in carrying out the purpose of the approved program or project. The timing and amount of advance payments must be as close as is administratively feasible to the actual disbursements by the recipient or subrecipient for direct program or project costs and the proportionate share of any allowable indirect costs. The recipient or subrecipient must make timely payments to contractors in accordance with the contract provisions.
 - (2) Whenever possible, advance payment requests by the recipient or subrecipient must be consolidated to cover anticipated cash needs for all Federal awards received by the recipient from the awarding Federal agency or pass-through entity.
 - (i) Advance payment mechanisms must comply with 31 CFR part 208 and include, but are not limited to, Treasury checks and electronic funds transfers.
 - (ii) Recipients and subrecipients must be authorized to submit payment requests as often as necessary when electronic fund transfers are used or at least monthly when electronic transfers are not used. See Electronic Fund Transfer Act (15 U.S.C. 1693-1693r).
 - (3) Reimbursement is preferred when the requirements in paragraph (b) cannot be met, when the Federal agency or pass-through entity sets a specific condition per § 200.208, when requested by the recipient or subrecipient, when a Federal award is for construction, or when a significant portion of the construction project is accomplished through private market financing or Federal loans and the Federal award constitutes a minor portion of the project. When the reimbursement method is used, the Federal agency or pass-through entity must make payment within 30 calendar days after receipt of the payment request unless the Federal agency or pass-through entity reasonably believes the request to be improper.
 - (4) If the recipient or subrecipient cannot meet the criteria for advance payments and the Federal agency or pass-through entity has determined that reimbursement is not feasible because the recipient or subrecipient lacks sufficient working capital, the Federal agency or pass-through entity may provide cash on a working capital advance basis. Under this procedure, the Federal agency or pass-through entity must advance cash payments to the recipient or subrecipient to cover its estimated disbursement needs for an initial period generally aligned to the recipient's or subrecipient's

disbursing cycle. After that, the Federal agency or pass-through entity must reimburse the recipient or subrecipient for its actual cash disbursements. Use of the working capital advance payment method requires that the pass-through entity provide timely advance payments to any subrecipients to meet the subrecipient's actual cash disbursements. The pass-through entity must not use the working capital advance method of payment if the reason for using this method is the unwillingness or inability of the pass-through entity to provide timely advance payments to the subrecipient to meet the subrecipient's actual cash disbursements.

- (5) If available, the recipient or subrecipient must disburse funds available from program income (including repayments to a revolving fund), rebates, refunds, contract settlements, audit recoveries, and interest earned on Federal funds before requesting additional cash payments.
- (6) Payments for allowable costs must not be withheld at any time during the period of performance unless required by Federal statute, regulations, or in one of the following instances:
 - (i) The recipient or subrecipient has failed to comply with the terms and conditions of the Federal award; or
 - (ii) The recipient or subrecipient is delinquent in a debt to the United States as defined in OMB Circular A-129, "Policies for Federal Credit Programs and Non-Tax Receivables." Under such conditions, the Federal agency or pass-through entity may, after providing reasonable notice, withhold payments to the recipient or subrecipient for financial obligations incurred after a specified date until the conditions are corrected or the debt is repaid to the Federal Government.
- (7) A payment withheld for failure to comply with the terms and conditions of the Federal award must be released to the recipient or subrecipient upon subsequent compliance. When a Federal award is suspended, payment adjustments must be made in accordance with § 200.343.
- (8) A payment must not be made to a recipient or subrecipient for amounts that the recipient or subrecipient withholds from contractors to assure satisfactory completion of work. Payment must be made when the recipient or subrecipient disburses the withheld funds to the contractors or to escrow accounts established to ensure satisfactory completion of work.
- (9) The Federal agency or pass-through entity must not require separate depository accounts for funds provided to the recipient or subrecipient or establish any eligibility requirements for depositories. However, the recipient or subrecipient must be able to account for all Federal funds received, obligated, and expended.
- (10) Advance payments of Federal funds must be deposited and maintained in insured accounts whenever possible.
- (11) The recipient or subrecipient must maintain advance payments of Federal funds in interest-bearing accounts unless one of the following applies:
 - (i) The recipient or subrecipient receives less than \$250,000 in Federal funding per year;
 - (ii) The best available interest-bearing account would not reasonably be expected to earn interest in excess of \$500 per year on Federal cash balances;
 - (iii) The depository would require an average or minimum balance so high that it would not be feasible with the expected Federal and non-Federal cash resources;
 - (iv) A foreign government or banking system prohibits or precludes interest-bearing accounts; or

- (v) An interest-bearing account is not readily accessible (for example, due to public or political unrest in a foreign country).
- (12) The recipient or subrecipient may retain up to \$500 per year of interest earned on Federal funds to use for administrative expenses of the recipient or subrecipient. Any additional interest earned on Federal funds must be returned annually to the Department of Health and Human Services Payment Management System (PMS) through either the Automated Clearing House (ACH) network or a Fedwire Funds Service payment. All interest in excess of \$500 per year must be returned to PMS regardless of whether the recipient or subrecipient was paid through PMS. Instructions for returning interest can be found at <https://pms.psc.gov/grant-recipients/returning-funds-interest.html>.
- (13) All other Federal funds must be returned to the payment system of the Federal agency. Returns should follow the instructions provided by the Federal agency. All returns to PMS should follow the instructions provided at <https://pms.psc.gov/grant-recipients/returning-funds-interest.html>.

§ 200.306 Cost sharing.

- (a) Voluntary committed cost sharing is not expected under Federal research grants. The Federal agency may not use voluntary committed cost sharing as a factor during the merit review of applications or proposals for Federal research grants unless authorized by Federal statutes or agency regulations and specified in the notice of funding opportunity. Federal agencies are also discouraged from using voluntary committed cost sharing as a factor during the merit review of applications for other Federal financial assistance programs. If voluntary committed cost sharing is used for this purpose for other programs, the notice of funding opportunity must specify how an applicant's proposed cost sharing will be considered. See §§ 200.414, 200.204, and Appendix I.
- (b) For all Federal awards, the Federal agency or pass-through entity must accept any cost sharing funds (including cash and third-party in-kind contributions, and also including funds committed by the recipient, subrecipient, or third parties) as part of the recipient's or subrecipient's contributions to a program when the funds:
 - (1) Are verifiable in the recipient's or subrecipient's records;
 - (2) Are not included as contributions for any other Federal award;
 - (3) Are necessary and reasonable for achieving the objectives of the Federal award;
 - (4) Are allowable under subpart E;
 - (5) Are not paid by the Federal Government under another Federal award, except where the program's Federal authorizing statute specifically provides that Federal funds made available for the program can be applied to cost sharing requirements of other Federal programs;
 - (6) Are provided for in the approved budget when required by the Federal agency; and
 - (7) Conform to other applicable provisions of this part.
- (c) Unrecovered indirect costs, including indirect costs on cost sharing, may be included as part of cost sharing with the prior approval of the Federal agency or pass-through entity. Unrecovered indirect cost means the difference between the amount charged to the Federal award and the amount which could have been charged to the Federal award under the recipient's or subrecipient's approved indirect cost rate.

- (d) Values for recipient or subrecipient contributions of services and property must be established in accordance with the cost principles in subpart E. When a Federal agency or pass-through entity authorizes the recipient or subrecipient to donate buildings or land for construction/facilities acquisition projects or long-term use, the value of the donated property for cost sharing must be the lesser of paragraph (d)(1) or (2) below.
 - (1) The value of the remaining life of the property recorded in the recipient's or subrecipient's accounting records at the time of donation.
 - (2) The current fair market value. However, when there is sufficient justification, the Federal agency or pass-through may approve using the current fair market value of the donated property, even if it exceeds the value described in paragraph (d)(1) at the time of donation.
- (e) Volunteer services furnished by third-party professional and technical personnel, consultants, and other labor may be counted as cost sharing if the service is necessary for the program. Rates for third-party volunteer services must be consistent with those paid for similar work by the recipient or subrecipient. When the required skills are not found in the recipient's or subrecipient's workforce, rates must be consistent with those paid for similar work in the labor market where the recipient or subrecipient competes for the services involved. In either case, fringe benefits that are allowable, allocable, and reasonable may be included in the valuation.
- (f) When a third-party organization furnishes the services of an employee, these services must be valued at the employee's regular rate of pay plus an amount of fringe benefits that is reasonable, necessary, allocable, and otherwise allowable, and indirect costs at either the third-party organization's approved federally-negotiated indirect cost rate or, a rate in accordance with § 200.414(d) provided these services employ the same skill(s) for which the employee is normally paid. Where donated services are treated as indirect costs, indirect cost rates will separate the value of the donated services so that reimbursement for the donated services will not be made.
- (g) Donated property from third parties may include items such as equipment, office supplies, laboratory supplies, or workshop and classroom supplies. The assessed value of donated property included as cost sharing must not exceed the property's fair market value at the time of the donation.
- (h) The method used for determining the value of donated equipment, buildings, and land for which title passes to the recipient or subrecipient may differ according to the following:
 - (1) If the purpose of the Federal award is to assist the recipient or subrecipient in acquiring equipment, buildings, or land, the aggregate value of the donated property may be claimed as cost sharing.
 - (2) If the purpose of the Federal award is to support activities that require the use of equipment, buildings, or land, only depreciation charges for equipment and buildings may be made. However, the fair market value of equipment or other capital assets and fair rental charges for land may be allowed if provided in the terms and conditions of the Federal award. See § 200.420.
- (i) The value of donated property must be determined in accordance with the accounting policies of the recipient or subrecipient with the following qualifications:
 - (1) The value of donated land and buildings must not exceed its fair market value at the time of donation to the recipient or subrecipient as established by an independent appraiser (for example, certified real property appraiser or General Services Administration representative) and certified by a responsible official of the recipient or subrecipient as required by the Uniform Relocation Assistance

and Real Property Acquisition Policies Act of 1970, as amended, (42 U.S.C. 4601-4655) except as provided in the implementing regulations at 49 CFR part 24, "Uniform Relocation Assistance And Real Property Acquisition For Federal And Federally-Assisted Programs."

- (2) The value of donated equipment must not exceed the fair market value at the time of donation.
- (3) The value of donated space must not exceed the fair rental value of comparable space as established by an independent appraisal of comparable space and facilities in a privately-owned building in the same locality.
- (4) The value of loaned equipment must not exceed its fair rental value.
- (j) The fair market value of third-party in-kind contributions must be documented and, to the extent feasible, supported by the same methods used internally by the recipient or subrecipient.
- (k) For institutions of higher education (IHE), voluntary uncommitted cost sharing should be treated differently from mandatory or voluntary committed cost sharing. Voluntary uncommitted cost sharing should not be included in the organized research base for computing the indirect cost rate or reflected in any allocation of indirect costs. Voluntary uncommitted cost sharing includes faculty-donated additional time above that agreed to as part of the award. See OMB memorandum M-01-06, dated January 5, 2001, Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission Costs.

§ 200.307 Program income.

- (a) **General.** The recipient or subrecipient is encouraged to earn income to defray program costs when appropriate. Program income must be used for the original purpose of the Federal award. Program income earned during the period of performance may only be used for costs incurred during the period of performance or allowable closeout costs. See § 200.472(b). Program income must be expended prior to requesting additional Federal funds. Program income exceeding amounts specified in the Federal award may be added to or deducted from the total allowable costs in accordance with the terms and conditions of the Federal award.
- (b) **Use of program income.** There are three methods of applying program income: deduction; addition; and cost-sharing. The Federal agency should specify what program income method(s) will be used in the terms and conditions of the Federal award. The deduction method will be used if the Federal agency does not specify a method for applying program income. When no program income method is specified in the Federal award, prior approval is required to use the addition or cost sharing methods. However, the addition method will be used when no method is specified for awards made to institutions of higher education (IHE) and nonprofit research institutions. In specifying alternatives to the deduction and addition methods, the Federal agency may distinguish between income earned by the recipient and income earned by subrecipients as well as between the sources, kinds, or amounts of income.
 - (1) **Deduction.** Program income is deducted from the total allowable costs, reducing the overall total amount of the Federal award.
 - (2) **Addition.** Program income is added to the total allowable costs, increasing the overall total amount of the Federal award.
 - (3) **Cost sharing.** Program income is used to meet the Federal award's cost sharing requirement.

- (c) **Income after the period of performance.** There are no requirements governing the disposition of program income earned after the end of the period of performance of the Federal award unless stipulated in the Federal agency regulations or the terms and conditions of the Federal award. The Federal agency may negotiate agreements with recipients regarding appropriate uses of income earned after the end of the period of performance as part of the closeout process. See § 200.344.
- (d) **Cost of generating program income.** If authorized by Federal regulations or the Federal award, costs incidental to generating program income may be deducted from gross income to determine program income, provided these costs have not been charged to the Federal award.
- (e) **Not considered program income.** The following are not considered program income unless specified in Federal statutes, regulations, or the terms and conditions of the Federal award:
 - (1) **Governmental revenues.** Taxes, special assessments, levies, fines, and similar revenues the recipient or subrecipient raised.
 - (2) **Property.** Proceeds from the sale of real property, equipment, or supplies. The proceeds must be handled in accordance with the requirements of the Property Standards of §§ 200.311, 200.313, 200.314, or as explicitly identified in Federal statutes, regulations, or the terms and conditions of the Federal award.
 - (3) **License fees and royalties.** License fees and royalties for copyrighted material, patents, patent applications, trademarks, and inventions made under the Federal award subject to 37 CFR part 401.

§ 200.308 Revision of budget and program plans.

- (a) **Approved budget in general.** The approved budget for the Federal award summarizes the financial aspects of the project or program as approved during the Federal award process. It may include the Federal share and non-Federal share or only the Federal share, as determined by the Federal agency or pass-through entity.
- (b) **Deviations from approved budget.** The recipient or subrecipient must report deviations from the approved budget, project or program scope, or objective(s) in accordance with § 200.329. The recipient or subrecipient must request prior approvals from the Federal agency or pass-through entity for budget and program plan revisions in accordance with this section.
- (c) **Requesting approval for budget revisions.** When requesting approval for budget revisions, the recipient or subrecipient must use the same format for budget information that was used in their application, except if the Federal agency has approved an alternative format. Alternative formats may include the use of electronic systems, email, or other agency-approved mechanisms that document the request.
- (d) **Federal agency or pass-through entity review.** The Federal agency or pass-through entity must review the request for budget or program plan revision and should notify the recipient or subrecipient whether the revisions have been approved within 30 days of receipt of the request. The Federal agency or pass-through entity must inform the recipient or subrecipient in writing when a decision can be expected if more than 30 days is required for a review.
- (e) **Limitation on other prior approval requirements.** Unless specified in this guidance, the Federal agency must not impose additional prior approval requirements without OMB approval. See also §§ 200.102 and 200.407.
- (f) **Revisions Requiring Prior Approval.** A recipient or subrecipient must request prior written approval from the Federal agency or pass-through entity for the following program and budget-related reasons:

- (1) Change in the scope or the objective of the project or program (even if there is no associated budget revision requiring prior written approval).
- (2) Change in key personnel (including employees and contractors) that are identified by name or position in the Federal award.
- (3) The disengagement from a project for more than three months, or a 25 percent reduction in time and effort devoted to the Federal award over the course of the period of performance, by the approved project director or principal investigator.
- (4) The inclusion, unless waived by the Federal agency, of costs that require prior approval in accordance with subpart E as applicable.
- (5) The transfer of funds budgeted for participant support costs to other budget categories.
- (6) Subaward activities not proposed in the application and approved in the Federal award. A change of subrecipient only requires prior approval if the Federal agency or pass-through entity includes the requirement in the terms and conditions of the Federal award. In general, a Federal agency or pass-through entity should not require prior approval of a change of subrecipient unless the inclusion was a determining factor in the merit review or eligibility process. This requirement does not apply to procurement transactions for goods and services.
- (7) Changes in the total approved cost-sharing amount.
- (8) The need arises for additional Federal funds to complete the project. Before providing approval, the Federal agency must ensure that adequate funds are available to avoid a violation of the Antideficiency Act.
- (9) Transferring funds between the construction and non-construction work under a Federal award.
- (10) A no-cost extension (meaning, an extension of time that does not require the obligation of additional Federal funds) of the period of performance, other than any one-time extension authorized by the Federal agency in accordance with paragraph (g)(2). All requests for no-cost extensions should be submitted at least 10 calendar days before the conclusion of the period of performance. The Federal agency may approve multiple no-cost extensions under a Federal award if not prohibited by Federal statute or regulation.

(g) **Waiver of certain prior approvals.** Except for the requirements listed in paragraphs (f)(1) through (10), the Federal agency is authorized to waive other cost-related and administrative prior written approval requirements contained in subparts D and E. Such waivers may include authorizing recipients to do one or more of the following:

- (1) **Pre-award costs.** Incur project costs 90 calendar days before the Federal award date. Expenses incurred more than 90 calendar days before the Federal award date require prior approval of the Federal agency. All costs incurred before the Federal award date are at the recipient's own risk (*for example*, the Federal agency is not required to reimburse such costs if the recipient does not receive the Federal award or if the Federal award is less than anticipated and inadequate to cover such costs). Pre-award costs must be charged to the initial budget period of the Federal award unless otherwise specified by the Federal agency. See also § 200.458.
- (2) **One-time extensions.** Initiate a one-time extension of the period of performance by up to 12 months unless one or more of the conditions outlined in paragraphs (g)(2)(i) through (iii) of this section apply. Prior approval is not required if a recipient is authorized in the terms and conditions of the

Federal award to initiate a one-time extension. However, the recipient must notify the Federal agency in writing with the supporting justification and a revised period of performance at least 10 calendar days before the conclusion of the period of performance. A one-time extension may not be exercised for the sole purpose of using unobligated balances. This paragraph does not preclude the Federal agency from approving further no-cost extensions to the Federal award. One-time extensions require prior approval from the Federal agency when:

- (i) The terms and conditions of the Federal award prohibit the extension;
- (ii) The extension requires additional Federal funds; or
- (iii) The extension involves any change in the approved scope of the project.

(3) **Unobligated Balances.** Carry forward unobligated balances to subsequent budget periods.

(h) **Prior approvals for research awards.** The prior approval requirements for the actions described in paragraph (g) of this section are automatically waived for Federal awards that support research unless stipulated in the Federal agency's regulations or terms and conditions of the Federal award. However, one-time extensions require the Federal agency's prior approval when one of the conditions in paragraph (g)(2) of this section applies.

(i) **Transfer of funds.** The Federal agency must not permit a transfer of funds that would cause any Federal appropriation to be used for purposes other than those consistent with the appropriation. The Federal agency may also, at its option, restrict the transfer of funds among direct cost categories (for example, personnel, travel, and supplies) or programs, functions, and activities when:

- (1) The Federal share of the Federal award exceeds the simplified acquisition threshold; and
- (2) The cumulative amount of a transfer exceeds or is expected to exceed 10 percent of the total budget, including cost share, as last approved by the Federal agency.

§ 200.309 Modifications to Period of Performance.

When the Federal agency or pass-through entity approves an extension to a Federal award, or if a recipient extends under § 200.308(g)(2), the period of performance will be amended to end at the completion of the extension. If termination occurs, the period of performance will be amended to end upon the effective date of termination. The start date of a renewal award begins a new and distinct period of performance.

PROPERTY STANDARDS

§ 200.310 Insurance coverage.

The recipient or subrecipient must, at a minimum, provide the equivalent insurance coverage for real property and equipment acquired or improved with Federal funds as provided to property and equipment owned by the recipient or subrecipient. Insurance is not required for Federally owned property unless required by the terms and conditions of the Federal award.

§ 200.311 Real property.

(a) **Title.** Subject to the requirements and conditions set forth in this section, title to real property acquired or improved under the Federal award will vest upon acquisition in the recipient or subrecipient.

- (b) **Use.** Except as otherwise provided by Federal statutes or the Federal agency, real property must be used for the originally authorized purpose as long as it is needed for that purpose. While the property is being used for the originally authorized purpose, the recipient or subrecipient must not dispose of or encumber its title or other interests except as provided by the Federal agency. Easements for utility, cable, and similar services that benefit the real property and are consistent with the authorized use are not considered an encumbrance.
- (c) **Appraisals.** When an appraisal of real property is required and obtained by the recipient or subrecipient, it must be conducted by an independent appraiser (for example, certified real property appraiser or General Services Administration representative) and certified by a responsible official of the recipient or subrecipient as required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, (42 U.S.C. 4601-4655) except as provided in the implementing regulations at 49 CFR part 24, "Uniform Relocation Assistance And Real Property Acquisition For Federal And Federally-Assisted Programs."
- (d) **Disposition.** When real property is no longer needed for the originally authorized purpose, the recipient or subrecipient must obtain disposition instructions from the Federal agency or pass-through entity. The instructions must specify one of the following disposition methods:
 - (1) **Retain title after compensating the Federal agency.** When the recipient or subrecipient retains title to the property, it must pay the Federal agency an amount calculated by multiplying the percentage of the Federal agency's contribution towards the original purchase (and costs of any improvements) by the current fair market value of the property. However, in situations where the recipient or subrecipient is disposing of real property acquired or improved with the Federal award and acquiring replacement real property under the same Federal award, the net proceeds from the disposition may be used as an offset to the cost of the replacement property.
 - (2) **Sell the property and compensate the Federal agency.** When a recipient or subrecipient sells the property, it must pay the Federal agency an amount calculated by multiplying the percentage of the Federal agency's contribution towards the original purchase (and cost of any improvements) by the proceeds of the sale after deducting any actual and reasonable expenses paid to sell or fix up the property for sale. When the Federal award has not been closed out, the net proceeds from the sale may be offset against the original cost of the property. When directed to sell the property, the recipient or subrecipient must sell the property utilizing procedures that provide for competition to the extent practicable and that result in the highest possible return.
 - (3) **Transfer title to the Federal agency or a third party designated/approved by the Federal agency.** When a recipient or subrecipient transfers title to the property to a Federal agency or third party designated or approved by the Federal agency, the recipient or subrecipient is entitled to be paid an amount calculated by multiplying the percentage of the recipient's or subrecipient's contribution towards the original purchase of the real property (and cost of any improvements) by the current fair market value of the property.

§ 200.312 Federally owned and exempt property.

- (a) Title to Federally owned property remains vested in the Federal Government. The recipient or subrecipient must submit an inventory listing of Federally owned property in its custody to the Federal agency or pass-through entity on an annual basis. The recipient or subrecipient must request disposition instructions from the Federal agency or pass-through entity upon completion of the Federal award or when the property is no longer needed.

- (b) If the Federal agency has no further need for the property, it must declare the property excess and report it for disposal to the appropriate Federal disposal authority unless the Federal agency has statutory authority to dispose of the property by alternative methods (*for example*, the authority provided by the Federal Technology Transfer Act (15 U.S.C. 3710(i)). The Federal agency or pass-through entity must issue appropriate instructions to the recipient or subrecipient.
- (c) Exempt property means property acquired under the Federal award where the Federal agency has chosen to vest title to the property to the recipient or subrecipient without further responsibility to the Federal Government. The Federal agency may only exercise this option when permitted by Federal statute and set forth in the terms and conditions of the Federal award. Absent statutory authority and specific terms and conditions of the Federal award, the title to exempt property acquired under the Federal award remains with the Federal Government.

§ 200.313 Equipment.

See also § 200.439.

- (a) **Title.** Title to equipment acquired under the Federal award will vest upon acquisition in the recipient or subrecipient subject to the conditions of this section. This title must be a conditional title unless a Federal statute specifically authorizes the Federal agency to vest title in the recipient or subrecipient without further responsibility to the Federal Government (and the Federal agency elects to do so). A conditional title means a clear title is withheld by the Federal agency until conditions and requirements specified in the terms and conditions of a Federal award have been fulfilled. Title for equipment vested in a recipient or subrecipient is subject to the following conditions:
 - (1) Use the equipment for the authorized purposes of the project during the period of performance or until the property is no longer needed for the purposes of the project.
 - (2) While the equipment is being used for the originally-authorized purpose, the recipient or subrecipient must not dispose of or encumber its title or other interests without the approval of the Federal agency or pass-through entity.
 - (3) Use and dispose of the property in accordance with paragraphs (b), (c), and (e) of this section.
- (b) **General.** A State must use, manage and dispose of equipment acquired under a Federal award in accordance with State laws and procedures. Indian Tribes must use, manage, and dispose of equipment acquired under a Federal award in accordance with tribal laws and procedures. If such laws and procedures do not exist, Indian Tribes must follow the guidance in this section. Other recipients and subrecipients, including subrecipients of a State or Indian Tribe, must follow paragraphs (c) through (e) of this section.
- (c) **Use.**
 - (1) The recipient or subrecipient must use equipment for the project or program for which it was acquired and for as long as needed, whether or not the project or program continues to be supported by the Federal award. The recipient or subrecipient must not encumber the equipment without prior approval of the Federal agency or pass-through entity. The Federal agency may require the submission of the applicable common forms for reporting on equipment. When no longer needed for the original project or program, the equipment may be used in other activities in the following order of priority:

- (i) Activities under other Federal awards from the Federal agency that funded the original program or project; then
 - (ii) Activities under Federal awards from other Federal agencies. These activities include consolidated equipment for information technology systems.
- (2) During the time that equipment is used on the project or program for which it was acquired, the recipient or subrecipient must also make the equipment available for use on other programs or projects supported by the Federal Government, provided that such use will not interfere with the purpose for which it was originally acquired. First preference for other use of the equipment must be given to other programs or projects supported by the Federal agency that financed the equipment. Second preference must be given to programs or projects under Federal awards from other Federal agencies. Use for non-federally-funded projects is also permissible, provided such use will not interfere with the purpose for which it was originally acquired. The recipient or subrecipient should consider charging user fees as appropriate.
- (3) Notwithstanding the encouragement in § 200.307 to earn program income, the recipient or subrecipient must not use equipment acquired with the Federal award to provide services for a fee that is less than a private company would charge for similar services unless specifically authorized by Federal statute. This restriction is effective as long as the Federal Government retains an interest in the equipment.
- (4) When acquiring replacement equipment, the recipient or subrecipient may either trade-in or sell the equipment and use the proceeds to offset the cost of the replacement equipment.
- (d) **Management requirements.** Regardless of whether equipment is acquired in part or its entirety under the Federal award, the recipient or subrecipient must manage equipment (including replacement equipment) utilizing procedures that meet the following requirements:
 - (1) Property records must include a description of the property, a serial number or another identification number, the source of funding for the property (including the FAIN), the title holder, the acquisition date, the cost of the property, the percentage of the Federal agency contribution towards the original purchase, the location, use and condition of the property, and any disposition data including the date of disposal and sale price of the property. The recipient and subrecipient are responsible for maintaining and updating property records when there is a change in the status of the property.
 - (2) A physical inventory of the property must be conducted, and the results must be reconciled with the property records at least once every two years.
 - (3) A control system must be in place to ensure safeguards for preventing property loss, damage, or theft. Any loss, damage, or theft of equipment must be investigated. The recipient or subrecipient must notify the Federal agency or pass-through entity of any loss, damage, or theft of equipment that will have an impact on the program.
 - (4) Regular maintenance procedures must be in place to ensure the property is in proper working condition.
 - (5) If the recipient or subrecipient is authorized or required to sell the property, proper sales procedures must be in place to ensure the highest possible return.

(e) **Disposition.** When equipment acquired under a Federal award is no longer needed for the original project, program, or for other activities currently or previously supported by a Federal agency, the recipient or subrecipient must request disposition instructions from the Federal agency or pass-through entity if required by the terms and conditions of the Federal award. Disposition of the equipment will be made as follows, in accordance with Federal agency or pass-through entity disposition instructions:

- (1) Equipment with a current fair market value of \$10,000 or less (per unit) may be retained, sold, or otherwise disposed of with no further responsibility to the Federal agency or pass-through entity.
- (2) Except as provided in § 200.312(b), or if the Federal agency or pass-through entity fails to provide requested disposition instructions within 120 days, items of equipment with a current fair market value in excess of \$10,000 (per-unit) may be retained or sold by the recipient or subrecipient. However, the Federal agency is entitled to an amount calculated by multiplying the percentage of the Federal agency's contribution towards the original purchase by the current market value or proceeds from the sale. If the equipment is sold, the Federal agency or pass-through entity may permit the recipient or subrecipient to retain, from the Federal share, \$1,000 of the proceeds to cover expenses associated with the selling and handling of the equipment.
- (3) The recipient or subrecipient may transfer title to the property to the Federal Government or to an eligible third party provided that the recipient or subrecipient must be entitled to compensation for its attributable percentage of the current fair market value of the property.
- (4) In cases where a recipient or subrecipient fails to take appropriate disposition actions, the Federal agency or pass-through entity may direct the recipient or subrecipient to take disposition actions.

(f) **Equipment retention.** When included in the terms and conditions of the Federal award, the Federal agency may permit the recipient to retain equipment, or authorize a pass-through entity to permit the subrecipient to retain equipment, with no further obligation to the Federal Government unless prohibited by Federal statute or regulation.

§ 200.314 Supplies.

See also § 200.453.

- (a) Title to supplies acquired under the Federal award will vest upon acquisition in the recipient or subrecipient. When there is a residual inventory of unused supplies exceeding \$10,000 in aggregate value at the end of the period of performance, and the supplies are not needed for any other Federal award, the recipient or subrecipient may retain or sell the unused supplies. Unused supplies means supplies that are in new condition, not having been used or opened before. The aggregate value of unused supplies consists of all supply types, not just like-item supplies. The Federal agency or pass-through entity is entitled to compensation in an amount calculated by multiplying the percentage of the Federal agency's or pass-through entity's contribution towards the cost of the original purchase(s) by the current market value or proceeds from the sale. If the supplies are sold, the Federal agency or pass-through entity may permit the recipient or subrecipient to retain, from the Federal share, \$1,000 of the proceeds to cover expenses associated with the selling and handling of the supplies.
- (b) Unless expressly authorized by Federal statute, the recipient or subrecipient must not use supplies acquired with the Federal award to provide services for a fee that is less than a private company would charge for similar services. This restriction is effective as long as the Federal Government retains an interest in the supplies or as authorized by Federal statute.

§ 200.315 Intangible property.

- (a) Title to intangible property acquired under a Federal award vests upon acquisition in the recipient or subrecipient. The recipient or subrecipient must use that intangible property for the originally authorized purpose and must not encumber the property without the approval of the Federal agency or pass-through entity. When no longer needed for the originally authorized purpose, disposition of the intangible property must occur in accordance with the provisions in § 200.313(e).
- (b) To the extent permitted by law, the recipient or subrecipient may copyright any work that is subject to copyright and was developed, or for which ownership was acquired, under a Federal award. The Federal agency reserves a royalty-free, nonexclusive, and irrevocable right to reproduce, publish, or otherwise use the work for Federal purposes and to authorize others to do so. This includes the right to require recipients and subrecipients to make such works available through agency-designated public access repositories.
- (c) The recipient or subrecipient is subject to applicable regulations governing patents and inventions, including government-wide regulations in 37 CFR part 401.
- (d) The Federal Government has the right to:
 - (1) Obtain, reproduce, publish, or otherwise use the data produced under a Federal award; and
 - (2) Authorize others to receive, reproduce, publish, or otherwise use the data for Federal purposes.
- (e)
 - (1) The recipient or subrecipient must provide research data relating to published research findings produced under the Federal award and that were used by the Federal Government in developing an agency action that has the force and effect of law if requested by the Federal agency in response to a Freedom of Information Act (FOIA) request. When the Federal agency obtains the research data solely in response to a FOIA request, the Federal agency may charge the requester a fee for the cost of obtaining the research data. This fee should reflect the costs incurred by the Federal agency and the recipient or subrecipient. This fee is in addition to any fees the Federal agency may assess under the FOIA (5 U.S.C. 552(a)(4)(A)).
 - (2) Published research findings mean:
 - (i) Research findings published in a peer-reviewed scientific or technical journal; or
 - (ii) Research findings publicly cited by a Federal agency in developing an agency action that has the force and effect of law.
 - (3) Research data means the recorded factual material commonly accepted in the scientific community as necessary to validate research findings. Research data does not include any of the following:
 - (i) Preliminary analyses, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues. This “recorded” material excludes physical objects (for example, laboratory samples).
 - (ii) Trade secrets, commercial information, materials necessary to be held confidential by a researcher until they are published, or similar information which is protected under law; and
 - (iii) Personnel, medical, and other personally identifiable information that, if disclosed, would constitute an invasion of personal privacy. Information that could identify a particular person in a research study is not considered research data.

- (f) Federal agencies should work with recipients to maximize public access to Federally funded research results and data in a manner that protects data providers' confidentiality, privacy, and security. Agencies should provide guidance to recipients to make restricted-access data available through a variety of mechanisms. FOIA may not be the most appropriate mechanism for providing access to intangible property, including Federally funded research results and data.

§ 200.316 Property trust relationship.

Real property, equipment, and intangible property acquired or improved with the Federal award must be held in trust by the recipient or subrecipient as trustee for the beneficiaries of the project or program under which the property was acquired or improved. The Federal agency or pass-through entity may require the recipient or subrecipient to record liens or other appropriate notices of record to indicate that personal or real property has been acquired or improved with a Federal award and that use and disposition conditions apply to the property.

PROCUREMENT STANDARDS

§ 200.317 Procurements by States and Indian Tribes.

When conducting procurement transactions under a Federal award, a State or Indian Tribe must follow the same policies and procedures it uses for procurements with non-Federal funds. If such policies and procedures do not exist, States and Indian Tribes must follow the procurement standards in §§ 200.318 through 200.327. In addition to its own policies and procedures, a State or Indian Tribe must also comply with the following procurement standards: §§ 200.321, 200.322, 200.323, and 200.327. All other recipients and subrecipients, including subrecipients of a State or Indian Tribe, must follow the procurement standards in §§ 200.318 through 200.327.

§ 200.318 General procurement standards.

- (a) **Documented procurement procedures.** The recipient or subrecipient must maintain and use documented procedures for procurement transactions under a Federal award or subaward, including for acquisition of property or services. These documented procurement procedures must be consistent with State, local, and tribal laws and regulations and the standards identified in §§ 200.317 through 200.327.
- (b) **Oversight of contractors.** Recipients and subrecipients must maintain oversight to ensure that contractors perform in accordance with the terms, conditions, and specifications of their contracts or purchase orders. See also § 200.501(h).
- (c) **Conflicts of interest.**
 - (1) The recipient or subrecipient must maintain written standards of conduct covering conflicts of interest and governing the actions of its employees engaged in the selection, award, and administration of contracts. No employee, officer, agent, or board member with a real or apparent conflict of interest may participate in the selection, award, or administration of a contract supported by the Federal award. A conflict of interest includes when the employee, officer, agent, or board member, any member of their immediate family, their partner, or an organization that employs or is about to employ any of the parties indicated herein, has a financial or other interest in or a tangible personal benefit from an entity considered for a contract. An employee, officer, agent, and board member of the recipient or subrecipient may neither solicit nor accept gratuities, favors, or anything of monetary value from contractors. However, the recipient or subrecipient may set standards for

situations where the financial interest is not substantial or a gift is an unsolicited item of nominal value. The recipient's or subrecipient's standards of conduct must also provide for disciplinary actions to be applied for violations by its employees, officers, agents, or board members.

- (2) If the recipient or subrecipient has a parent, affiliate, or subsidiary organization that is not a State, local government, or Indian Tribe, the recipient or subrecipient must also maintain written standards of conduct covering organizational conflicts of interest. Organizational conflicts of interest mean that because of relationships with a parent company, affiliate, or subsidiary organization, the recipient or subrecipient is unable or appears to be unable to be impartial in conducting a procurement action involving a related organization.
- (d) **Avoidance of unnecessary or duplicative items.** The recipient's or subrecipient's procedures must avoid the acquisition of unnecessary or duplicative items. Consideration should be given to consolidating or breaking out procurements to obtain a more economical purchase. When appropriate, an analysis should be made between leasing and purchasing property or equipment to determine the most economical approach.
- (e) **Procurement arrangements using strategic sourcing.** When appropriate for the procurement or use of common or shared goods and services, recipients and subrecipients are encouraged to enter into State and local intergovernmental agreements or inter-entity agreements for procurement transactions. These or similar procurement arrangements using strategic sourcing may foster greater economy and efficiency. Documented procurement actions of this type (using strategic sourcing, shared services, and other similar procurement arrangements) will meet the competition requirements of this part.
- (f) **Use of excess and surplus Federal property.** The recipient or subrecipient is encouraged to use excess and surplus Federal property instead of purchasing new equipment and property when it is feasible and reduces project costs.
- (g) **Use of value engineering clauses.** When practical, the recipient or subrecipient is encouraged to use value engineering clauses in contracts for construction projects of sufficient size to offer reasonable opportunities for cost reductions. Value engineering means analyzing each contract item or task to ensure its essential function is provided at the overall lowest cost.
- (h) **Responsible contractors.** The recipient or subrecipient must award contracts only to responsible contractors that possess the ability to perform successfully under the terms and conditions of a proposed contract. The recipient or subrecipient must consider contractor integrity, public policy compliance, proper classification of employees (see the Fair Labor Standards Act, 29 U.S.C. 201, chapter 8), past performance record, and financial and technical resources when conducting a procurement transaction. See also § 200.214.
- (i) **Procurement records.** The recipient or subrecipient must maintain records sufficient to detail the history of each procurement transaction. These records must include the rationale for the procurement method, contract type selection, contractor selection or rejection, and the basis for the contract price.
- (j) **Time-and-materials type contracts.**
 - (1) The recipient or subrecipient may use a time-and-materials type contract only after a determination that no other contract is suitable and if the contract includes a ceiling price that the contractor exceeds at its own risk. Time-and-materials type contract means a contract whose cost to a recipient or subrecipient is the sum of:
 - (i) The actual cost of materials; and

- (ii) Direct labor hours charged at fixed hourly rates that reflect wages, general and administrative expenses, and profit.
- (2) Because this formula generates an open-ended contract price, a time-and-materials contract provides no positive profit incentive to the contractor for cost control or labor efficiency. Therefore, each contract must set a ceiling price that the contractor exceeds at its own risk. Further, the recipient or subrecipient awarding such a contract must assert a high degree of oversight to obtain reasonable assurance that the contractor is using efficient methods and effective cost controls.
- (k) **Settlement of contractual and administrative issues.** The recipient or subrecipient is responsible for the settlement of all contractual and administrative issues arising out of its procurement transactions. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve the recipient or subrecipient of any contractual responsibilities under its contracts. The Federal agency will not substitute its judgment for that of the recipient or subrecipient unless the matter is primarily a Federal concern. The recipient or subrecipient must report violations of law to the Federal, State, or local authority with proper jurisdiction.
- (l) **Examples of labor and employment practices.**
 - (1) The procurement standards in this subpart do not prohibit recipients or subrecipients from:
 - (i) Using Project Labor Agreements (PLAs) or similar forms of pre-hire collective bargaining agreements;
 - (ii) Requiring construction contractors to use hiring preferences or goals for people residing in high-poverty areas, disadvantaged communities as defined by the Justice40 Initiative (see OMB Memorandum M-21-28), or high-unemployment census tracts within a region no smaller than the county where a federally funded construction project is located. The hiring preferences or goals should be consistent with the policies and procedures of the recipient or subrecipient, and must not prohibit interstate hiring;
 - (iii) Requiring a contractor to use hiring preferences or goals for individuals with barriers to employment (as defined in section 3 of the Workforce Innovation and Opportunity Act (29 U.S.C. 3102(24))), including women and people from underserved communities as defined by Executive Order 14091;
 - (iv) Using agreements intended to ensure uninterrupted delivery of services; using agreements intended to ensure community benefits; or
 - (v) Offering employees of a predecessor contractor rights of first refusal under a new contract.
 - (2) Recipients and subrecipients may use the practices listed in paragraph (1) if consistent with the U.S. Constitution, applicable Federal statutes and regulations, the objectives and purposes of the applicable Federal financial assistance program, and other requirements of this part.

§ 200.319 Competition.

- (a) All procurement transactions under the Federal award must be conducted in a manner that provides full and open competition and is consistent with the standards of this section and § 200.320.
- (b) To ensure objective contractor performance and eliminate unfair competitive advantage, contractors that develop or draft specifications, requirements, statements of work, or invitations for bids must be excluded from competing on those procurements.

- (c) Examples of situations that may restrict competition include, but are not limited to:
 - (1) Placing unreasonable requirements on firms for them to qualify to do business;
 - (2) Requiring unnecessary experience and excessive bonding;
 - (3) Noncompetitive pricing practices between firms or between affiliated companies;
 - (4) Noncompetitive contracts to consultants that are on retainer contracts;
 - (5) Organizational conflicts of interest;
 - (6) Specifying only a “brand name” product instead of allowing “an equal” product to be offered and describing the performance or other relevant requirements of the procurement; and
 - (7) Any arbitrary action in the procurement process.
- (d) The recipient or subrecipient must have written procedures for procurement transactions. These procedures must ensure that all solicitations:
 - (1) Are made in accordance with § 200.319(b);
 - (2) Incorporate a clear and accurate description of the technical requirements for the property, equipment, or service being procured. The description may include a statement of the qualitative nature of the property, equipment, or service to be procured. When necessary, the description must provide minimum essential characteristics and standards to which the property, equipment, or service must conform. Detailed product specifications should be avoided if at all possible. When it is impractical or uneconomical to clearly and accurately describe the technical requirements, a “brand name or equivalent” description of features may be used to provide procurement requirements. The specific features of the named brand must be clearly stated; and
 - (3) Identify any additional requirements which the offerors must fulfill and all other factors that will be used in evaluating bids or proposals.
- (e) The recipient or subrecipient must ensure that all prequalified lists of persons, firms, or products used in procurement transactions are current and include enough qualified sources to ensure maximum open competition. When establishing or amending prequalified lists, the recipient or subrecipient must consider objective factors that evaluate price and cost to maximize competition. The recipient or subrecipient must not preclude potential bidders from qualifying during the solicitation period.
- (f) To the extent consistent with established practices and legal requirements applicable to the recipient or subrecipient, this subpart does not prohibit recipients or subrecipients from developing written procedures for procurement transactions that incorporate a scoring mechanism that rewards bidders that commit to specific numbers and types of U.S. jobs, minimum compensation, benefits, on-the-job-training for employees making work products or providing services on a contract, and other worker protections. This subpart also does not prohibit recipients and subrecipients from making inquiries of bidders about these subjects and assessing the responses. Any scoring mechanism must be consistent with the U.S. Constitution, applicable Federal statutes and regulations, and the terms and conditions of the Federal award.
- (g) Noncompetitive procurements can only be awarded in accordance with § 200.320(c).

§ 200.320 Procurement methods.

There are three types of procurement methods described in this section: informal procurement methods (for micro-purchases and simplified acquisitions); formal procurement methods (through sealed bids or proposals); and noncompetitive procurement methods. For any of these methods, the recipient or subrecipient must maintain and use documented procurement procedures, consistent with the standards of this section and §§ 200.317, 200.318, and 200.319.

- (a) **Informal procurement methods for small purchases.** These procurement methods expedite the completion of transactions, minimize administrative burdens, and reduce costs. Informal procurement methods may be used when the value of the procurement transaction under the Federal award does not exceed the simplified acquisition threshold as defined in § 200.1. Recipients and subrecipients may also establish a lower threshold. Informal procurement methods include:

(1) **Micro-purchases —**

- (i) **Distribution.** The aggregate amount of the procurement transaction does not exceed the micro-purchase threshold defined in § 200.1. To the extent practicable, the recipient or subrecipient should distribute micro-purchases equitably among qualified suppliers.
- (ii) **Micro-purchase awards.** Micro-purchases may be awarded without soliciting competitive price or rate quotations if the recipient or subrecipient considers the price reasonable based on research, experience, purchase history, or other information; and maintains documents to support its conclusion. Purchase cards may be used as a method of payment for micro-purchases.
- (iii) **Micro-purchase thresholds.** The recipient or subrecipient is responsible for determining and documenting an appropriate micro-purchase threshold based on internal controls, an evaluation of risk, and its documented procurement procedures. The micro-purchase threshold used by the recipient or subrecipient must be authorized or not prohibited under State, local, or tribal laws or regulations. The recipient or subrecipient may establish a threshold higher than the Federal threshold established in the Federal Acquisition Regulations (FAR) in accordance with paragraphs (a)(1)(iv) and (v) of this section.
- (iv) **Recipient or subrecipient increase to the micro-purchase threshold up to \$50,000.** The recipient or subrecipient may establish a threshold higher than the micro-purchase threshold identified in the FAR in accordance with the requirements of this section. The recipient or subrecipient may self-certify a threshold up to \$50,000 on an annual basis and must maintain documentation to be made available to the Federal agency or pass-through entity and auditors in accordance with § 200.334. The self-certification must include a justification, clear identification of the threshold, and supporting documentation of any of the following:
 - (A) A qualification as a low-risk auditee, in accordance with the criteria in § 200.520 for the most recent audit;
 - (B) An annual internal institutional risk assessment to identify, mitigate, and manage financial risks; or,
 - (C) For public institutions, a higher threshold is consistent with State law.

- (v) **Recipient or subrecipient increase to the micro-purchase threshold over \$50,000.** Micro-purchase thresholds higher than \$50,000 must be approved by the cognizant agency for indirect costs. The recipient or subrecipient must submit a request that includes the requirements in paragraph (a)(1)(iv) of this section. The increased threshold is valid until any factor that was relied on in the establishment and rationale of the threshold changes.

(2) **Simplified acquisitions –**

- (i) **Simplified acquisition procedures.** The aggregate dollar amount of the procurement transaction is higher than the micro-purchase threshold but does not exceed the simplified acquisition threshold. If simplified acquisition procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources. Unless specified by the Federal agency, the recipient or subrecipient may exercise judgment in determining what number is adequate.
- (ii) **Simplified acquisition thresholds.** The recipient or subrecipient is responsible for determining an appropriate simplified acquisition threshold based on internal controls, an evaluation of risk, and its documented procurement procedures, which may be lower than, but must not exceed, the threshold established in the FAR.

- (b) **Formal procurement methods.** Formal procurement methods are required when the value of the procurement transaction under a Federal award exceeds the simplified acquisition threshold of the recipient or subrecipient. Formal procurement methods are competitive and require public notice. The following formal methods of procurement are used for procurement transactions above the simplified acquisition threshold determined by the recipient or subrecipient in accordance with paragraph (a)(2)(ii) of this section:

- (1) **Sealed bids.** This is a procurement method in which bids are publicly solicited through an invitation and a firm fixed-price contract (lump sum or unit price) is awarded to the responsible bidder whose bid conforms with all the material terms and conditions of the invitation and is the lowest in price. The sealed bids procurement method is preferred for procuring construction services.

- (i) For sealed bidding to be feasible, the following conditions should be present:

- (A) A complete, adequate, and realistic specification or purchase description is available;
- (B) Two or more responsible bidders have been identified as willing and able to compete effectively for the business; and
- (C) The procurement lends itself to a firm-fixed-price contract, and the selection of the successful bidder can be made principally based on price.

- (ii) If sealed bids are used, the following requirements apply:

- (A) Bids must be solicited from an adequate number of qualified sources, providing them with sufficient response time prior to the date set for opening the bids. Unless specified by the Federal agency, the recipient or subrecipient may exercise judgment in determining what number is adequate. For local governments, the invitation for bids must be publicly advertised.
- (B) The invitation for bids must define the items or services with specific information, including any required specifications, for the bidder to properly respond;

- (C) All bids will be opened at the time and place prescribed in the invitation for bids. For local governments, the bids must be opened publicly.
 - (D) A firm-fixed-price contract is awarded in writing to the lowest responsive bid and responsible bidder. When specified in the invitation for bids, factors such as discounts, transportation cost, and life-cycle costs must be considered in determining which bid is the lowest. Payment discounts must only be used to determine the low bid when the recipient or subrecipient determines they are a valid factor based on prior experience.
 - (E) The recipient or subrecipient must document and provide a justification for all bids it rejects.
- (2) **Proposals.** This is a procurement method used when conditions are not appropriate for using sealed bids. This procurement method may result in either a fixed-price or cost-reimbursement contract. They are awarded in accordance with the following requirements:
- (i) Requests for proposals require public notice, and all evaluation factors and their relative importance must be identified. Proposals must be solicited from multiple qualified entities. To the maximum extent practicable, any proposals submitted in response to the public notice must be considered.
 - (ii) The recipient or subrecipient must have written procedures for conducting technical evaluations and making selections.
 - (iii) Contracts must be awarded to the responsible offeror whose proposal is most advantageous to the recipient or subrecipient considering price and other factors; and
 - (iv) The recipient or subrecipient may use competitive proposal procedures for qualifications-based procurement of architectural/engineering (A/E) professional services whereby the offeror's qualifications are evaluated, and the most qualified offeror is selected, subject to negotiation of fair and reasonable compensation. The method, where the price is not used as a selection factor, can only be used to procure architectural/engineering (A/E) professional services. The method may not be used to purchase other services provided by A/E firms that are a potential source to perform the proposed effort.
- (c) **Noncompetitive procurement.** There are specific circumstances in which the recipient or subrecipient may use a noncompetitive procurement method. The noncompetitive procurement method may only be used if one of the following circumstances applies:
- (1) The aggregate amount of the procurement transaction does not exceed the micro-purchase threshold (see paragraph (a)(1) of this section);
 - (2) The procurement transaction can only be fulfilled by a single source;
 - (3) The public exigency or emergency for the requirement will not permit a delay resulting from providing public notice of a competitive solicitation;
 - (4) The recipient or subrecipient requests in writing to use a noncompetitive procurement method, and the Federal agency or pass-through entity provides written approval; or
 - (5) After soliciting several sources, competition is determined inadequate.

§ 200.321 Contracting with small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms.

- (a) When possible, the recipient or subrecipient should ensure that small businesses, minority businesses, women's business enterprises, veteran-owned businesses, and labor surplus area firms (See U.S. Department of Labor's list) are considered as set forth below.
- (b) Such consideration means:
 - (1) These business types are included on solicitation lists;
 - (2) These business types are solicited whenever they are deemed eligible as potential sources;
 - (3) Dividing procurement transactions into separate procurements to permit maximum participation by these business types;
 - (4) Establishing delivery schedules (for example, the percentage of an order to be delivered by a given date of each month) that encourage participation by these business types;
 - (5) Utilizing organizations such as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and
 - (6) Requiring a contractor under a Federal award to apply this section to subcontracts.

§ 200.322 Domestic preferences for procurements.

- (a) The recipient or subrecipient should, to the greatest extent practicable and consistent with law, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards, contracts, and purchase orders under Federal awards.
- (b) For purposes of this section:
 - (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
 - (2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.
- (c) Federal agencies providing Federal financial assistance for infrastructure projects must implement the Buy America preferences set forth in 2 CFR part 184.

§ 200.323 Procurement of recovered materials.

- (a) A recipient or subrecipient that is a State agency or agency of a political subdivision of a State and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 as amended, 42 U.S.C. 6962. The requirements of Section 6002 include procuring only items designated in the guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or

the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

- (b) The recipient or subrecipient should, to the greatest extent practicable and consistent with law, purchase, acquire, or use products and services that can be reused, refurbished, or recycled; contain recycled content, are biobased, or are energy and water efficient; and are sustainable. This may include purchasing compostable items and other products and services that reduce the use of single-use plastic products. See Executive Order 14057, section 101, Policy.

§ 200.324 Contract cost and price.

- (a) The recipient or subrecipient must perform a cost or price analysis for every procurement transaction, including contract modifications, in excess of the simplified acquisition threshold. The method and degree of analysis conducted depend on the facts surrounding the particular procurement transaction. For example, the recipient or subrecipient should consider potential workforce impacts in their analysis if the procurement transaction will displace public sector employees. However, as a starting point, the recipient or subrecipient must make independent estimates before receiving bids or proposals.
- (b) Costs or prices based on estimated costs for contracts under the Federal award are allowable only to the extent that the costs incurred or cost estimates included in negotiated prices would be allowable for the recipient or subrecipient under subpart E of this part. The recipient or subrecipient may reference its own cost principles as long as they comply with subpart E of this part.
- (c) The recipient or subrecipient must not use the “cost plus a percentage of cost” and “percentage of construction costs” methods of contracting.

§ 200.325 Federal agency or pass-through entity review.

- (a) The Federal agency or pass-through entity may review the technical specifications of proposed procurements under the Federal award if the Federal agency or pass-through entity believes the review is needed to ensure that the item or service specified is the one being proposed for acquisition. The recipient or subrecipient must submit the technical specifications of proposed procurements when requested by the Federal agency or pass-through entity. This review should take place prior to the time the specifications are incorporated into a solicitation document. When the recipient or subrecipient desires to accomplish the review after a solicitation has been developed, the Federal agency or pass-through entity may still review the specifications. In those cases, the review should be limited to the technical aspects of the proposed purchase.
- (b) When requested, the recipient or subrecipient must provide procurement documents (such as requests for proposals, invitations for bids, or independent cost estimates) to the Federal agency or pass-through entity for pre-procurement review. The Federal agency or pass-through entity may conduct a pre-procurement review when:
 - (1) The recipient's or subrecipient's procurement procedures or operation fails to comply with the procurement standards in this part;
 - (2) The procurement is expected to exceed the simplified acquisition threshold and is to be awarded without competition, or only one bid is expected to be received in response to a solicitation;
 - (3) The procurement is expected to exceed the simplified acquisition threshold and specifies a “brand name” product;

- (4) The procurement is expected to exceed the simplified acquisition threshold, and a sealed bid procurement is to be awarded to an entity other than the apparent low bidder; or
 - (5) A proposed contract modification changes the scope of a contract or increases the contract amount by more than the simplified acquisition threshold.
- (c) The recipient or subrecipient is exempt from the pre-procurement review in paragraph (b) of this section if the Federal agency or pass-through entity determines that its procurement systems comply with the standards of this part.
- (1) The recipient or subrecipient may request that the Federal agency or pass-through entity review its procurement system to determine whether it meets these standards for its system to be certified. Generally, these reviews must occur where there is continuous high-dollar funding and third-party contracts are awarded regularly.
 - (2) The recipient or subrecipient may self-certify its procurement system. However, self-certification does not limit the Federal agency's or pass-through entity's right to review the system. Under a self-certification procedure, the Federal agency or pass-through entity may rely on written assurances from the recipient or subrecipient that it is complying with the standards of this part. The recipient or subrecipient must cite specific policies, procedures, regulations, or standards as complying with these requirements and have its system available for review.

§ 200.326 Bonding requirements.

The Federal agency or pass-through entity may accept the recipient's or subrecipient's bonding policy and requirements for construction or facility improvement contracts or subcontracts exceeding the simplified acquisition threshold. Before doing so, the Federal agency or pass-through entity must determine that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

- (a) A bid guarantee from each bidder equivalent to five percent of the bid price. The bid guarantee must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute any required contractual documents within the specified timeframe.
- (b) A performance bond on the contractor's part for 100 percent of the contract price. A performance bond is a bond executed in connection with a contract to secure the fulfillment of all the contractor's requirements under a contract.
- (c) A payment bond on the contractor's part for 100 percent of the contract price. A payment bond is a bond executed in connection with a contract to assure payment as required by the law of all persons supplying labor and material in the execution of the work provided for under a contract.

§ 200.327 Contract provisions.

The recipient's or subrecipient's contracts must contain the applicable provisions described in Appendix II of this part.

PERFORMANCE AND FINANCIAL MONITORING AND REPORTING

§ 200.328 Financial reporting.

- (a) The Federal agency must require only OMB-approved government-wide data elements on recipient financial reports. At the time of publication, this consists of the Federal Financial Report (SF-425); however, this also applies to any future OMB-approved government-wide data elements available from the OMB-designated standards lead.
- (b) The Federal agency or pass-through entity must collect financial reports no less than annually. The Federal agency or pass-through entity may not collect financial reports more frequently than quarterly unless a specific condition has been implemented in accordance with § 200.208. To the extent practicable, the Federal agency or pass-through entity should collect financial reports in coordination with performance reports.
- (c) The recipient or subrecipient must submit financial reports as required by the Federal award. Reports submitted annually by the recipient or subrecipient must be due no later than 90 calendar days after the reporting period. Reports submitted quarterly or semiannually must be due no later than 30 calendar days after the reporting period.
- (d) The final financial report submitted by the recipient must be due no later than 120 calendar days after the conclusion of the period of performance. A subrecipient must submit a final financial report to a pass-through entity no later than 90 calendar days after the conclusion of the period of performance. See also § 200.344. The Federal agency or pass-through entity may extend the due date for any financial report with justification from the recipient or subrecipient.

§ 200.329 Monitoring and reporting program performance.

- (a) **Monitoring by the recipient and subrecipient.** The recipient and subrecipient are responsible for the oversight of the Federal award. The recipient and subrecipient must monitor their activities under Federal awards to ensure they are compliant with all requirements and meeting performance expectations. Monitoring by the recipient and subrecipient must cover each program, function, or activity. See also § 200.332.
- (b) **Reporting program performance.** The Federal agency must use OMB-approved common information collections (for example, Research Performance Progress Reports) when requesting performance reporting information. The Federal agency or pass-through entity may not collect performance reports more frequently than quarterly unless a specific condition has been implemented in accordance with § 200.208. To the extent practicable, the Federal agency or pass-through entity should align the due dates of performance reports and financial reports. When reporting program performance, the recipient or subrecipient must relate financial data and project or program accomplishments to the performance goals and objectives of the Federal award. Also, the recipient or subrecipient must provide cost information to demonstrate cost-effective practices (for example, through unit cost data) when required by the terms and conditions of the Federal award. In some instances (for example, discretionary research awards), this may be limited to the requirement to submit technical performance reports. Reporting requirements must clearly indicate a standard against which the recipient's or subrecipient's performance can be measured. Reporting requirements should not solicit information from the recipient or subrecipient that is not necessary for the effective monitoring or evaluation of the Federal award. Federal agencies should consult monitoring framework documents such as the agency's Evaluation Plan to make that determination. As noted in OMB Circular A-11, Part 6, Section 280, measures of customer experience are of co-equal importance as traditional measures of financial and operational performance.
- (c) **Submitting performance reports.**

- (1) The recipient or subrecipient must submit performance reports as required by the Federal award. Intervals must be no less frequent than annually nor more frequent than quarterly except if specific conditions are applied (See § 200.208). Reports submitted annually by the recipient or subrecipient must be due no later than 90 calendar days after the reporting period. Reports submitted quarterly or semiannually must be due no later than 30 calendar days after the reporting period. Alternatively, the Federal agency or pass-through entity may require annual reports before the anniversary dates of multiple-year Federal awards. The final performance report submitted by the recipient must be due no later than 120 calendar days after the period of performance. A subrecipient must submit a final performance report to a pass-through entity no later than 90 calendar days after the conclusion of the period of performance. See also § 200.344. The Federal agency or pass-through entity may extend the due date for any performance report with justification from the recipient or subrecipient.
- (2) As applicable, performance reports should contain information on the following:
 - (i) A comparison of accomplishments to the objectives of the Federal award established for the reporting period (for example, comparing costs to units of accomplishment). Where performance trend data and analysis would be informative to the Federal agency program, the Federal agency should include this as a performance reporting requirement.
 - (ii) Explanations on why established goals or objectives were not met; and
 - (iii) Additional information, analysis, and explanation of cost overruns or higher-than-expected unit costs.
- (d) **Construction performance reports.** Federal agencies or pass-through entities rely on on-site technical inspections and certified percentage of completion data to monitor progress under Federal awards for construction. Therefore, the Federal agency or pass-through entity may require additional performance reports when necessary to ensure the goals and objectives of Federal awards are met.
- (e) **Significant developments.** When a significant development that could impact the Federal award occurs between performance reporting due dates, the recipient or subrecipient must notify the Federal agency or pass-through entity. Significant developments include events that enable meeting milestones and objectives sooner or at less cost than anticipated or that produce different beneficial results than originally planned. Significant developments also include problems, delays, or adverse conditions which will impact the recipient's or subrecipient's ability to meet milestones or the objectives of the Federal award. When significant developments occur that negatively impact the Federal Award, the recipient or subrecipient must include information on their plan for corrective action and any assistance needed to resolve the situation.
- (f) **Site visits.** The Federal agency or pass-through entity may conduct in-person or virtual site visits as warranted.
- (g) **Performance report requirement waiver.** The Federal agency may waive any performance report that is not necessary to ensure the goals and objectives of the Federal award are being achieved.

§ 200.330 Reporting on real property.

The Federal agency or pass-through entity must require the recipient or subrecipient to submit reports on the status of real property in which the Federal Government retains an interest. Such reports must be submitted at least annually. In instances where the Federal Government's interest in the real property extends for 15 years or more, the

Federal agency or pass-through entity may require the recipient or subrecipient to report at various multi-year frequencies. Reports submitted at multi-year frequencies may not exceed a five-year reporting period. The Federal agency must only require OMB-approved government-wide data elements on recipient real property reports.

SUBRECIPIENT MONITORING AND MANAGEMENT

§ 200.331 Subrecipient and contractor determinations.

An entity may concurrently receive Federal awards as a recipient, a subrecipient, and a contractor. The pass-through entity is responsible for making case-by-case determinations to determine whether the entity receiving Federal funds is a subrecipient or a contractor. The Federal agency may require the pass-through entity to comply with additional guidance to make these determinations, provided such guidance does not conflict with this section. The Federal agency does not have a direct legal relationship with subrecipients or contractors of any tier; however, the Federal agency is responsible for monitoring the pass-through entity's oversight of first-tier subrecipients. All of the characteristics listed below may not be present in all cases, and some characteristics from both categories may be present at the same time. No single factor or any combination of factors is necessarily determinative. The pass-through entity must use judgment in classifying each agreement as a subaward or a procurement contract. In making this determination, the substance of the relationship is more important than the form of the agreement.

- (a) **Subrecipients.** A subaward is for the purpose of carrying out a portion of the Federal award and creates a Federal financial assistance relationship with a subrecipient. See the definition of *Subaward* in § 200.1. Characteristics that support the classification of the entity as a subrecipient include, but are not limited to, when the entity:
 - (1) Determines who is eligible to receive what Federal assistance;
 - (2) Has its performance measured in relation to whether the objectives of a Federal program were met;
 - (3) Has responsibility for programmatic decision-making;
 - (4) Is responsible for adherence to applicable Federal program requirements specified in the Federal award; and
 - (5) Implements a program for a public purpose specified in authorizing statute, as opposed to providing goods or services for the benefit of the pass-through entity.
- (b) **Contractors.** A contract is for the purpose of obtaining goods and services for the recipient's or subrecipient's use and creates a procurement relationship with a contractor. See the definition of *contract* in § 200.1. Characteristics that support a procurement relationship between the recipient or subrecipient and a contractor include, but are not limited to, when the contractor:
 - (1) Provides the goods and services within normal business operations;
 - (2) Provides similar goods or services to many different purchasers;
 - (3) Normally operates in a competitive environment;
 - (4) Provides goods or services that are ancillary to the implementation of a Federal program; and
 - (5) Is not subject to compliance requirements of a Federal program as a result of the agreement. However, similar requirements may apply for other reasons.

§ 200.332 Requirements for pass-through entities.

A pass-through entity must:

- (a) Verify that the subrecipient is not excluded or disqualified in accordance with § 180.300. Verification methods are provided in § 180.300, which include confirming in SAM.gov that a potential subrecipient is not suspended, debarred, or otherwise excluded from receiving Federal funds.
- (b) Ensure that every subaward is clearly identified to the subrecipient as a subaward and includes the information provided below. A pass-through entity must provide the best available information when some of the information below is unavailable. A pass-through entity must provide the unavailable information when it is obtained. Required information includes:
 - (1) Federal award identification.
 - (i) Subrecipient's name (must match the name associated with its unique entity identifier);
 - (ii) Subrecipient's unique entity identifier;
 - (iii) Federal Award Identification Number (FAIN);
 - (iv) Federal Award Date;
 - (v) Subaward Period of Performance Start and End Date;
 - (vi) Subaward Budget Period Start and End Date;
 - (vii) Amount of Federal Funds Obligated in the subaward;
 - (viii) Total Amount of Federal Funds Obligated to the subrecipient by the pass-through entity, including the current financial obligation;
 - (ix) Total Amount of the Federal Award committed to the subrecipient by the pass-through entity;
 - (x) Federal award project description, as required by the Federal Funding Accountability and Transparency Act (FFATA);
 - (xi) Name of the Federal agency, pass-through entity, and contact information for awarding official of the pass-through entity;
 - (xii) Assistance Listings title and number; the pass-through entity must identify the dollar amount made available under each Federal award and the Assistance Listings Number at the time of disbursement;
 - (xiii) Identification of whether the Federal award is for research and development; and
 - (xiv) Indirect cost rate for the Federal award (including if the de minimis rate is used in accordance with § 200.414).
 - (2) All requirements of the subaward, including requirements imposed by Federal statutes, regulations, and the terms and conditions of the Federal award;
 - (3) Any additional requirements that the pass-through entity imposes on the subrecipient for the pass-through entity to meet its responsibilities under the Federal award. This includes information and certifications (see § 200.415) required for submitting financial and performance reports that the pass-through entity must provide to the Federal agency;

- (4) Indirect cost rate:
 - (i) An approved indirect cost rate negotiated between the subrecipient and the Federal Government. If no approved rate exists, a pass-through entity must determine the appropriate rate in collaboration with the subrecipient. The indirect cost rate may be either:
 - (A) An indirect cost rate negotiated between the pass-through entity and the subrecipient. These rates may be based on a prior negotiated rate between a different pass-through entity and the subrecipient, in which case the pass-through entity is not required to collect information justifying the rate but may elect to do so; or
 - (B) The de minimis indirect cost rate.
 - (ii) The pass-through entity must not require the use of the de minimis indirect cost rate if the subrecipient has an approved indirect cost rate negotiated with the Federal Government. Subrecipients may elect to use the cost allocation method to account for indirect costs in accordance with § 200.405(d).
- (5) A requirement that the subrecipient permit the pass-through entity and auditors to access the subrecipient's records and financial statements for the pass-through entity to fulfill its monitoring requirements; and
- (6) Appropriate terms and conditions concerning the closeout of the subaward.
- (c) Evaluate each subrecipient's fraud risk and risk of noncompliance with a subaward to determine the appropriate subrecipient monitoring described in paragraph (f) of this section. When evaluating a subrecipient's risk, a pass-through entity should consider the following:
 - (1) The subrecipient's prior experience with the same or similar subawards;
 - (2) The results of previous audits. This includes considering whether or not the subrecipient receives a Single Audit in accordance with subpart F and the extent to which the same or similar subawards have been audited as a major program;
 - (3) Whether the subrecipient has new personnel or new or substantially changed systems; and
 - (4) The extent and results of any Federal agency monitoring (for example, if the subrecipient also receives Federal awards directly from the Federal agency).
- (d) If appropriate, consider implementing specific conditions in a subaward as described in § 200.208 and notify the Federal agency of the specific conditions.
- (e) Monitor the activities of a subrecipient as necessary to ensure that the subrecipient complies with Federal statutes, regulations, and the terms and conditions of the subaward. The pass-through entity is responsible for monitoring the overall performance of a subrecipient to ensure that the goals and objectives of the subaward are achieved. In monitoring a subrecipient, a pass-through entity must:
 - (1) Review financial and performance reports.
 - (2) Ensure that the subrecipient takes corrective action on all significant developments that negatively affect the subaward. Significant developments include Single Audit findings related to the subaward, other audit findings, site visits, and written notifications from a subrecipient of adverse conditions which will impact their ability to meet the milestones or the objectives of a subaward. When

significant developments negatively impact the subaward, a subrecipient must provide the pass-through entity with information on their plan for corrective action and any assistance needed to resolve the situation.

- (3) Issue a management decision for audit findings pertaining only to the Federal award provided to the subrecipient from the pass-through entity as required by § 200.521.
- (4) Resolve audit findings specifically related to the subaward. However, the pass-through entity is not responsible for resolving cross-cutting audit findings that apply to the subaward and other Federal awards or subawards. If a subrecipient has a current Single Audit report and has not been excluded from receiving Federal funding (meaning, has not been debarred or suspended), the pass-through entity may rely on the subrecipient's cognizant agency for audit or oversight agency for audit to perform audit follow-up and make management decisions related to cross-cutting audit findings in accordance with section § 200.513(a)(4)(viii). Such reliance does not eliminate the responsibility of the pass-through entity to issue subawards that conform to agency and award-specific requirements, to manage risk through ongoing subaward monitoring, and to monitor the status of the findings that are specifically related to the subaward.
- (f) Depending upon the pass-through entity's assessment of the risk posed by the subrecipient (as described in paragraph (c) of this section), the following monitoring tools may be useful for the pass-through entity to ensure proper accountability and compliance with program requirements and achievement of performance goals:
 - (1) Providing subrecipients with training and technical assistance on program-related matters;
 - (2) Performing site visits to review the subrecipient's program operations; and
 - (3) Arranging for agreed-upon-procedures engagements as described in § 200.425.
- (g) Verify that a subrecipient is audited as required by subpart F of this part.
- (h) Consider whether the results of a subrecipient's audit, site visits, or other monitoring necessitate adjustments to the pass-through entity's records.
- (i) Consider taking enforcement action against noncompliant subrecipients as described in § 200.339 and in program regulations.

§ 200.333 Fixed amount subawards.

With prior written approval from the Federal agency, the recipient may provide subawards based on fixed amounts up to \$500,000. Fixed amount subawards must meet the requirements of § 200.201.

RECORD RETENTION AND ACCESS

§ 200.334 Record retention requirements.

The recipient and subrecipient must retain all Federal award records for three years from the date of submission of their final financial report. For awards that are renewed quarterly or annually, the recipient and subrecipient must retain records for three years from the date of submission of their quarterly or annual financial report, respectively. Records to be retained include but are not limited to, financial records, supporting documentation, and statistical records. Federal agencies or pass-through entities may not impose any other record retention requirements except for the following:

- (a) The records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final action taken if any litigation, claim, or audit is started before the expiration of the three-year period.
- (b) When the recipient or subrecipient is notified in writing by the Federal agency or pass-through entity, cognizant agency for audit, oversight agency for audit, or cognizant agency for indirect costs to extend the retention period.
- (c) The records for property and equipment acquired with the support of Federal funds must be retained for three years after final disposition.
- (d) The three-year retention requirement does not apply to the recipient or subrecipient when records are transferred to or maintained by the Federal agency.
- (e) The records for program income earned after the period of performance must be retained for three years from the end of the recipient's or subrecipient's fiscal year in which the program income is earned. This only applies if the Federal agency or pass-through entity requires the recipient or subrecipient to report on program income earned after the period of performance in the terms and conditions of the Federal award.
- (f) The records for indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates) must be retained according to the applicable option below:
 - (1) ***If submitted for negotiation.*** When a proposal, plan, or other computation must be submitted to the Federal Government to form the basis for negotiation of an indirect cost rate (or other standard rates), then the three-year retention period for its supporting records starts from the date of submission.
 - (2) ***If not submitted for negotiation.*** When a proposal, plan, or other computation is not required to be submitted to the Federal Government to form the basis for negotiation of an indirect cost rate (or other standard rates), then the three-year retention period for its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation.

§ 200.335 Requests for transfer of records.

The Federal agency must request the transfer of records to its custody from the recipient or subrecipient when it determines that the records possess long-term retention value. However, the Federal agency may arrange for the recipient or subrecipient to retain the records that have long-term retention value so long as they are continuously available to the Federal Government.

§ 200.336 Methods for collection, transmission, and storage of information.

When practicable, the Federal agency or pass-through entity and the recipient or subrecipient must collect, transmit, and store Federal award information in open and machine-readable formats. A machine-readable format is a format in a standard computer language (not English text) that can be read automatically by a computer system. Upon request, the Federal agency or pass-through entity must always provide or accept paper versions of Federal award information to and from the recipient or subrecipient. The Federal agency or pass-through entity must not require additional copies of Federal award information submitted in paper versions. The recipient or subrecipient does not need to create and retain paper copies when original records are electronic and cannot be altered. In addition, the recipient or subrecipient may substitute electronic versions of original paper records through duplication or other

forms of electronic conversion, provided that the procedures are subject to periodic quality control reviews. Quality control reviews must ensure that electronic conversion procedures provide safeguards against the alteration of records and assurance that records remain in a format that is readable by a computer system.

§ 200.337 Access to records.

- (a) **Records of recipients and subrecipients.** The Federal agency or pass-through entity, Inspectors General, the Comptroller General of the United States, or any of their authorized representatives must have the right of access to any records of the recipient or subrecipient pertinent to the Federal award to perform audits, execute site visits, or for any other official use. This right also includes timely and reasonable access to the recipient's or subrecipient's personnel for the purpose of interview and discussion related to such documents or the Federal award in general.
- (b) **Extraordinary and rare circumstances.** The recipient or subrecipient and Federal agency or pass-through entity must take measures to protect the name of victims of a crime when access to the victim's name is necessary. Only under extraordinary and rare circumstances would such access include a review of the true name of victims of a crime. Routine monitoring cannot be considered extraordinary and rare circumstances that would necessitate access to this information. Any such access, other than under a court order or subpoena pursuant to a bona fide confidential investigation, must be approved by the head or delegate of the Federal agency.
- (c) **Expiration of right of access.** The Federal agency's or pass-through entity's rights of access are not limited to the required retention period of this part but last as long as the records are retained. Federal agencies or pass-through entities must not impose any other access requirements upon recipients and subrecipients.

§ 200.338 Restrictions on public access to records.

Federal agencies may not place restrictions on the recipient or subrecipient that limit public access to the records of the recipient or subrecipient pertinent to a Federal award, except for protected personally identifiable information (PII) or other sensitive information when the Federal agency can demonstrate that such records will be kept confidential and would have been exempted from disclosure pursuant to the Freedom of Information Act (5 U.S.C. 552) or controlled unclassified information pursuant to Executive Order 13556 if the records had belonged to the Federal agency. The Freedom of Information Act (5 U.S.C. 552) (FOIA) does not apply to records that remain under the recipient's or subrecipient's control except as required by § 200.315. Unless required by Federal, State, local, or tribal law, recipients and subrecipients are not required to permit public access to their records. The recipient's or subrecipient's records provided to a Federal agency generally will be subject to FOIA and applicable exemptions.

REMEDIES FOR NONCOMPLIANCE

§ 200.339 Remedies for noncompliance.

The Federal agency or pass-through entity may implement specific conditions if the recipient or subrecipient fails to comply with the U.S. Constitution, Federal statutes, regulations, or terms and conditions of the Federal award. See § 200.208 for additional information on specific conditions. When the Federal agency or pass-through entity determines that noncompliance cannot be remedied by imposing specific conditions, the Federal agency or pass-through entity may take one or more of the following actions:

- (a) Temporarily withhold payments until the recipient or subrecipient takes corrective action.

- (b) Disallow costs for all or part of the activity associated with the noncompliance of the recipient or subrecipient.
- (c) Suspend or terminate the Federal award in part or in its entirety.
- (d) Initiate suspension or debarment proceedings as authorized in 2 CFR part 180 and the Federal agency's regulations, or for pass-through entities, recommend suspension or debarment proceedings be initiated by the Federal agency.
- (e) Withhold further Federal funds (new awards or continuation funding) for the project or program.
- (f) Pursue other legally available remedies.

§ 200.340 Termination.

- (a) The Federal award may be terminated in part or its entirety as follows:
 - (1) By the Federal agency or pass-through entity if the recipient or subrecipient fails to comply with the terms and conditions of the Federal award;
 - (2) By the Federal agency or pass-through entity with the consent of the recipient or subrecipient, in which case the two parties must agree upon the termination conditions. These conditions include the effective date and, in the case of partial termination, the portion to be terminated;
 - (3) By the recipient or subrecipient upon sending the Federal agency or pass-through entity a written notification of the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if the Federal agency or pass-through entity determines that the remaining portion of the Federal award will not accomplish the purposes for which the Federal award was made, the Federal agency or pass-through entity may terminate the Federal award in its entirety; or
 - (4) By the Federal agency or pass-through entity pursuant to the terms and conditions of the Federal award, including, to the extent authorized by law, if an award no longer effectuates the program goals or agency priorities.
- (b) The Federal agency or pass-through entity must clearly and unambiguously specify all termination provisions in the terms and conditions of the Federal award.
- (c) When the Federal agency terminates the Federal award prior to the end of the period of performance due to the recipient's material failure to comply with the terms and conditions of the Federal award, the Federal agency must report the termination in *SAM.gov*. A Federal agency must use the Contractor Performance Assessment Reporting System (CPARS) to enter information in *SAM.gov*.
 - (1) The information required under paragraph (c) of this section is not to be reported in *SAM.gov* until the recipient has either:
 - (i) Exhausted its opportunities to object or challenge the decision (see § 200.342); or
 - (ii) Has not, within 30 calendar days after being notified of the termination, informed the Federal agency that it intends to appeal the decision to terminate.
 - (2) If a Federal agency, after entering information about a termination in *SAM.gov*, subsequently:
 - (i) Learns that any of that information is erroneous, the Federal agency must correct the information in the system within three business days;

(ii) Obtains an update to that information that could be helpful to other Federal agencies, the Federal agency is strongly encouraged to amend the information in the system to incorporate the update in a timely way.

(3) The Federal agency must not post any information that will be made publicly available in the non-public segment of *SAM.gov* that is covered by a disclosure exemption under the Freedom of Information Act (FOIA). When the recipient asserts within seven calendar days to the Federal agency which posted the information that a disclosure exemption under FOIA covers some of the information made publicly available, the Federal agency that posted the information must remove the posting within seven calendar days of receiving the assertion. Before reposting the releasable information, the Federal agency must resolve the issue in accordance with the agency's FOIA procedures.

(d) When the Federal award is terminated in part or its entirety, the Federal agency or pass-through entity and recipient or subrecipient remain responsible for compliance with the requirements in §§ 200.344 and 200.345.

§ 200.341 Notification of termination requirement.

(a) The Federal agency or pass-through entity must provide written notice of termination to the recipient or subrecipient. The written notice of termination should include the reasons for termination, the effective date, and the portion of the Federal award to be terminated, if applicable.

(b) If the Federal award is terminated for the recipient's material failure to comply with a Federal award, the notification must state the following:

(1) The termination decision will be reported in *SAM.gov*;

(2) The information will be available in *SAM.gov* for five years from the date of the termination and then archived;

(3) Federal agencies that consider making a Federal award to the recipient during the five year period must consider this information in judging whether the recipient is qualified to receive the Federal award when the Federal share of the Federal award is expected to exceed the simplified acquisition threshold over the period of performance;

(4) The recipient may comment on any information in *SAM.gov* about the recipient for future consideration by Federal agencies. The recipient may submit comments in *SAM.gov*.

(5) Federal agencies should consider the recipient's comments when determining whether the recipient is qualified for a Federal award.

(c) Upon termination of the Federal award, the Federal agency must provide the information required by the Federal Funding Accountability and Transparency Act (FFATA) to *USAspending.gov*. In addition, the Federal agency must update or notify any other relevant government-wide systems or entities of any indications of poor performance as required by 41 U.S.C. 2313 and 31 U.S.C. 3321.

§ 200.342 Opportunities to object, hearings, and appeals.

The Federal agency must maintain written procedures for processing objections, hearings, and appeals. Upon initiating a remedy for noncompliance (for example, disallowed costs, a corrective action plan, or termination), the Federal agency must provide the recipient with an opportunity to object and provide information challenging the

action. The Federal agency or pass-through entity must comply with any requirements for hearings, appeals, or other administrative proceedings to which the recipient or subrecipient is entitled under any statute or regulation applicable to the action involved.

§ 200.343 Effects of suspension and termination.

Costs to the recipient or subrecipient resulting from financial obligations incurred by the recipient or subrecipient during a suspension or after the termination of a Federal award are not allowable unless the Federal agency or pass-through entity expressly authorizes them in the notice of suspension or termination or subsequently. However, costs during suspension or after termination are allowable if:

- (a) The costs result from financial obligations which were properly incurred by the recipient or subrecipient before the effective date of suspension or termination, and not in anticipation of it; and
- (b) The costs would be allowable if the Federal award was not suspended or expired normally at the end of the period of performance in which the termination takes effect.

CLOSEOUT

§ 200.344 Closeout.

- (a) The Federal agency or pass-through entity must close out the Federal award when it determines that all administrative actions and required work of the Federal award have been completed. When the recipient or subrecipient fails to complete the necessary administrative actions or the required work for an award, the Federal agency or pass-through entity must proceed with closeout based on the information available. This section specifies the administrative actions required at the end of the period of performance.
- (b) A recipient must submit all reports (financial, performance, and other reports required by the Federal award) no later than 120 calendar days after the conclusion of the period of performance. A subrecipient must submit all reports (financial, performance, and other reports required by a subaward) to the pass-through entity no later than 90 calendar days after the conclusion of the period of performance of the subaward (or an earlier date as agreed upon by the pass-through entity and subrecipient). When justified, the Federal agency or pass-through entity may approve extensions for the recipient or subrecipient. When the recipient does not have a final indirect cost rate covering the period of performance, a final financial report must still be submitted to fulfill the requirements of this section. The recipient must submit a revised final financial report when all applicable indirect cost rates have been finalized.
- (c) The recipient must liquidate all financial obligations incurred under the Federal award no later than 120 calendar days after the conclusion of the period of performance. A subrecipient must liquidate all financial obligations incurred under a subaward no later than 90 calendar days after the conclusion of the period of performance of the subaward (or an earlier date as agreed upon by the pass-through entity and subrecipient). When justified, the Federal agency or pass-through entity may approve extensions for the recipient or subrecipient.
- (d) The Federal agency or pass-through entity must not delay payments to the recipient or subrecipient for costs meeting the requirements of subpart E of this part.
- (e) The recipient or subrecipient must promptly refund any unobligated funds that the Federal agency or pass-through entity paid and that are not authorized to be retained. See OMB Circular A-129 and § 200.346.

- (f) The Federal agency or pass-through entity must make all necessary adjustments to the Federal share of costs after closeout reports are received (for example, to reflect the disallowance of any costs or the deobligation of an unliquidated balance).
- (g) The recipient or subrecipient must account for any property acquired with Federal funds or received from the Federal Government in accordance with §§ 200.310 through 200.316 and 200.330.
- (h) The Federal agency must make every effort to complete all closeout actions no later than one year after the end of the period of performance. If the indirect cost rate has not been finalized and would delay closeout, the Federal agency is authorized to mutually agree with the recipient to close an award using the current or most recently negotiated rate. However, the recipient is not required to agree to a final rate for a Federal award for the purpose of prompt closeout.
- (i) If the recipient does not comply with the requirements of this section, including submitting all final reports, the Federal agency must report the recipient's material failure to comply with the terms and conditions of the Federal award in *SAM.gov*. A Federal agency must use the Contractor Performance Assessment Reporting System (CPARS) to enter or amend information in *SAM.gov*. Federal agencies may also pursue other enforcement actions as appropriate. See § 200.339.

POST-CLOSEOUT ADJUSTMENTS AND CONTINUING RESPONSIBILITIES

§ 200.345 Post-closeout adjustments and continuing responsibilities.

- (a) The closeout of the Federal award does not affect any of the following:
 - (1) The right of the Federal agency or pass-through entity to disallow costs and recover funds on the basis of a later audit or review. However, the Federal agency or pass-through entity must make determinations to disallow costs and notify the recipient or subrecipient within the record retention period.
 - (2) The recipient's or subrecipient's requirement to return funds or right to receive any remaining and available funds as a result of refunds, corrections, final indirect cost rate adjustments (unless the Federal award is closed in accordance with § 200.344(h)), or other transactions.
 - (3) The ability of the Federal agency or pass-through entity to make financial adjustments to a previously closed Federal award, such as resolving indirect cost payments and making final payments.
 - (4) Audit requirements in subpart F of this part.
 - (5) Property management and disposition requirements in §§ 200.310 through 200.316.
 - (6) Records retention as required in §§ 200.334 through 200.337.
- (b) After the closeout of the Federal award, a relationship created under the Federal award may be modified or ended in whole or in part. This may only be done with the consent of the awarding Federal agency or pass-through entity and the recipient or subrecipient, provided the responsibilities of the recipient or subrecipient referred to in paragraph (a) of this section, including those for property management as applicable, are considered and provisions are made for continuing responsibilities of the recipient or subrecipient, as appropriate.

COLLECTION OF AMOUNTS DUE

§ 200.346 Collection of amounts due.

Any Federal funds paid to the recipient or subrecipient in excess of the amount that the recipient or subrecipient is determined to be entitled to under the Federal award constitute a debt to the Federal Government. The Federal agency must collect all debts arising out of its Federal awards in accordance with the Standards for the Administrative Collection of Claims (31 CFR part 901).

Subpart E—Cost Principles

GENERAL PROVISIONS

§ 200.400 Policy guide.

The application of these cost principles is based on the fundamental premises that:

- (a) The recipient and subrecipient are responsible for the efficient and effective administration of the Federal award through sound management practices.
- (b) The recipient and subrecipient are responsible for administering Federal funds in a manner consistent with Federal statutes, regulations, and the terms and conditions of the Federal award.
- (c) The recipient and subrecipient, in recognition of their unique combination of staff, facilities, and experience, are responsible for employing organization and management techniques necessary to ensure the proper and efficient administration of the Federal award.
- (d) The accounting practices of the recipient and subrecipient must be consistent with these cost principles and support the accumulation of costs as required by these cost principles, including maintaining adequate documentation to support costs charged to the Federal award.
- (e) When reviewing, negotiating, and approving cost allocation plans or indirect cost proposals, the cognizant agency for indirect costs should ensure that the recipient consistently applies these cost principles. Where wide variations exist in the treatment of a given cost item by the recipient, the reasonableness and equity of such treatments should be fully considered. See the definition of *indirect costs* in § 200.1.
- (f) For recipients and subrecipients that educate and engage students in research, the dual role of students as both trainees and employees (including pre- and post-doctoral staff) contributing to the completion of Federal awards for research must be recognized in the application of these principles.
- (g) The recipient or subrecipient must not earn or keep any profit resulting from Federal financial assistance unless explicitly authorized by the terms and conditions of the Federal award. See also § 200.307. When the required activities of a fixed amount award were completed in accordance with the terms and conditions of the award, the unexpended funds retained by the recipient or subrecipient are not considered profit.

§ 200.401 Application.

- (a) **General.** The recipient and subrecipient must apply these principles in determining allowable costs under Federal awards. The recipient and subrecipient must also use these principles as a guide in pricing fixed-price contracts and subcontracts when costs are used in determining the appropriate price. These cost principles do not apply to:

- (1) Arrangements under which Federal financing is in the form of loans, scholarships, fellowships, traineeships, or other fixed amounts based on items such as education allowance or published tuition rates and fees.
 - (2) Capitation awards based on case counts or the number of beneficiaries.
 - (3) Fixed amount awards, except as provided in § 200.101(b). See also § 200.201.
 - (4) Federal awards to hospitals (see Appendix IX of this part).
 - (5) Food commodities provided through grants and cooperative agreements.
 - (6) Other awards under which the recipient or subrecipient is not required to account for actual costs incurred.
- (b) **Federal contract.** A Federal contract awarded to a recipient is subject to the Cost Accounting Standards (CAS). It must incorporate the applicable CAS requirements per 48 CFR Chapter 99 and 48 CFR part 30 (FAR Part 30). With respect to the allocation of costs, the Cost Accounting Standards at 48 CFR parts 9904 or 9905 take precedence over the cost principles in subpart E. When a contract with a recipient is subject to full CAS coverage, the allowability of certain costs under the cost principles will be affected by the allocation provisions of the Cost Accounting Standards (for example, CAS 414—48 CFR 9904.414—Cost of Money as an Element of the Cost of Facilities Capital, and CAS 417—48 CFR 9904.417—Cost of Money as an Element of the Cost of Capital Assets Under Construction, apply instead of the allowability provisions of § 200.449). For example, the allowability of costs in CAS-covered contracts is determined first by the allocation provisions of the Cost Accounting Standards rather than the allowability provisions in § 200.449 (unless the CAS does not address the specific costs). In complying with those requirements, the recipient's application of cost accounting practices for estimating, accumulating, and reporting costs for Federal awards and CAS-covered contracts must be consistent with 48 CFR. The recipient only needs to maintain one set of accounting records supporting the allocation of costs if the recipient administers both Federal awards and CAS-covered contracts.
- (c) **Exemptions.** Some nonprofit organizations, because of their size and nature of operations, can be considered to be similar to for-profit organizations in terms of the applicability of cost principles. These nonprofit organizations must operate under Federal cost principles that apply to for-profit organizations located at 48 CFR 31.2. Appendix VIII contains a list of these nonprofit organizations. Other organizations may be added to this list if approved by the cognizant agency for indirect costs.

BASIC CONSIDERATIONS

§ 200.402 Composition of costs.

The total cost of a Federal award is the sum of the allowable direct and allocable indirect costs minus any applicable credits

§ 200.403 Factors affecting allowability of costs.

Except where otherwise authorized by statute, costs must meet the following criteria to be allowable under Federal awards:

- (a) Be necessary and reasonable for the performance of the Federal award and be allocable thereto under these principles.

- (b) Conform to any limitations or exclusions set forth in these principles or in the Federal award as to types or amount of cost items.
- (c) Be consistent with policies and procedures that apply uniformly to both federally financed and other activities of the recipient or subrecipient.
- (d) Be accorded consistent treatment. For example, a cost must not be assigned to a Federal award as a direct cost if any other cost incurred for the same purpose in like circumstances has been allocated to the Federal award as an indirect cost.
- (e) Be determined in accordance with generally accepted accounting principles (GAAP), except, for State and local governments and Indian Tribes only, as otherwise provided for in this part.
- (f) Not be included as a cost or used to meet cost sharing requirements of any other federally-financed program in either the current or a prior period. See § 200.306(b).
- (g) Be adequately documented. See §§ 200.300 through 200.309.
- (h) Administrative closeout costs may be incurred until the due date of the final report(s). If incurred, these costs must be liquidated prior to the due date of the final report(s) and charged to the final budget period of the award unless otherwise specified by the Federal agency. All other costs must be incurred during the approved budget period. At its discretion, the Federal agency is authorized to waive prior written approvals to carry forward unobligated balances to subsequent budget periods. See § 200.308(g)(3).

§ 200.404 Reasonable costs.

A cost is reasonable if it does not exceed an amount that a prudent person would incur under the circumstances prevailing when the decision was made to incur the cost. In determining the reasonableness of a given cost, consideration must be given to the following:

- (a) Whether the cost is generally recognized as ordinary and necessary for the recipient's or subrecipient's operation or the proper and efficient performance of the Federal award;
- (b) The restraints or requirements imposed by such factors as sound business practices; arm's-length bargaining; Federal, State, local, tribal, and other laws and regulations; and terms and conditions of the Federal award;
- (c) Market prices for comparable costs for the geographic area;
- (d) Whether the individuals concerned acted with prudence in the circumstances considering their responsibilities to the recipient or subrecipient, its employees, its students or membership (if applicable), the public at large, and the Federal Government; and
- (e) Whether the cost represents a deviation from the recipient's or subrecipient's established written policies and procedures for incurring costs.

§ 200.405 Allocable costs.

- (a) **Allocable costs in general.** A cost is allocable to a Federal award or other cost objective if the cost is assignable to that Federal award or other cost objective in accordance with the relative benefits received. This standard is met if the cost satisfies any of the following criteria:
 - (1) Is incurred specifically for the Federal award;

- (2) Benefits both the Federal award and other work of the recipient or subrecipient and can be distributed in proportions that may be approximated using reasonable methods; or
 - (3) Is necessary to the overall operation of the recipient or subrecipient and is assignable in part to the Federal award in accordance with these cost principles.
- (b) **Allocation of indirect costs.** All activities which benefit from the recipient's or subrecipient's indirect cost, including unallowable activities and donated services by the recipient or subrecipient or third parties, will receive an appropriate allocation of indirect costs.
- (c) **Limitation on charging certain allocable costs to other Federal awards.** A cost allocable to a particular Federal award may not be charged to other Federal awards (for example, to overcome fund deficiencies or to avoid restrictions imposed by Federal statutes, regulations, or the terms and conditions of the Federal awards). However, this prohibition would not preclude the recipient or subrecipient from shifting costs that are allowable under two or more Federal awards in accordance with existing Federal statutes, regulations, or the terms and conditions of the Federal awards.
- (d) **Direct cost allocation principles.** If a cost benefits two or more projects or activities in proportions that can be determined without undue effort or cost, the cost must be allocated to the projects based on the proportional benefit. However, when those proportions cannot be determined because of the interrelationship of the work involved, then, notwithstanding paragraph (c), the costs may be allocated or transferred to benefitted projects on any reasonable documented basis. Where the purchase of equipment or other capital asset is specifically authorized under a Federal award, the costs are assignable to the Federal award regardless of the use that may be made of the equipment or other capital asset involved, when no longer needed for the purpose for which it was originally required. See also §§ 200.310 through 200.316 and 200.439.
- (e) **Costs of contracts subject to CAS.** If a contract is subject to CAS, costs must be allocated to that contract according to the Cost Accounting Standards, which take precedence over the allocation provisions in this part.

§ 200.406 Applicable credits.

- (a) Applicable credits refer to transactions that offset or reduce direct or indirect costs allocable to a Federal award. Examples of such transactions are purchase discounts, rebates or allowances, recoveries or indemnities on losses, insurance refunds or rebates, and adjustments of overpayments or erroneous charges. To the extent that such credits accruing to or received by the recipient or subrecipient relate to allowable costs, they must be credited to the Federal award either as a cost reduction or cash refund, as appropriate.
- (b) In some instances, the amounts received from the Federal Government to finance activities or service operations of the recipient or subrecipient should be treated as applicable credits. Specifically, the concept of netting such credit items (including any amounts used to meet cost sharing requirements) must be recognized in determining the rates or amounts to be charged to the Federal award. See §§ 200.436 and 200.468 for potential application areas.

§ 200.407 Prior written approval (prior approval).

The reasonableness and allocability of certain costs under Federal awards may be difficult to determine. To avoid subsequent disallowance or dispute based on unreasonableness or nonallocability, the recipient may seek the prior written approval of the Federal agency (or, for indirect costs, the cognizant agency for indirect costs) before

incurring the cost. The absence of prior written approval on any element of cost will not, in itself, affect the reasonableness or allocability of that cost unless prior approval is specifically required for allowability as described under certain circumstances in the following sections:

- (a) Section 200.306 Cost sharing;
- (b) Section 200.307 Program income;
- (c) Section 200.308 Revision of budget and program plans;
- (d) Section 200.333 Fixed amount subawards;
- (e) Section 200.430 Compensation—personal services, paragraph (h);
- (f) Section 200.431 Compensation—fringe benefits;
- (g) Section 200.439 Equipment and other capital expenditures;
- (h) Section 200.440 Exchange rates;
- (i) Section 200.441 Fines, penalties, damages and other settlements;
- (j) Section 200.442 Fund raising and investment management costs;
- (k) Section 200.445 Goods or services for personal use;
- (l) Section 200.447 Insurance and indemnification;
- (m) Section 200.455 Organization costs;
- (n) Section 200.458 Pre-award costs;
- (o) Section 200.462 Rearrangement and reconversion costs;
- (p) Section 200.475 Travel costs.

§ 200.408 Limitation on allowance of costs.

Statutory requirements may limit the allowability of costs. Any costs that exceed the maximum amount allowed by statute may not be charged to the Federal award. Only the amount allowable by statute may be charged to the Federal award.

§ 200.409 Special considerations.

Other sections in this part describe special considerations and requirements applicable to states, local governments, Indian Tribes, and IHEs. In addition, certain provisions among the items of cost in this subpart are only applicable to certain types of recipients and subrecipients, as specified in the following sections:

- (a) Direct and Indirect Costs (§§ 200.412-200.415);
- (b) Special Considerations for States, Local Governments and Indian Tribes (§§ 200.416 and 200.417); and
- (c) Special Considerations for Institutions of Higher Education (§§ 200.418 and 200.419).

§ 200.410 Collection of unallowable costs.

Payments made for costs determined to be unallowable by either the awarding Federal agency, cognizant agency for indirect costs, or pass-through entity must be refunded with interest to the Federal Government. Unless directed by Federal statute or regulation, repayments must be made in accordance with the instructions provided by the Federal agency or pass-through entity that made the allowability determination. See §§ 200.300 through 200.309, and § 200.346.

§ 200.411 Adjustment of previously negotiated indirect cost rates containing unallowable costs.

- (a) Negotiated indirect cost rates based on a proposal later found to have included costs that:
 - (1) Are unallowable as specified by Federal statutes, regulations or the terms and conditions of a Federal award; or
 - (2) Are unallowable because they are not allocable to the Federal award(s), must be adjusted, or a refund must be made in accordance with the requirements of this section. These adjustments or refunds are intended to correct the proposals used to establish the rates and do not constitute a reopening of the rate negotiation. The adjustments or refunds must be made regardless of the type of rate negotiated (predetermined, final, fixed, or provisional).
- (b) For rates covering a future fiscal year of the recipient or subrecipient, the unallowable costs must be removed from the indirect cost pools and the rates must be adjusted.
- (c) For rates covering a past period, the Federal share of the unallowable costs must be computed for each year involved, and a cash refund (including interest) must be made to the Federal Government in accordance with the directions provided by the cognizant agency for indirect costs. When cash refunds are made for past periods covered by provisional or fixed rates, appropriate adjustments must be made when the rates are finalized to avoid duplicate recovery of the unallowable costs.
- (d) For rates covering the current period, either a rate adjustment or a refund, as described in paragraphs (b) and (c) of this section, must be required by the cognizant agency for indirect costs. The choice of method must be at the discretion of the cognizant agency for indirect costs, based on its judgment as to which method would be most practical.
- (e) The amount or proportion of unallowable costs included in each year's rate will be assumed to be the same as the amount or proportion of unallowable costs included in the base year proposal used to establish the rate.

DIRECT AND INDIRECT COSTS

§ 200.412 Classification of costs.

There is no universal rule for classifying certain costs as direct or indirect costs. A cost may be direct for some specific service or function but indirect for the Federal award or other final cost objective. Therefore, each cost incurred for the same purpose in like circumstances must be treated consistently either as a direct or an indirect cost to avoid possible double-charging of Federal awards. Guidelines for determining direct and indirect costs charged to Federal awards are provided in this subpart.

§ 200.413 Direct costs.

- (a) **General.** Direct costs are those costs that can be identified specifically with a particular final cost objective, such as a Federal award, or other internally or externally funded activity, or that can be directly assigned to such activities relatively easily with a high degree of accuracy. Costs incurred for the same purpose in like circumstances must be treated consistently as direct or indirect costs. See § 200.405.
- (b) **Application to Federal awards.** The association of costs with a Federal award determines whether costs are direct or indirect. Costs charged directly to a Federal award are typically incurred specifically for that Federal award (including, for example, supplies needed to achieve the award's objectives and the proportion of employee compensation and fringe benefits expended in relation to that specific award). Costs that otherwise would be treated as indirect costs may also be considered direct costs if they are directly related to a specific award (including, for example, extraordinary utility consumption, the cost of materials supplied from stock or services rendered by specialized facilities, cybersecurity, integrated data systems, asset management systems, performance management costs, program evaluation costs, or other institutional service operations).
- (c) **Administrative and clerical staff salaries.** Administrative and clerical staff salaries should normally be treated as indirect costs. Direct charging of these costs may be appropriate only if they meet all of the following conditions:
 - (1) The administrative or clerical services are integral to a Federal award;
 - (2) Individuals involved can be specifically identified with a Federal award; and
 - (3) The costs are not also recovered as indirect costs.
- (d) **Minor items.** A direct cost of a minor amount may be treated as an indirect cost, for reasons of practicality, provided that it is treated consistently for all Federal and non-Federal purposes.
- (e) **Treatment of unallowable costs in determining indirect cost rates.** The costs of certain activities are not allowable as charges to Federal awards. Even though these costs are unallowable, they must be treated as direct costs for purposes of determining indirect cost rates and be allocated their equitable share of the recipient's or subrecipient's indirect costs if they represent activities which:
 - (1) Include the salaries of personnel;
 - (2) Occupy space; and
 - (3) Benefit from the recipient's or subrecipient's indirect costs.
- (f) **Treatment of certain costs for nonprofit organizations.** For nonprofit organizations, the costs of activities performed by the nonprofit organization primarily as a service to members, clients, or the general public when significant and necessary to the organization's mission must be treated as direct costs whether or not allowable, and be allocated an equitable share of indirect costs. Some examples of these types of activities include:
 - (1) Maintenance of membership rolls, subscriptions, publications, and related functions. See § 200.454.
 - (2) Providing services and information to members, the government, or the public. See §§ 200.454 and 200.450.
 - (3) Promotion, lobbying, and other forms of public relations. See §§ 200.421 and 200.450.

- (4) Conferences (except those held to conduct the general administration of the recipient or subrecipient). See also § 200.432.
- (5) Maintenance, protection, and investment of special funds not used in the recipient's or subrecipient's operation. See also § 200.442.
- (6) Administration of group benefits on behalf of members or clients, including life and hospital insurance, annuity or retirement plans, and financial aid. See also § 200.431.

§ 200.414 Indirect costs.

- (a) **Facilities and administration classification.** For major Institutions of Higher Education (IHE) and major nonprofit organizations, indirect costs must be classified within two broad categories: "Facilities" and "Administration." "Facilities" is defined as depreciation on buildings, equipment and capital improvements, interest on debt associated with certain buildings, equipment and capital improvements, and operations and maintenance expenses. "Administration" is defined as general administration and general expenses such as the director's office, accounting, personnel, and all other types of expenditures not listed specifically under one of the subcategories of "Facilities" (including cross allocations from other pools, where applicable). For nonprofit organizations, library expenses are included in the "Administration" category; for IHEs, they are included in the "Facilities" category. Major IHEs are defined as those required to use the Standard Format for Submission as noted in Appendix III. Major nonprofit organizations are those which receive more than \$10 million in direct Federal funding.
- (b) **Diversity of nonprofit organizations.** It is not always possible to specify the types of costs that may be classified as indirect costs for nonprofit organizations due to the diversity of their accounting practices. The association of a cost with a Federal award is the determining factor in distinguishing direct from indirect costs. However, typical examples of indirect cost for many nonprofit organizations may include depreciation on buildings and equipment, the costs of operating and maintaining facilities, and general administration and general expenses, such as the salaries and expenses of executive officers, personnel administration, and accounting.
- (c) **Federal Agency Acceptance of Negotiated Indirect Cost Rates.** (See § 200.306.)
 - (1) Negotiated indirect cost rates must be accepted by all Federal agencies. A Federal agency may use a rate different from the negotiated rate for either a class of Federal awards or a single Federal award only when required by Federal statute or regulation, or when approved by the awarding Federal agency in accordance with paragraph (c)(3) of this section.
 - (2) The Federal agency must notify OMB of any approved deviations. The recipient or subrecipient may notify OMB of any disputes with Federal agencies regarding the application of a federally negotiated indirect cost rate.
 - (3) The Federal agency must implement, and make publicly available, the policies, procedures and general decision-making criteria that their programs will follow to seek and justify deviations from negotiated rates.
 - (4) The Federal agency must include, in the notice of funding opportunity, the policies relating to indirect cost rate reimbursement or cost share as approved under paragraph (e). As appropriate, the Federal agency should incorporate discussion of these policies into its outreach activities with applicants before posting a notice of funding opportunity. See § 200.204.
- (d) **Pass-through entities.** Pass-through entities are subject to the requirements in § 200.332(b)(4) and must accept all federally negotiated indirect costs rates for subrecipients.

- (e) **Appendices.** Requirements for development and submission of indirect cost rate proposals and cost allocation plans are contained in the following Appendices:
- (1) Appendix III to Part 200—Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs);
 - (2) Appendix IV to Part 200—Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Nonprofit Organizations;
 - (3) Appendix V to Part 200—State/Local Government-wide Central Service Cost Allocation Plans;
 - (4) Appendix VI to Part 200—Public Assistance Cost Allocation Plans;
 - (5) Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals; and
 - (6) Appendix IX to Part 200—Hospital Cost Principles.
- (f) **De minimis rate.** Recipients and subrecipients that do not have a current Federal negotiated indirect cost rate (including provisional rate) may elect to charge a de minimis rate of up to 15 percent of modified total direct costs (MTDC). The recipient or subrecipient is authorized to determine the appropriate rate up to this limit. Federal agencies and pass-through entities may not require recipients and subrecipients to use a de minimis rate lower than the negotiated indirect cost rate or the rate elected pursuant to this subsection unless required by Federal statute or regulation. The de minimis rate must not be applied to cost reimbursement contracts issued directly by the Federal Government in accordance with the FAR. Recipients and subrecipients are not required to use the de minimis rate. When applying the de minimis rate, costs must be consistently charged as either direct or indirect costs and may not be double charged or inconsistently charged as both. The de minimis rate does not require documentation to justify its use and may be used indefinitely. Once elected, the recipient or subrecipient must use the de minimis rate for all Federal awards until the recipient or subrecipient chooses to receive a negotiated rate.
- (g) **One-time extension of indirect rates.** A recipient or subrecipient with a current Federal negotiated indirect cost rate may apply for a one-time extension of that agreement for up to four years. This extension will be subject to review and approval by the cognizant agency for indirect costs. If this extension is granted, the recipient or subrecipient may not request a rate review until the extension period ends. The recipient or subrecipient must re-apply to negotiate a new rate when the extension ends. After a new rate has been negotiated, the recipient or subrecipient may again apply for a one-time extension of the new rate in accordance with this paragraph.

§ 200.415 Required certifications.

- (a) Financial reports must include a certification, signed by an official who is authorized to legally bind the recipient, which reads as follows: “By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and objectives set forth in the terms and conditions of the Federal award. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code Title 18, Section 1001 and Title 31, Sections 3729-3730 and 3801-3812).”
- (b) Subrecipients under the Federal award must certify to the pass-through entity whenever applying for funds, requesting payment, and submitting financial reports: “I certify to the best of my knowledge and belief that the information provided herein is true, complete, and accurate. I am aware that the provision of false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to

criminal, civil, or administrative consequences including, but not limited to violations of U.S. Code Title 18, Sections 2, 1001, 1343 and Title 31, Sections 3729-3730 and 3801-3812.” Each such certification must be maintained pursuant to the requirements of § 200.334. This paragraph applies to all tiers of subrecipients.

- (c) Certification of cost allocation plan or indirect cost rate proposal. Each cost allocation plan or indirect cost rate proposal must comply with the following:
 - (1) A proposal to establish a cost allocation plan or an indirect cost rate, whether submitted to a Federal cognizant agency for indirect costs or maintained on file by the recipient, must be certified by the recipient using the *Certificate of Cost Allocation Plan* or *Certificate of Indirect Costs* as set forth in appendices III through VII, and IX of this part. The certificate must be signed on behalf of the recipient by an individual at a level no lower than the vice president or chief financial officer of the recipient that submits the proposal.
 - (2) The Federal Government may either disallow all indirect costs or unilaterally establish an indirect cost rate when the recipient fails to submit a certified proposal for establishing a rate. This rate should be based upon audited historical data or other data furnished to the cognizant agency for indirect costs and for which it can be demonstrated that all unallowable costs have been excluded. The rate established must ensure that potentially unallowable costs are not reimbursed. Alternatively, the recipient may use the de minimis indirect cost rate. See § 200.414(f).
- (d) Nonprofit organizations must certify that they did not meet the definition of a major nonprofit organization as defined in § 200.414(a), if applicable.
- (e) The recipient must certify that the requirements and standards for lobbying (see § 200.450) have been met when submitting its indirect cost rate proposal.

SPECIAL CONSIDERATIONS FOR STATES, LOCAL GOVERNMENTS AND INDIAN TRIBES

§ 200.416 Cost allocation plans and indirect cost proposals.

- (a) Awards to states, local governments, and Indian Tribes are often implemented at the level of department within the State, local government, or Indian Tribe. A central service cost allocation plan is established to allow such department to claim a portion of centralized service costs that are incurred in proportion to the award's activities. Examples of centralized service costs may include motor pools, computer centers, purchasing, and accounting. Since Federal awards are performed within the individual operating agencies, there needs to be a process whereby these central service costs can be identified and assigned to benefitted activities on a reasonable and consistent basis. The central service cost allocation plan establishes this process.
- (b) Individual departments typically charge Federal awards for indirect costs through an indirect cost rate. A separate indirect cost rate proposal for each operating department is usually necessary to claim indirect costs under Federal awards. Indirect costs include:
 - (1) The indirect costs originating in each operating department of the State, local government, or Indian Tribe carrying out Federal awards; and
 - (2) The costs of central governmental services distributed through the central service cost allocation plan and not otherwise treated as direct costs.

- (c) The requirements for developing and submitting cost allocation plans (for central service costs and public assistance programs) and indirect cost rate proposals are contained in appendices V, VI, and VII of this part.

§ 200.417 Interagency service.

An operating department may provide services to another operating department of the same State, local government, or Indian Tribe. In these instances, the cost of services provided may include allowable direct costs of the service plus a pro-rated share of indirect costs. A standard indirect cost rate equal to 15 percent of the direct salaries and wages for providing the service (excluding overtime, shift premiums, and fringe benefits) may be used instead of determining the actual indirect costs of the service. These services do not include centralized services that are included in central service cost allocation plans described in Appendix V of this part.

Special Considerations for Institutions of Higher Education

§ 200.418 Costs incurred by states and local governments.

Costs incurred or paid by a State or local government on behalf of and in direct benefit to its IHEs are allowable. These costs include but are not limited to fringe benefit programs such as pension costs and Federal Insurance Contributions Act (FICA) costs. These costs are allowable regardless of whether they are recorded in the accounting records of the institutions, subject to the following conditions:

- (a) The costs meet the requirements of § 200.402-200.411;
- (b) The costs are properly supported by approved cost allocation plans in accordance with the applicable cost accounting principles of this part; and
- (c) The costs are not otherwise borne directly or indirectly by the Federal Government.

§ 200.419 Cost accounting standards.

An IHE that receive an aggregate total \$50 million or more in Federal awards and instruments subject to this subpart (as specified in § 200.101) in its most recently completed fiscal year must comply with the Cost Accounting Standards Board's cost accounting standards located at 48 CFR 9905.501, 9905.502, 9905.505, and 9905.506. CAS-covered contracts and subcontracts awarded to the IHEs are subject to the broader range of CAS requirements at 48 CFR 9900 through 9999 and 48 CFR part 30 (FAR Part 30).

GENERAL PROVISIONS FOR SELECTED ITEMS OF COST

§ 200.420 Considerations for selected items of cost.

- (a) This section provides principles to be applied in establishing the allowability of certain items involved in determining cost, in addition to other requirements of this subpart. These principles apply whether or not a particular cost item is properly treated as a direct or indirect cost.
- (b) The following sections are not intended to be a comprehensive list of potential items of cost encountered under Federal awards. Failure to mention a particular item of cost, including as an example in certain sections, is not intended to imply that it is either allowable or unallowable. When determining the allowability for an item of cost, each case should be based on the treatment provided for similar or related

items of cost and based on the principles described in §§ 200.402 through 200.411. In case of a discrepancy between the provisions of a specific Federal award and the provisions below, the Federal award governs. Criteria outlined in § 200.403 must be applied in determining allowability.

§ 200.421 Advertising and public relations.

- (a) The term advertising costs means the costs of advertising media and corollary administrative costs. Advertising media includes, but is not limited to, magazines, newspapers, radio and television, direct mail, exhibits, and electronic or computer transmittals.
- (b) The only allowable advertising costs are those which are solely for:
 - (1) The recruitment of personnel required by the recipient or subrecipient for the performance of a Federal award (See also § 200.463);
 - (2) The procurement of goods and services for the performance of a Federal award;
 - (3) The disposal of scrap or surplus materials acquired in the performance of a Federal award except when the recipient or subrecipient is reimbursed for disposal costs at a predetermined amount; or
 - (4) Program outreach (for example, recruiting project participants) and other specific purposes necessary to meet the Federal award requirements.
- (c) The term “public relations” includes community relations and means those activities dedicated to maintaining the recipient's or subrecipient's image or maintaining or promoting understanding and favorable relations with the community or public at large or any segment of the public.
- (d) The only allowable public relations costs are:
 - (1) Costs specifically required by the Federal award;
 - (2) Costs of communicating with the public and press about specific activities or accomplishments which result from the performance of the Federal award (these costs are considered necessary as part of the outreach effort for the Federal award); or
 - (3) Costs of conducting general liaison with news media and government public relations officers, to the extent that such activities are limited to communication and liaison necessary to keep the public informed on matters of public concern, such as notices of funding opportunities or financial matters.
- (e) Unallowable advertising and public relations costs include the following:
 - (1) All advertising and public relations costs other than as specified in paragraphs (b) and (d) of this section;
 - (2) Costs of meetings, conventions, conferences, or other events related to other activities of the entity (see also § 200.432), including:
 - (i) Costs of displays, demonstrations, and exhibits;
 - (ii) Costs of meeting rooms, hospitality suites, and other special facilities used in conjunction with shows and other special events; and
 - (iii) Salaries and wages of employees engaged in setting up and displaying exhibits, making demonstrations, and providing briefings;
 - (3) Costs of promotional items and memorabilia;

- (4) Costs of advertising and public relations designed solely to promote the recipient or subrecipient.

§ 200.422 Advisory councils.

An advisory council or committee is a body that provides advice to the management of such entities as corporations, organizations, or foundations. Costs incurred by both internal and external advisory councils or committees are allowable if authorized by statute, the Federal agency, or as an indirect cost where allocable to Federal awards. See § 200.444, which applies to States, local governments, and Indian Tribes.

§ 200.423 Alcoholic beverages.

The cost of alcoholic beverages is unallowable.

§ 200.424 Alumni activities.

Costs incurred by IHEs for, or in support of, alumni activities are unallowable.

§ 200.425 Audit services.

- (a) A reasonably proportionate share of the costs of audits required by and performed in accordance with the Single Audit Act Amendments of 1996 (31 U.S.C. 7501-7507), and the requirements of this part are allowable. However, the following audit costs are unallowable:
 - (1) Any costs when audits required by the Single Audit Act and subpart F of this part have not been conducted, or have been conducted but not in accordance with the requirements; and
 - (2) Except as provided for in paragraph (c) of this section, any costs of auditing a non-Federal entity that is exempted from having an audit conducted under the Single Audit Act and subpart F of this part because its expenditures under Federal awards are less than \$1,000,000 during its fiscal year."
- (b) The costs of a financial statement audit of a recipient or subrecipient that does not currently have a Federal award may be included in the indirect cost pool for a cost allocation plan or indirect cost proposal.
- (c) Pass-through entities may charge Federal awards for the cost of agreed-upon procedures engagements to monitor subrecipients (in accordance with §§ 200.331-333) exempt from having an audit conducted under the Single Audit Act and the *requirements of this part*. This cost is allowable only if the agreed-upon procedures engagements are:
 - (1) Conducted in accordance with GAGAS or applicable international attestation standards, as appropriate;
 - (2) Paid for and arranged by the pass-through entity; and
 - (3) Limited in scope to one or more of the following types of compliance requirements: activities allowed or unallowed; allowable costs/cost principles; eligibility; and reporting.

§ 200.426 Bad debts.

Bad debts (debts determined to be uncollectable), including losses (whether actual or estimated) arising from uncollectable accounts and other claims, are unallowable. Related collection costs, and related legal costs, arising from such debts are also unallowable. See § 200.428.

§ 200.427 Bonding costs.

- (a) Bonding costs arise when the Federal agency requires assurance against financial loss to itself or others because of an act or default of the recipient or subrecipient. They also arise when the recipient or subrecipient requires similar assurance, including bonds as bid, performance, payment, advance payment, infringement, and fidelity bonds for employees and officials.
- (b) Costs of bonding required under the Federal award's terms and conditions are allowable.
- (c) Costs of bonding required by the recipient or subrecipient in the general conduct of its operations are allowable as an indirect cost to the extent that such bonding is in accordance with sound business practice and the rates and premiums are reasonable under the circumstances.

§ 200.428 Collections of improper payments.

The costs incurred by a recipient or subrecipient to recover improper payments, including improper overpayments, are allowable as either direct or indirect costs, as appropriate. The recipient or subrecipient may use the amounts collected in accordance with cash management standards described in § 200.305.

§ 200.429 Commencement and convocation costs.

For IHEs, costs incurred for commencements and convocations are unallowable, except as activity costs provided for in Appendix III, (B)(9) Student Administration and Services.

§ 200.430 Compensation—personal services.

- (a) **General.** Compensation for personal services includes all remuneration, paid currently or accrued, for services of employees rendered during the period of performance under the Federal award, including but not necessarily limited to wages and salaries. Compensation for personal services may also include fringe benefits addressed in § 200.431. Costs of compensation are allowable to the extent that they satisfy the specific requirements of this part and that the total compensation for individual employees:
 - (1) Is reasonable for the services rendered and conforms to the established written policy of the recipient or subrecipient consistently applied to both Federal and non-Federal activities;
 - (2) Follows an appointment made in accordance with the recipient's or subrecipient's laws, rules, or written policies and meets the requirements of Federal statute, where applicable; and
 - (3) Is determined and supported as provided in paragraph (g) of this section, when applicable.
- (b) **Reasonableness.** Compensation for employees engaged in work on Federal awards will be reasonable to the extent that it is consistent with that paid for similar work in other activities of the recipient or subrecipient. In cases where the kinds of employees required for Federal awards are not found in the other activities of the recipient or subrecipient, compensation will be considered reasonable to the extent that it is comparable to that paid for similar work in the labor market in which the recipient or subrecipient competes for the kind of employees involved.
- (c) **Professional activities outside the recipient or subrecipient.** Unless the Federal agency expressly authorizes an arrangement, a recipient or subrecipient must follow its written policies and procedures concerning the permissible extent of professional services that can be provided outside the recipient or subrecipient for non-organizational compensation. Where the recipient or subrecipient does not have

written policies or procedures, or they do not adequately define the permissible extent of consulting or other non-organizational activities undertaken for extra outside pay, the Federal Government may require the recipient or subrecipient to allocate the effort of professional staff working on Federal awards between:

- (1) Recipient or subrecipient activities, and
- (2) Non-organizational professional activities. Appropriate arrangements governing compensation must be negotiated on a case-by-case basis if the Federal agency considers the extent of non-organizational professional effort excessive or inconsistent with the conflicts-of-interest terms and conditions of the Federal award.

(d) **Unallowable costs.**

- (1) Costs unallowable under other sections of these principles must not be allowable under this section solely because they constitute personnel compensation.
- (2) The allowable compensation for certain employees is subject to a ceiling in accordance with Federal statute. See 10 U.S.C. 3744(a)(16), 41 U.S.C. 1127, and 41 U.S.C. 4304(a)(16) for the ceiling amount, covered compensation subject to the ceiling, covered employees, and other relevant provisions for cost-reimbursement contracts. For other types of Federal awards, other statutory ceilings may apply.

(e) **Special considerations.** Special considerations in determining the allowability of compensation will be given to any change in a recipient's or subrecipient's compensation policy resulting in a substantial increase in its employees' level of compensation (particularly when the change was concurrent with an increase in the ratio of Federal awards to other activities) or any change in the treatment of allowability of specific types of compensation due to changes in Federal policy.

(f) **Incentive compensation.** Incentive compensation to employees based on cost reduction, efficient performance, suggestion awards, or safety awards is allowable to the extent that the overall compensation is determined to be reasonable and such costs are paid or accrued according to an agreement entered into in good faith between the recipient or subrecipient and the employees before the services were rendered, or according to an established plan followed by the recipient or subrecipient so consistently as to imply, in effect, an agreement to make such payment.

(g) **Standards for Documentation of Personnel Expenses.**

- (1) Charges to Federal awards for salaries and wages must be based on records that accurately reflect the work performed. These records must:
 - (i) Be supported by a system of internal control that provides reasonable assurance that the charges are accurate, allowable, and properly allocated;
 - (ii) Be incorporated into the official records of the recipient or subrecipient;
 - (iii) Reasonably reflect the total activity for which the employee is compensated by the recipient or subrecipient, not exceeding 100 percent of compensated activities (for IHEs, this is the IBS);
 - (iv) Encompass federally-assisted and all other activities compensated by the recipient or subrecipient on an integrated basis but may include the use of subsidiary records as defined in the recipient's or subrecipient's written policy;
 - (v) Comply with the established accounting policies and procedures of the recipient or subrecipient (See paragraph (i)(1)(ii) of this section for treatment of incidental work for IHEs.); and

- (vi) Support the distribution of the employee's salary or wages among specific activities or cost objectives if the employee works on more than one Federal award; a Federal award and non-Federal award; an indirect cost activity and a direct cost activity; two or more indirect activities allocated using different allocation bases; or an unallowable activity and a direct or indirect cost activity.
- (vii) Budget estimates (meaning, estimates determined before the services are performed) alone do not qualify as support for charges to Federal awards, but may be used for interim accounting purposes, provided that:
 - (A) The system for establishing the estimates produces reasonable approximations of the activity performed;
 - (B) Significant changes in the related work activity (as defined by the recipient's or subrecipient's written policies) are promptly identified and entered into the records. Short-term (such as one or two months) fluctuations between workload categories do not need to be considered as long as the distribution of salaries and wages is reasonable over the longer term; and
 - (C) The recipient's or subrecipient's system of internal controls includes processes to perform periodic after-the-fact reviews of interim charges made to a Federal award based on budget estimates. All necessary adjustments must be made so that the final amount charged to the Federal award is accurate, allowable, and properly allocated.
- (viii) Because practices vary as to the activity constituting a full workload (for example, the Institutional Base Salary (IBS) for IHEs), records may reflect categories of activities expressed as a percentage distribution of total activities.
- (ix) It is recognized that teaching, research, service, and administration are often inextricably intermingled in an academic setting. Therefore, a precise assessment of factors contributing to costs is not required when IHEs record salaries and wages charged to Federal awards.
- (2) For records that meet the standards required in paragraph (g)(1) of this section, the recipient or subrecipient is not required to provide additional support or documentation for the work performed other than that referenced in paragraph (g)(3) of this section.
- (3) In accordance with Department of Labor regulations implementing the Fair Labor Standards Act (FLSA) (29 CFR part 516), charges for the salaries and wages of nonexempt employees, in addition to the supporting documentation described in this section, must also be supported by records indicating the total number of hours worked each day.
- (4) Salaries and wages of employees used in meeting cost sharing requirements on Federal awards must be supported in the same manner as salaries and wages claimed for reimbursement from Federal awards.
- (5) States, local governments, and Indian Tribes may use substitute processes or systems for allocating salaries and wages to Federal awards either in place of or in addition to the records described in paragraph (g)(1) of this section if approved by the cognizant agency for indirect cost. Such systems may include, but are not limited to, random moment sampling, "rolling" time studies, case counts, or other quantifiable measures of work performed.

- (i) Substitute systems that use sampling methods (primarily for Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), Medicaid, and other public assistance programs) must meet acceptable statistical sampling standards, including:
 - (A) The sampling universe must include all of the employees whose salaries and wages are to be allocated based on sample results except as provided in paragraph (g)(5)(iii);
 - (B) The sample must cover the entire period involved; and
 - (C) The results must be statistically valid and applied to the period being sampled.
- (ii) Allocating charges for the sampled employees' supervisors and clerical and support staff, based on the results of the sampled employees, will be acceptable.
- (iii) Less than full compliance with the statistical sampling standards noted in paragraph (5)(i) may be accepted by the cognizant agency for indirect costs if it concludes that the amounts allocated to Federal awards will be minimal or if it concludes that the system proposed by the recipient or subrecipient will result in lower costs to Federal awards than a system which complies with the standards.

- (6) Cognizant agencies for indirect costs are encouraged to approve alternative proposals based on outcomes and milestones for program performance when these are clearly documented. These plans are acceptable as an alternative to requirements in paragraph (g)(1) of this section when approved by the cognizant agency for indirect costs.
- (7) For Federal awards of similar purpose activity or instances of approved blended funding, a recipient or subrecipient may submit performance plans that incorporate funds from multiple Federal awards and account for their combined use based on performance-oriented metrics, provided the plans are approved in advance by all involved Federal agencies. In these instances, the recipient or subrecipient must submit a request for waiver of the requirements based on documentation that describes the method of charging costs, relates the charging of costs to the specific activity that is applicable to all fund sources, and is based on quantifiable measures of the activity in relation to time charged.
- (8) For a recipient or subrecipient whose records do not meet the standards described in this section, the Federal Government may require personnel activity reports, including prescribed certifications, or equivalent documentation supporting the records as required in this section.

(h) **Nonprofit organizations.** This paragraph (h) provides guidance specific to only nonprofit organizations. For compensation to members of nonprofit organizations, trustees, directors, associates, officers, or the immediate families thereof, a determination must be made that the compensation is reasonable for the actual personal services rendered rather than a distribution of earnings above actual costs. Compensation may include director's and executive committee member's fees, incentive awards, off-site or incentive pay, location allowances, hardship pay, and cost-of-living differentials.

(i) **Institutions of Higher Education (IHEs).** This paragraph provides guidance specific to only IHEs.

- (1) **Determining allowable personnel costs.** Certain conditions require special consideration and possible limitations in determining allowable personnel compensation costs under Federal awards. Among such conditions are the following:

- (i) Allowable activities. Charges to Federal awards may include reasonable amounts for activities contributing and directly related to work under an agreement, such as delivering special lectures about specific aspects of the ongoing activity, writing reports and articles, developing and maintaining protocols (human, animals, etcetera), managing substances/chemicals, managing and securing project-specific data, coordinating research subjects, participating in appropriate seminars, consulting with colleagues and graduate students, and attending meetings and conferences.
 - (ii) Incidental activities. Incidental activities for which supplemental compensation is allowable under the written institutional policy (at a rate not to exceed institutional base salary) do not need to be included in the records described in paragraph (g). To charge payments of incidental activities directly, such activities must either be expressly authorized in the Federal award budget or receive prior written approval by the Federal agency.
- (2) **Salary basis.** Charges for work performed on Federal awards by faculty members during the academic year are allowable at the institutional base salary (IBS) rate. Except as noted in paragraph (i)(1)(ii), in no event will charges to Federal awards, irrespective of the basis of computation, exceed the proportionate share of the IBS for that period. This principle applies to all members of the faculty at an institution. IBS is the annual compensation paid by an IHE for an individual's appointment, whether that individual's time is spent on research, instruction, administration, or other activities. IBS excludes any income an individual earns outside of duties performed for the IHE. Unless there is prior approval by the Federal agency, charges of a faculty member's salary to a Federal award may not exceed the proportionate share of the IBS for the period during which the faculty member worked on the Federal award.
- (3) **Intra-Institution of Higher Education (IHE) consulting.** Intra-IHE consulting by faculty should be undertaken as an IHE responsibility requiring no compensation in addition to IBS. However, in unusual cases where consultation is across departmental lines or involves a separate or remote operation, and the work performed by the faculty members is in addition to their regular responsibilities, any charges for such work representing additional compensation above IBS are allowable provided that such consulting arrangements are expressly authorized in the Federal award or approved in writing by the Federal agency.
- (4) **Extra service pay.** Extra service pay typically represents overload compensation, subject to institutional compensation policies for services above and beyond IBS. Where extra service pay results from Intra-IHE consulting, it is subject to the same requirements of paragraph (b) of this section. It is allowable if all of the following conditions are met:
 - (i) The IHE establishes consistent written policies which apply uniformly to all faculty members, not just those working on Federal awards.
 - (ii) The IHE establishes a consistent written definition of work covered by IBS, which is specific enough to determine conclusively when work beyond that level has occurred. This definition may be described in appointment letters or other documentation.
 - (iii) The supplementation amount paid is commensurate with the IBS pay rate and additional work performed. See paragraph (i)(2) of this section.
 - (iv) The salaries, as supplemented, fall within the salary structure and pay ranges established by and documented in writing or otherwise applicable to the IHE.

- (v) The total salaries charged to Federal awards, including extra service payments, are subject to the standards of documentation as described in paragraph (g).
- (5) **Periods outside the academic year.**
 - (i) Except as specified for teaching activity in paragraph (i)(5)(ii) of this section, charges for work performed by faculty members on Federal awards during periods not included in the base salary period must be at a rate not more than the IBS.
 - (ii) Charges for teaching activities performed by faculty members on Federal awards during periods not included in IBS period must be based on the written policy of the IHE governing compensation to faculty members for teaching assignments during such periods.
- (6) **Part-time faculty.** Charges for work performed on Federal awards by faculty members having only part-time appointments must be determined at a rate not more than that regularly paid for part-time assignments.
- (7) **Sabbatical leave costs.** Rules for sabbatical leave are as follows:
 - (i) Costs of leaves of absence by employees for performance of graduate work or sabbatical study, travel, or research are allowable, provided the IHE has a uniform written policy on sabbatical leave for persons engaged in instruction and persons engaged in research. These costs must be allocated equitably among all related activities of the IHE.
 - (ii) Where sabbatical leave is included in fringe benefits for which a cost is determined for assessment as a direct charge, the aggregate amount of such assessments applicable to all work of the institution during the base period must be reasonable in relation to the IHE's actual experience under its sabbatical leave policy.
- (8) **Salary rates for non-faculty members.** Non-faculty full-time professional personnel may also earn "extra service pay" in accordance with the IHE's written policy and paragraph (i)(1)(i).

§ 200.431 Compensation—fringe benefits.

- (a) **General.** Fringe benefits are allowances and services employers provide to their employees as compensation in addition to regular salaries and wages. Fringe benefits include, but are not limited to, the costs of leave, employee insurance, pensions, and unemployment benefits. Except as provided elsewhere in these principles, the costs of fringe benefits are allowable provided that the benefits are reasonable and are required by law, an organization-employee agreement, or an established policy of the recipient or subrecipient.
- (b) **Leave.** The cost of fringe benefits in the form of regular compensation paid to employees during periods of authorized absences from the job, such as for annual leave, family-related leave, sick leave, holidays, court leave, military leave, administrative leave, and other similar benefits, are allowable if all of the following criteria are met:
 - (1) They are provided under established written leave policies;
 - (2) The costs are equitably allocated to all related activities, including Federal awards; and,
 - (3) The accounting basis (cash or accrual) selected for costing each type of leave is consistently followed by the recipient or subrecipient or a specified grouping of employees.

- (i) When a recipient or subrecipient uses the cash basis of accounting, the cost of leave is recognized in the period that the leave is taken and paid for. Payments for unused leave when an employee retires or terminates employment are allowable in the year of payment and should be allocated as a general administrative expense to all activities or included in the fringe benefit rate.
 - (ii) The accrual basis may be only used for those types of leave for which a liability as defined by GAAP exists when the leave is earned. When a recipient or subrecipient uses the accrual basis of accounting, allowable leave costs are the lesser of the amount accrued or funded.
- (c) **Fringe benefits.** The cost of fringe benefits in the form of employer contributions or expenses for social security; employee life, health, unemployment, and worker's compensation insurance (except as indicated in § 200.447); pension plan costs; and other similar benefits are allowable, provided such benefits are permitted under established written policies. The recipient or subrecipient must allocate fringe benefits to Federal awards and all other activities in a manner consistent with the pattern of benefits attributable to the individuals or group(s) of employees whose salaries and wages are chargeable to such Federal awards and other activities, and charged as direct or indirect costs following the recipient's or subrecipient's accounting practices.
- (d) **Cost objectives.** The recipient or subrecipient may assign fringe benefits to cost objectives by identifying specific benefits to specific individual employees or by allocating them based on entity-wide salaries and wages of the employees receiving the benefits. When the allocation method is used, separate allocations must be made to selective groupings of employees unless the recipient or subrecipient demonstrates that costs in relationship to salaries and wages do not differ significantly for different groups of employees.
- (e) **Insurance.** See also § 200.447(d)(1) and (2).
 - (1) Provisions for a reserve under a self-insurance program for unemployment compensation or workers' compensation are allowable to the extent that the provisions represent reasonable estimates of the liabilities for such compensation and the types of coverage, the extent of coverage, and rates and premiums would have been allowable had insurance been purchased to cover the risks. However, provisions for self-insured liabilities which do not become payable for more than one year after the provision is made must not exceed the present value of the liability.
 - (2) Insurance costs on the lives of trustees, officers, or other employees holding positions of similar responsibility are allowable only to the extent that the insurance represents additional compensation. The cost of such insurance is unallowable when the recipient or subrecipient is named as beneficiary.
 - (3) Actual claims paid to or on behalf of employees or former employees for workers' compensation, unemployment compensation, severance pay, and similar employee benefits (*for example*, post-retirement health benefits) are allowable in the year of payment provided that the recipient or subrecipient follows a consistent costing policy.
- (f) **Automobiles.** That portion of automobile costs furnished by the recipient or subrecipient that relates to personal use by employees (including transportation to and from work) is unallowable as a fringe benefit or indirect costs regardless of whether the cost is reported as taxable income to the employees.
- (g) **Pension plan costs.** Pension plan costs incurred in accordance with the established written policies of the recipient or subrecipient are allowable, provided that:
 - (1) Such policies meet the test of reasonableness.

- (2) The methods of cost allocation are not discriminatory.
- (3) The cost assigned to each fiscal year should be determined in accordance with GAAP, except for State and local governments.
- (4) The costs assigned to a given fiscal year are funded for all plan participants within six months after the end of that year. However, increases to normal and past service pension costs caused by a delay in funding the actuarial liability beyond 30 calendar days after each quarter of the year to which such costs are assignable are unallowable. The recipient or subrecipient may follow the "Cost Accounting Standard for Composition and Measurement of Pension Costs" (48 CFR 9904.412).
- (5) Premiums for pension plan termination insurance that are paid according to the Employee Retirement Income Security Act (ERISA) of 1974 (29 U.S.C. 1301-1461) are allowable. Late payment charges on such premiums are unallowable. Excise taxes on accumulated funding deficiencies and other penalties imposed under ERISA are unallowable.
- (6) Pension plan costs may be computed using a pay-as-you-go method or an actuarial cost method recognized by GAAP and following the recipient's or subrecipient's established written policies.
 - (i) For pension plans financed on a pay-as-you-go method, allowable costs will be limited to those representing actual payments to retirees or their beneficiaries.
 - (ii) Pension costs calculated using an actuarial cost method recognized by GAAP are allowable for a given fiscal year if they are funded for that year within six months after the end of that year. Costs funded after six months (or a later period agreed to by the cognizant agency for indirect costs) are allowable in the year funded. The cognizant agency for indirect costs may agree to an extension if an appropriate adjustment is made to compensate for the timing of the charges to the Federal Government and related Federal reimbursement and the recipient's or subrecipient's contribution to the pension fund. Adjustments may be made by cash refund or other equitable procedures to compensate the Federal Government for the time value of Federal reimbursements in excess of contributions to the pension fund.
 - (iii) Amounts funded by the recipient or subrecipient in excess of the actuarially determined amount for a fiscal year may be used as the recipient's or subrecipient's contribution in future periods.
 - (iv) When a recipient or subrecipient establishes or converts to an acceptable actuarial cost method, as defined by GAAP, and funds pension costs in accordance with this method, the unfunded liability at the time of conversion is allowable if amortized over a period of years in accordance with GAAP.
 - (v) Payments for unfunded pension costs must be charged in accordance with the allocation principles of this subpart. Specifically, the recipient or subrecipient may not charge unfunded pension costs directly to a Federal award if those unfunded pension costs are not allocable to that award.
 - (vi) The recipient or subrecipient must provide the Federal Government an equitable share of any previously allowed pension costs (including subsequent earnings) that revert or inure to the recipient or subrecipient through a refund, withdrawal, or other credit.

- (h) **Post-retirement health.** A post-retirement health plan (PRHP) refers to the costs of health insurance or health services not included in a pension plan covered by paragraph (g) for retirees and their spouses, dependents, and survivors. PRHP costs may be computed using a pay-as-you-go method or an actuarial cost method recognized by GAAP and following the recipient's or subrecipient's established written policies.
- (1) For PRHP financed on a pay-as-you-go method, allowable costs will be limited to those representing actual payments to retirees or their beneficiaries.
 - (2) PRHP costs calculated using an actuarial cost method recognized by GAAP are allowable for a given fiscal year if they are funded for that year within six months after the end of that year. Costs funded after six months (or a later period agreed to by the cognizant agency for indirect costs) are allowable in the year funded. The cognizant agency for indirect costs may agree to an extension if an appropriate adjustment is made to compensate for the timing of the charges to the Federal Government and related Federal reimbursement and the recipient's or subrecipient's contributions to the PRHP fund. Adjustments may be made by cash refund, reduction in the current year's PRHP costs, or other equitable procedures to compensate the Federal Government for the time value of Federal reimbursements in excess of contributions to the PRHP fund.
 - (3) Amounts funded by the recipient or subrecipient in excess of the actuarially determined amount for a fiscal year may be used as the recipient's or subrecipient's contribution in future periods.
 - (4) If a recipient or subrecipient establishes or converts to an actuarial cost method and funds PRHP costs in accordance with this method, the initial unfunded liability attributable to prior years is allowable if amortized over a period of years in accordance with GAAP, or, if no such GAAP period exists, over a period negotiated with the cognizant agency for indirect costs.
 - (5) Payments for unfunded PRHP costs must be charged in accordance with the allocation principles of this subpart. Specifically, the recipient or subrecipient may not charge unfunded PRHP costs directly to a Federal award if those unfunded PRHP costs are not allocable to that award.
 - (6) To be allowable in the current year, the PRHP costs must be paid either to:
 - (i) An insurer or other benefit provider as current year costs or premiums; or
 - (ii) An insurer or trustee that will maintain a trust fund or reserve for the sole purpose of providing post-retirement benefits to retirees and other beneficiaries.
 - (7) The recipient or subrecipient must provide the Federal Government an equitable share of any previously allowed post-retirement benefit costs (including subsequent earnings) that revert or inure to the recipient or subrecipient through a refund, withdrawal, or other credit.
- (i) **Severance pay.**
- (1) Severance pay, also commonly referred to as dismissal wages, is a payment in addition to regular salaries and wages, by recipients and subrecipients to workers whose employment is being terminated. Severance pay is allowable only to the extent that, in each case, it is required by:
 - (i) Law;
 - (ii) Employer-employee agreement;
 - (iii) Established policy that constitutes, in effect, an implied agreement on the recipient's or subrecipient's part; or

(iv) Circumstances of the particular employment.

(2) Costs of severance payments are divided into two categories as follows:

(i) Actual severance payments for normal turnover must be allocated to all activities; or, where the recipient or subrecipient provides for a reserve for normal severances, such method is acceptable if the charge to current operations is reasonable in light of payments made for normal severances over a representative past period, and if amounts charged are allocated to all activities of the recipient or subrecipient.

(ii) Measuring the costs of abnormal or mass severance pay by means of an accrual method will not achieve equity for both parties. Therefore, accruals are not allowable. However, the Federal Government recognizes its responsibility to contribute its fair share toward a specific payment. Prior approval by the Federal agency or cognizant agency for indirect cost, as appropriate, is required.

(3) Costs incurred in severance pay packages that are in excess of the standard severance pay provided by the recipient or subrecipient to an employee upon termination of employment and that are paid to the employee contingent upon a change in management control over, or ownership of, the recipient's or subrecipient's assets, are unallowable.

(4) Severance payments to foreign nationals employed by the recipient or subrecipient outside the United States, to the extent that the amount exceeds the customary or prevailing practices for the recipient or subrecipient in the United States, are unallowable unless they are required by applicable foreign law or necessary for the performance of Federal programs and approved by the Federal agency.

(5) Severance payments to foreign nationals employed by the recipient or subrecipient outside the United States due to the termination of the foreign national as a result of the closing of, or curtailment of activities by, the recipient or subrecipient in that country, are unallowable unless they are either:

(i) Required by applicable foreign law; or

(ii) Necessary for the performance of Federal programs and approved by the Federal agency.

(j) *For IHEs only.*

(1) Fringe benefits in the form of undergraduate and graduate tuition or tuition remission for individual employees are allowable, provided such benefits are granted in accordance with established written policies of the IHE and are distributed to all IHE activities on an equitable basis. Tuition benefits for family members other than the employee are unallowable.

(2) Fringe benefits in the form of undergraduate and graduate tuition or tuition remission for individual employees not employed by the IHE are limited to the tax-free amount allowed by the Internal Revenue Code as amended (26 U.S.C. 127).

(3) IHEs may offer employees tuition waivers or reductions, provided that the benefit does not discriminate in favor of highly compensated employees. Employees can exercise these benefits at other institutions according to institutional policy. See § 200.466, for treatment of tuition remission provided to students.

(k) *Fringe benefit programs and other benefit costs.*

- (1) For IHEs whose costs are paid by a State or local government, fringe benefit programs (such as pension costs and FICA) and any other benefits costs incurred specifically on behalf of, and in direct benefit to, the IHE, are allowable, subject to the following:
 - (i) The costs meet the requirements of Basic Considerations in §§ 200.402 through 200.411;
 - (ii) The costs are properly supported by approved cost allocation plans in accordance with applicable Federal cost accounting principles; and
 - (iii) The costs are not otherwise borne directly or indirectly by the Federal Government.
- (2) The allowability of these costs for the IHE does not depend on whether they are recorded in the accounting records of the IHE.

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§ 200.432 Conferences.

A conference means an event whose primary purpose is to disseminate technical information beyond the recipient or subrecipient and is necessary and reasonable for successful performance under the Federal award. Allowable conference costs may include the rental of facilities, speakers' fees, attendance fees, costs of meals and refreshments, local transportation, and other items incidental to such conferences unless further restricted by the terms and conditions of the Federal award. The costs of identifying and providing locally available dependent-care resources for participants are allowable as needed. Conference hosts/sponsors must exercise discretion and judgment in ensuring that conference costs are appropriate, necessary, and managed to minimize costs to the Federal award. The Federal agency may authorize exceptions for programs including Indian Tribes, children, and the elderly. See also §§ 200.438, 200.456, and 200.475.

§ 200.433 Contingency provisions.

- (a) Contingency provisions are part of a budget estimate of future costs (typically of large construction projects, IT systems, or other items approved by the Federal agency) which are associated with possible events or conditions arising from causes for which the precise outcome is indeterminable at the time of estimate and that are likely to result, in the aggregate, in additional costs for the approved activity or project. Contingency amounts for major project scope changes, unforeseen risks, or extraordinary events must not be included in the budget estimates for a Federal award.
- (b) It is permissible for contingency amounts other than those excluded in paragraph (a) of this section to be explicitly included in budget estimates to the extent necessary to improve their precision. Contingency amounts must be estimated using broadly-accepted cost estimating methodologies, specified in the budget documentation of the Federal award, and accepted by the Federal agency. As such, contingency amounts are to be included in the Federal award. In order for actual costs incurred to be allowable, they must comply with the cost principles and other requirements of this part (see §§ 200.300 and 200.403), be necessary and reasonable for proper and efficient accomplishment of project or program objectives, and be verifiable from the recipient's or subrecipient's records.
- (c) Payments to a recipient's or subrecipient's "contingency reserve" or any similar payment made for events the occurrence of which cannot be foretold with certainty as to the time or intensity, or with an assurance of their happening, are unallowable, except as noted in §§ 200.431 and 200.447.

§ 200.434 Contributions and donations.

- (a) Costs of contributions and donations, including cash, property, and services, from the recipient or subrecipient to other entities are unallowable.
- (b) The value of services and property donated (that is, in-kind donations) to the recipient or subrecipient may not be charged to the Federal award either as a direct or indirect cost. The value of donated services and property may be used to meet cost sharing requirements (see § 200.306). Depreciation on donated assets is permitted so long as the donated property is not counted towards meeting cost sharing requirements (see § 200.436).
- (c) Services donated or volunteered to the recipient or subrecipient may be provided by professional and technical personnel, consultants, and other skilled and unskilled labor. The value of these services may not be charged to the Federal award as a direct or indirect cost. However, the value of donated services may be used to meet cost sharing requirements in accordance with the provisions of § 200.306.
- (d) To the extent feasible, services donated to the recipient or subrecipient will be supported by the same methods used to support the allocability of regular personnel services.
- (e) The following provisions apply to nonprofit organizations. The value of services donated to a nonprofit organization and used in the performance of a direct cost activity must be considered in the determination of the recipient's or subrecipient's indirect cost rate(s) and, accordingly, must be allocated a proportionate share of applicable indirect costs when the following circumstances exist:
 - (1) The aggregate value of the services is material;
 - (2) The services are supported by a significant amount of the indirect costs incurred by the recipient or subrecipient;
 - (i) In those instances where there is no basis for determining the fair market value of the services rendered, the recipient or subrecipient and the cognizant agency for indirect costs must negotiate an appropriate allocation of indirect cost to the services.
 - (ii) Where donated services directly benefit a project supported by the Federal award, the indirect costs allocated to the services will be considered as a part of the project's total costs. Such indirect costs may be reimbursed under the Federal award or used to meet cost sharing requirements.
- (f) Fair market value of donated services must be computed as described in § 200.306.
- (g) Personal property and use of space.
 - (1) Donated personal property and use of space may be furnished to a recipient or subrecipient. The value of the personal property and space may not be charged to the Federal award either as a direct or indirect cost.
 - (2) The value of the donations of personal property and use of space may be used to meet cost sharing requirements described in § 200.300. The recipient or subrecipient must value the donations in accordance with § 200.300. Where the recipient or subrecipient treats donations as indirect costs, indirect cost rates must separate the value of the donations so that reimbursement is not made.

§ 200.435 Defense and prosecution of criminal and civil proceedings, claims, appeals and patent infringements.

(a) *Definitions for this section* —

- (1) **Conviction** means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon verdict or a plea, including a conviction due to a plea of nolo contendere.
- (2) **Costs** include the services that bear a direct relationship to a judicial or administrative proceeding and provided by in-house or private counsel, accountants, consultants, or others engaged to assist the recipient or subrecipient before, during, or after the commencement of that proceeding.
- (3) **Fraud** means:
 - (i) Acts of fraud or corruption or attempts to defraud the Federal Government or to corrupt its agents,
 - (ii) Acts that constitute a cause for debarment or suspension (as specified in agency regulations), and
 - (iii) Acts that violate the False Claims Act (31 U.S.C. 3729-3732) or the Anti-kickback Act (42 U.S.C. 1320a-7b(b)).
- (4) **Penalty** does not include restitution, reimbursement, or compensatory damages.
- (5) **Proceeding** includes an investigation.

(b) *Costs.*

- (1) Except as otherwise described herein, costs incurred in connection with any criminal, civil, or administrative proceeding (including the filing of a false certification) commenced by the Federal Government, a State, local government, or foreign government, or joined by the Federal Government (including a proceeding under the False Claims Act), against the recipient or subrecipient, (or commenced by third parties or a current or former employee of the recipient or subrecipient who submits a whistleblower complaint of reprisal in accordance with 10 U.S.C. 4701 or 41 U.S.C. 4712), are not allowable if the proceeding:
 - (i) Relates to a violation of, or failure to comply with, a Federal, State, local or foreign statute, regulation, or the terms and conditions of the Federal award by the recipient or subrecipient (including its agents and employees); and
 - (ii) Results in any of the following dispositions:
 - (A) In a criminal proceeding, a conviction.
 - (B) In a civil or administrative proceeding involving an allegation of fraud or similar misconduct, a determination of recipient or subrecipient liability.
 - (C) In the case of any civil or administrative proceeding, the disallowance of costs, the imposition of a monetary penalty, or an order issued by the Federal agency head or delegate to the recipient or subrecipient to take corrective action under 10 U.S.C. 4701 or 41 U.S.C. 4712.

- (D) A final decision by an appropriate Federal official to debar or suspend the recipient or subrecipient, to rescind or void a Federal award, or to terminate a Federal award because of a violation or failure to comply with a statute, regulation, or the terms and conditions of the Federal award.
 - (E) A disposition by consent or compromise if the action could have resulted in any of the dispositions described in paragraphs (b)(1)(ii)(A) through (D) of this section.
- (2) If more than one proceeding involves the same alleged misconduct, the costs of all such proceedings are unallowable if any results in one of the dispositions shown in paragraph (b) of this section.
- (c) **Allowability of costs for proceeding commenced by Federal Government.** If a proceeding referred to in paragraph (b) of this section is commenced by the Federal Government and is resolved by consent or compromise pursuant to an agreement by the recipient or subrecipient and the Federal Government, then the costs incurred may be allowed to the extent expressly authorized in the agreement.
- (d) **Allowability of costs for proceeding commenced by State, local, or foreign government.** If a proceeding referred to in paragraph (b) of this section is commenced by a State, local or foreign government, then the costs incurred may be allowed if the authorized Federal official determines that the costs were incurred as a result of:
 - (1) A specific term or condition of the Federal award, or
 - (2) Specific written direction of an authorized official of the Federal agency.
- (e) **Allowability of costs in general.** Costs incurred in connection with proceedings described in paragraph (b), and not made unallowable by that paragraph, may be allowed to the extent that:
 - (1) The costs are reasonable and necessary for the administration of the Federal award and activities required to deal with the proceeding and the underlying cause of action;
 - (2) Payment of the reasonable, necessary, allocable and otherwise allowable costs incurred is not prohibited by any other provision(s) of the Federal award;
 - (3) The costs are not recovered from the Federal Government or a third party, either directly as a result of the proceeding or otherwise; and,
 - (4) An authorized Federal official has determined the percentage of costs allowed considering the complexity of litigation, generally accepted principles governing the award of legal fees in civil actions involving the United States, and other factors that may be appropriate. This percentage must not exceed 80 percent unless an agreement under paragraph (c) has explicitly considered this limitation and permitted a higher percentage. In that case, the total amount of costs incurred may be allowable.
- (f) **Major Fraud Act.** Costs incurred by the recipient or subrecipient in connection with the defense of suits brought by its employees or ex-employees under section 2 of the Major Fraud Act of 1988 (18 U.S.C. 1031), including the cost of all relief necessary to make the employee whole, where the recipient or subrecipient was found liable or settled, are unallowable.
- (g) **Un-allowability of costs for prosecuting claims against Federal Government.** Costs for prosecuting claims against the Federal Government, including appeals of final Federal agency decisions, are unallowable.

- (h) **Patent infringement litigation.** Costs of legal, accounting, and consultant services, and related costs incurred in connection with patent infringement litigation, are unallowable unless otherwise provided for in the Federal award.
- (i) **Potentially unallowable costs.** Costs that may be unallowable under this section, including directly associated costs, must be segregated and accounted for separately. During the pendency of any proceeding covered by paragraphs (b) and (f) of this section, the Federal Government must generally withhold payment of such costs. However, if in its best interests, the Federal Government may provide for conditional payment upon provision of adequate security, or other adequate assurance, and agreement to repay all unallowable costs, plus interest, if the costs are subsequently determined to be unallowable.

§ 200.436 Depreciation.

- (a) Depreciation is the method for allocating the cost of fixed assets to periods benefitting from asset use. The recipient or subrecipient may be compensated for the use of its buildings, capital improvements, equipment, and software projects capitalized in accordance with GAAP provided that they are needed and used in the recipient's or subrecipient's activities and correctly allocated to Federal awards. The compensation must be made by computing the proper depreciation.
- (b) The allocation for depreciation must be made in accordance with Appendices III through IX of this part.
- (c) Depreciation is computed applying the following rules. The computation of depreciation must be based on the acquisition cost of the assets involved. For an asset donated to the recipient or subrecipient by a third party, its fair market value at the time of the donation must be considered as the acquisition cost. Such assets may be depreciated or claimed as cost sharing but not both. When computing depreciation charges, the acquisition cost will exclude:
 - (1) The cost of land;
 - (2) Any portion of the cost of buildings and equipment borne by or donated by the Federal Government, irrespective of where the title was originally vested or is presently located;
 - (3) Any portion of the cost of buildings and equipment contributed by or for the recipient or subrecipient that is already claimed as cost sharing or where law or agreement prohibits recovery; and
 - (4) Any asset acquired solely for the performance of a non-Federal award.
- (d) When computing depreciation charges, the following must be observed:
 - (1) The period of useful service or useful life established in each case for usable capital assets must take into consideration such factors as the type of construction, nature of the equipment, technological developments in the particular area, historical data, and the renewal and replacement policies followed for the individual items or classes of assets involved.
 - (2) The depreciation method used to charge the cost of an asset (or group of assets) to accounting periods must reflect the pattern of consumption of the asset during its useful life. In the absence of clear evidence indicating that the expected consumption of the asset will be significantly greater in the early portions than in the later portions of its useful life, the straight-line method must be presumed to be the appropriate method. Once used, depreciation methods may not be changed unless approved in advance by the cognizant agency for indirect costs. The depreciation methods used to calculate the depreciation amounts for indirect cost rate purposes must be the same methods used by the recipient or subrecipient for its financial statements.

- (3) The entire building, including the shell and all components, may be treated as a single asset and depreciated over a single useful life. A building may also be divided into multiple components. Each component may be depreciated over its estimated useful life in this case. The building components must be grouped into three general components: building shell (including construction and design costs), building services systems (for example, elevators, HVAC, and plumbing system), and fixed equipment (for example, sterilizers, casework, fume hoods, cold rooms, and glassware/washers). A cognizant agency for indirect costs may authorize a recipient or subrecipient to use more than these three groupings in exceptional cases. When a recipient or subrecipient elects to depreciate its buildings by their components, the same depreciation method must be used for indirect and financial statements purposes, as described in paragraphs (d)(1) and (2).
- (4) No depreciation may be allowed on assets that have outlived their depreciable lives.
- (5) Where the depreciation method is introduced to replace the use allowance method, depreciation must be computed as if the asset had been depreciated over its entire life (meaning, from the date the asset was acquired and ready for use to the date of disposal or withdrawal from service). The total amount of use allowance and depreciation for an asset (including imputed depreciation applicable to periods before the conversion from the use allowance method and depreciation after the conversion) may not exceed the total acquisition cost of the asset.
- (e) Adequate property records must support depreciation charges, and physical inventories must be taken at least once every two years to ensure that the assets exist and are usable, used, and needed. The recipient or subrecipient may use statistical sampling techniques when taking these inventories. In addition, the recipient or subrecipient must maintain adequate depreciation records showing the amount of depreciation.

§ 200.437 Employee health and welfare costs.

- (a) Costs incurred in accordance with the recipient's or subrecipient's established written policies for improving working conditions, employer-employee relations, employee health, and employee performance are allowable.
- (b) These costs must be equitably apportioned to all activities of the recipient or subrecipient. Income generated from these activities must be credited to the cost thereof unless such income has been irrevocably sent to employee welfare organizations.
- (c) Losses resulting from operating food services are allowable only if the recipient's or subrecipient's objective is to operate food services on a break-even basis. Losses sustained because of operating objectives other than the above are allowable only when:
 - (1) The recipient or subrecipient can demonstrate unusual circumstances; and
 - (2) Approved by the cognizant agency for indirect costs.

§ 200.438 Entertainment and prizes.

- (a) **Entertainment costs.** Costs of entertainment, including amusement, diversion, and social activities and any associated costs (such as gifts), are unallowable unless they have a specific and direct programmatic purpose and are included in a Federal award.

- (b) **Prizes.** Costs of prizes or challenges are allowable if they have a specific and direct programmatic purpose and are included in the Federal award. Federal agencies should refer to OMB guidance in M-10-11 "Guidance on the Use of Challenges and Prizes to Promote Open Government," issued March 8, 2010, or its successor.

§ 200.439 Equipment and other capital expenditures.

- (a) See § 200.1 for the definitions of *capital expenditures*, *equipment*, *special purpose equipment*, *general purpose equipment*, *acquisition cost*, and *capital assets*.
- (b) The following rules of allowability must apply to equipment and other capital expenditures:
 - (1) Capital expenditures for general purpose equipment, buildings, and land are allowable as direct costs, but only with the prior written approval of the Federal agency or pass-through entity.
 - (2) Capital expenditures for special purpose equipment are allowable as direct costs, provided that items with a unit cost of \$10,000 or more have the prior written approval of the Federal agency or pass-through entity.
 - (3) Capital expenditures for improvements to land, buildings, or equipment that materially increase their value or useful life are allowable as a direct cost, but only with the prior written approval of the Federal agency or pass-through entity. See § 200.436 on the allowability of depreciation on buildings, capital improvements, and equipment. See § 200.465 on the allowability of real property and equipment rental costs.
 - (4) When approved as a direct cost in accordance with paragraphs (b)(1) through (3), capital expenditures must be charged in the period in which the expenditure is incurred or as otherwise determined appropriate and negotiated with the Federal agency.
 - (5) The recipient or subrecipient may claim the unamortized portion of any equipment written off as a result of a change in capitalization levels by continuing to claim the otherwise allowable depreciation on the equipment or by amortizing the amount to be written off over a period of years negotiated with the cognizant agency for indirect cost.
 - (6) Cost of equipment disposal. If the Federal agency instructs the recipient or subrecipient to otherwise dispose of or transfer the equipment, the costs of disposal or transfer are allowable.
 - (7) Equipment and other capital expenditures are unallowable as indirect costs. See § 200.436.

§ 200.440 Exchange rates.

- (a) Cost increases for fluctuations in exchange rates are allowable costs subject to the availability of funding. Prior approval of exchange rate fluctuations is required only when the change results in the need for additional Federal funding, or the increased costs result in the need to significantly reduce the scope of the project. Before providing approval, the Federal agency must ensure that adequate funds are available to cover currency fluctuations in order to avoid a violation of the Antideficiency Act.
- (b) The recipient or subrecipient is required to make reviews of local currency gains to determine the need for additional Federal funding before the expiration date of the Federal award. Subsequent adjustments for currency increases may be allowable only when the recipient or subrecipient provides the Federal agency with adequate source documentation from a commonly used source in effect at the time the expense was made, and to the extent that sufficient Federal funds are available.

§ 200.441 Fines, penalties, damages and other settlements.

Costs resulting from recipient or subrecipient violations of, alleged violations of, or failure to comply with, Federal, State, local, tribal, or foreign laws and regulations are unallowable, except when incurred as a result of compliance with specific provisions of the Federal award, or with the prior written approval of the Federal agency. See § 200.435.

§ 200.442 Fundraising and investment management costs.

- (a) Costs of organized fundraising, including financial campaigns, endowment drives, solicitation of gifts and bequests, and similar expenses incurred to raise capital or obtain contributions, are unallowable. Fundraising costs for meeting the Federal program objectives are allowable with the prior written approval of the Federal agency.
- (b) Costs of investment counsel and staff and similar expenses incurred to enhance income from investments are unallowable except when associated with investments covering pension, self-insurance, or other funds, which include Federal participation allowed by this part.
- (c) Costs related to the physical custody and control of monies and securities are allowable.
- (d) Both allowable and unallowable fundraising and investment activities must be allocated an appropriate share of indirect costs in accordance with § 200.413.

§ 200.443 Gains and losses on the disposition of depreciable assets.

- (a) The recipient or subrecipient must include gains and losses on the sale, retirement, or other disposition of depreciable property in the year they occur as credits or charges to the asset cost grouping(s) of the property. The amount of the gain or loss is the difference between the amount realized on the property and the undepreciated basis of the property.
- (b) Gains and losses from the disposition of depreciable property must not be recognized as a separate credit or charge under the following conditions:
 - (1) The gain or loss is processed through a depreciation account and is reflected in the depreciation allowable under §§ 200.436 and 200.439.
 - (2) The property is given in exchange as part of the purchase price of a similar item, and the gain or loss is taken into account in determining the depreciation cost basis of the new item.
 - (3) A loss results from failing to maintain proper insurance, except as provided in § 200.447.
 - (4) Compensation for the use of the property was provided through use allowances instead of depreciation.
 - (5) Gains and losses arising from extraordinary or bulk sales, retirements, or other dispositions must be considered on a case-by-case basis.
- (c) Gains or losses of any nature arising from the sale or exchange of property other than the property covered in paragraph (a) of this section must be excluded in computing Federal award costs.
- (d) When assets acquired with Federal funds, in part or wholly, are disposed of, the distribution of the proceeds must be made in accordance with §§ 200.310 through 200.316.

§ 200.444 General costs of government.

- (a) For states, local governments, and Indian Tribes, the general costs of government are unallowable except as provided in § 200.475. Unallowable costs include:
 - (1) Salaries and expenses of the Office of the Governor of a State or the chief executive of a local government or the chief executive of an Indian Tribe;
 - (2) Salaries and other expenses of a State legislature, tribal council, or similar local governmental body, such as a county supervisor, city council, or school board, whether incurred for purposes of legislation or executive direction;
 - (3) Costs of the judicial branch of a government;
 - (4) Costs of prosecutorial activities unless treated as a direct cost to a specific program if authorized by statute or regulation. However, this does not preclude the allowability of other legal activities of the Attorney General as described in § 200.435; and
 - (5) Costs of other general types of government services normally provided to the general public, such as fire and police, unless provided as a direct cost under a program statute or regulation.
- (b) Indian Tribes and Councils of Governments (COGs) (see definition for *Local government* in § 200.1) may include up to 50 percent of salaries and expenses directly attributable to managing and operating Federal programs by the chief executive and their staff in the indirect cost calculation without documentation.

§ 200.445 Goods or services for personal use.

- (a) Costs of goods or services for the personal use of the recipient's or subrecipient's employees are unallowable regardless of whether the cost is reported as taxable income to the employees.
- (b) Housing costs (for example, depreciation, maintenance, utilities, furnishings, rent), housing allowances, and personal living expenses for the recipient's or subrecipient's employees are only allowable as direct costs and must be approved in advance by the Federal agency.

§ 200.446 Idle facilities and idle capacity.

- (a) Definitions for the purpose of this section:
 - (1) Facilities means land and buildings or any portion thereof, equipment individually or collectively, or any other tangible capital asset, wherever located, and whether owned or leased by the recipient or subrecipient.
 - (2) Idle facilities mean completely unused facilities that exceed the recipient's or subrecipient's current needs.
 - (3) Idle capacity means the unused capacity of partially used facilities. It is the difference between:
 - (i) That which a facility could achieve under 100 percent operating time on a one-shift basis less operating interruptions resulting from time lost for repairs, setups, unsatisfactory materials, and other normal delays; and
 - (ii) The extent to which the facility was actually used to meet demands during the accounting period. A multi-shift basis should be used if it can be shown that this amount of usage would normally be expected for the type of facility involved.

- (4) Cost of idle facilities or idle capacity means maintenance, repair, housing, rent, and other related costs (for example, insurance, interest, and depreciation). These costs could include the costs of idle public safety emergency facilities, telecommunications, or information technology system capacity that is built to withstand major fluctuations in load (for example, consolidated data centers).
- (b) The costs of idle facilities are unallowable except to the extent that:
 - (1) They are necessary to meet workload requirements which may fluctuate, and are allocated appropriately to all benefiting programs; or
 - (2) Although not necessary to meet fluctuations in workload, they were necessary when acquired and are now idle because of changes in program requirements, efforts to achieve more economical operations, reorganization, termination, or other causes which could not have been reasonably foreseen. Under this exception, costs of idle facilities are allowable for a reasonable period, ordinarily not to exceed one year, depending on the initiative taken to use, lease, or dispose of such facilities.
- (c) The costs of idle capacity are normal costs of doing business and are a factor in the normal fluctuations of usage or indirect cost rates from period to period. These costs are allowable, provided that the capacity is reasonably anticipated to be necessary to carry out the purpose of the Federal award or was originally reasonable and is not subject to reduction or elimination by use on other Federal awards, subletting, renting, or sale, in accordance with sound business, economic, or security practices. Widespread idle capacity throughout an entire facility or among a group of assets having substantially the same function may be considered idle facilities.

§ 200.447 Insurance and indemnification.

- (a) Costs of insurance required or approved and maintained by the terms and conditions of the Federal award are allowable.
- (b) Costs of other insurance in connection with the general conduct of activities are allowable subject to the following limitations:
 - (1) The types, extent, and cost of coverage are in accordance with the recipient's or subrecipient's established written policy and sound business practices.
 - (2) Costs of insurance or contributions to any reserve covering the risk of loss of, or damage to, Federal Government property are unallowable except to the extent that the Federal agency has approved the costs.
 - (3) Costs allowed for business interruption or other similar insurance must exclude coverage of management fees.
 - (4) Insurance costs on the lives of trustees, officers, or other employees holding positions of similar responsibilities are allowable only when the insurance represents additional compensation (see § 200.431). This insurance is unallowable when the recipient or subrecipient is identified as the beneficiary.
 - (5) Insurance costs to correct defects in the recipient's or subrecipient's materials or workmanship are unallowable.

- (6) Medical liability (malpractice) insurance is an allowable cost of a Federal research program only when the program involves human subjects or training of participants in research techniques. Medical liability insurance costs must be treated as a direct cost and assigned to individual projects based on how the insurer allocates the risk to the population covered by the insurance.
- (c) Actual losses which could have been covered by permissible insurance (through a self-insurance program or otherwise) are unallowable unless expressly authorized in the Federal award. However, costs incurred because of losses not covered under nominal deductible insurance coverage provided in keeping with sound management practice, and minor losses not covered by insurance, such as spoilage, breakage, and disappearance of small hand tools, which occur in the ordinary course of operations, are allowable.
- (d) Contributions to a reserve for a self-insurance program, including workers' compensation, unemployment compensation, and severance pay, are allowable subject to the following requirements:
 - (1) The type, extent, and cost of coverage and the rates and premiums would have been allowed had insurance (including reinsurance) been purchased to cover the risks. However, a provision for known or reasonably estimated self-insured liabilities, which do not become payable for more than one year after the provision is made, must not exceed the discounted present value of the liability. The rate used for discounting the liability must be determined by considering factors such as the recipient's or subrecipient's settlement rate for those liabilities and its investment rate of return.
 - (2) Earnings or investment income on reserves must be credited to those reserves.
 - (3)
 - (i) Contributions to reserves must be based on sound actuarial principles using historical experience and reasonable assumptions. Reserve levels must be analyzed and updated at least biennially for each major risk being insured and take into account any reinsurance, coinsurance, and other relevant factors or information. Reserve levels related to employee-related coverages must normally be limited to the value of claims:
 - (A) Submitted and adjudicated but not paid;
 - (B) Submitted but not adjudicated; and
 - (C) Incurred but not submitted.
 - (ii) Reserve exceeding the levels described in paragraph (d)(3)(i) of this section must be identified and justified in the cost allocation plan or indirect cost rate proposal.
 - (4) Accounting records, actuarial studies, and cost allocations (or billings) must recognize any significant differences due to the types of insured risk and losses generated by the various insured activities or agencies of the recipient or subrecipient. If individual departments or agencies of the recipient or subrecipient experience significantly different levels of claims for a particular risk, those differences must be recognized by using separate allocations or other techniques resulting in an equitable allocation.
 - (5) Whenever funds are transferred from a self-insurance reserve to other accounts (for example, general fund or unrestricted account), refunds must be made to the Federal Government for its share of funds transferred, including earned or imputed interest from the date of transfer and debt interest, if applicable, chargeable in accordance with the claims collection regulations of the cognizant agency for indirect cost.
- (e) Insurance refunds must be credited against insurance costs in the year the refund is received.

- (f) Indemnification includes securing the recipient or subrecipient against liabilities to third persons and other losses not compensated by insurance or otherwise. The Federal Government is obligated to indemnify the recipient or subrecipient only to the extent expressly provided for in the Federal award, except as provided in paragraph (c).

§ 200.448 Intellectual property.

(a) *Patent and copyright costs.*

- (1) The following costs related to securing patents and copyrights are allowable:
 - (i) Costs of preparing disclosures, reports, and other documents required by the Federal award and of searching the art to the extent necessary to make such disclosures;
 - (ii) Costs of preparing documents and any other patent costs in connection with the filing and prosecution of a United States patent application where the Federal Government requires that a title or a royalty-free license be conveyed to the Federal Government; and
 - (iii) General counseling services relating to patent and copyright matters, such as advice on patent and copyright laws, regulations, clauses, and employee intellectual property agreements (See § 200.459).
- (2) The following costs related to securing patents and copyrights are unallowable:
 - (i) Costs of preparing disclosures, reports, and other documents and of searching the art to make disclosures not required by the Federal award;
 - (ii) Costs in connection with filing and prosecuting any foreign patent application, or any United States patent application, where the Federal award does not require conveying title or a royalty-free license to the Federal Government.

(b) *Royalties and other costs for the use of patents and copyrights.*

- (1) Royalties on a patent or copyright or amortization of the cost of acquiring by purchase a copyright, patent, or rights thereto, necessary for the proper performance of the Federal award are allowable unless:
 - (i) The Federal Government already has a license or the right to free use of the patent or copyright.
 - (ii) The patent or copyright has been adjudicated to be invalid or administratively determined to be invalid.
 - (iii) The patent or copyright is considered to be unenforceable.
 - (iv) The patent or copyright is expired.
- (2) Special care should be exercised in determining reasonableness when the royalties may have been obtained as a result of less-than-arm's-length bargaining, such as:
 - (i) Royalties paid to persons, including corporations, affiliated with the recipient or subrecipient.
 - (ii) Royalties paid to unaffiliated parties, including corporations, under an agreement entered into in contemplation that a Federal award would be made.
 - (iii) Royalties paid under an agreement entered into after a Federal award is made to a recipient or subrecipient.

- (3) In any case involving a patent or copyright formerly owned by the recipient or subrecipient, the amount of royalty allowed must not exceed the cost which would have been allowed had the recipient or subrecipient retained ownership.

§ 200.449 Interest.

- (a) **General.** Costs incurred for interest on borrowed capital, temporary use of endowment funds, or the use of the recipient's or subrecipient's own funds are unallowable. Financing costs (including interest) to acquire, construct, or replace capital assets are allowable, subject to the requirements of this section.
- (b) **Capital assets.**
 - (1) Capital assets is defined in § 200.1. An asset cost includes (as applicable) acquisition costs, construction costs, and other costs capitalized in accordance with GAAP.
 - (2) For recipient or subrecipient fiscal years beginning on or after January 1, 2016, intangible assets include patents and computer software. For software development projects, only interest attributable to the portion of the project costs capitalized in accordance with GAAP is allowable.
- (c) **Requirements for all recipients and subrecipients.**
 - (1) The recipient or subrecipient uses the capital assets in support of Federal awards;
 - (2) The allowable asset costs to acquire facilities and equipment are limited to a fair market value available to the recipient or subrecipient from an unrelated (arm's length) third party.
 - (3) The recipient or subrecipient obtains the financing via an arm's-length transaction (meaning, a transaction with an unrelated third party); or claims reimbursement of actual interest cost at a rate available via such a transaction.
 - (4) The recipient or subrecipient limits claims for Federal reimbursement of interest costs to the least expensive alternative. For example, a lease contract that transfers ownership by the end of the contract may be determined less costly than purchasing through other types of debt financing, in which case reimbursement must be limited to the amount of interest determined if leasing had been used.
 - (5) The recipient or subrecipient expenses or capitalizes allowable interest cost in accordance with GAAP.
 - (6) Earnings generated by the investment of borrowed funds pending their disbursement for the asset costs are used to offset the current period's allowable interest cost, whether that cost is expensed or capitalized. Earnings subject to being reported to the Federal Internal Revenue Service under arbitrage requirements are excludable.
 - (7) The following conditions must apply to debt arrangements over \$1 million to purchase or construct facilities unless the recipient or subrecipient makes an initial equity contribution to the purchase of 25 percent or more. For this purpose, "initial equity contribution" means the amount or value of contributions made by the recipient or subrecipient for the acquisition of facilities prior to occupancy.
 - (i) The recipient or subrecipient must reduce claims for reimbursement of interest cost by an amount equal to imputed interest earnings on excess cash flow attributable to the portion of the facility used for Federal awards.
 - (ii) The recipient or subrecipient must impute interest on excess cash flow as follows:

- (A) Annually, the recipient or subrecipient must prepare a cumulative (from the project's inception) report of monthly cash inflows and outflows, regardless of the funding source. For this purpose, inflows consist of Federal reimbursement for depreciation, amortization of capitalized construction interest, and annual interest cost. Outflows consist of initial equity contributions, debt principal payments (less the pro-rata share attributable to the cost of land), and interest payments.
 - (B) To compute monthly cash inflows and outflows, the recipient or subrecipient must divide the above-mentioned annual amounts by the months in the year (usually 12) that the building is in service.
 - (C) For any month in which cumulative cash inflows exceed cumulative outflows, interest must be calculated on the excess inflows for that month and be treated as a reduction to allowable interest cost. The interest rate to be used must be the three-month Treasury bill closing rate as of the last business day of that month.
- (8) Interest attributable to a fully depreciated asset is unallowable.
- (d) **Additional requirements for states, local governments and Indian Tribes.** For interest costs to be allowable for states, local governments, and Indian Tribes, the recipient or subrecipient must have incurred the interest costs for buildings after October 1, 1980, or after September 1, 1995, for land and equipment.
 - (1) The requirement to offset the interest earned on borrowed funds against allowable interest cost (paragraph (c)(5) of this section) also applies to earnings on debt service reserve funds.
 - (2) The recipient or subrecipient must negotiate the amount of allowable interest cost related to the acquisition of facilities with asset costs of \$1 million or more, as described in paragraph (c)(7) of this section. For this purpose, a recipient or subrecipient must consider only cash inflows and outflows attributable to that portion of the real property used for Federal awards.
 - (e) **Additional requirements for IHEs.** For interest costs to be allowable, the IHE must have incurred the interest costs after July 1, 1982, in connection with acquisitions of capital assets that occurred after that date.
 - (f) **Additional requirements for nonprofit organizations.** For interest costs to be allowable, the nonprofit organization must have incurred the interest costs after September 29, 1995, in connection with acquisitions of capital assets that occurred after that date.
 - (g) **Requirements for nonprofit organizations subject to full coverage under CAS.** The interest allowability provisions of this section do not apply to a nonprofit organization subject to "full coverage" under the Cost Accounting Standards (CAS), as defined at 48 CFR 9903.201-2(a). The nonprofit organization's Federal awards are instead subject to CAS 414 (48 CFR 9904.414), "Cost of Money as an Element of the Cost of Facilities Capital," and CAS 417 (48 CFR 9904.417), "Cost of Money as an Element of the Cost of Capital Assets Under Construction."

§ 200.450 Lobbying.

- (a) **Lobbying costs associated with obtaining Federal assistance awards.** The costs of certain influencing activities associated with obtaining grants, cooperative agreements, contracts, or loans are unallowable. Lobbying with respect to certain grants, cooperative agreements, contracts, and loans is governed by relevant statutes, including the provisions of 31 U.S.C. 1352, as well as the common rule, "New

Restrictions on Lobbying,” published on February 26, 1990, including definitions, and the Office of Management and Budget “Government-wide Guidance for New Restrictions on Lobbying” and notices published on December 20, 1989, June 15, 1990, January 15, 1992, and January 19, 1996.

- (b) **Executive lobbying costs.** Costs incurred in attempting to improperly influence, either directly or indirectly, an employee or officer of the executive branch of the Federal Government to give consideration or to act regarding a Federal award or a regulatory matter are unallowable. Improper influence means any influence that induces or tends to induce a Federal employee or officer to give consideration or to act regarding a Federal award or regulatory matter on any basis other than the merit.
- (c) **Restrictions on nonprofit organizations and IHEs.** In addition, the following restrictions apply to nonprofit organizations and IHEs:
 - (1) Costs associated with the following activities are unallowable:
 - (i) Attempts to influence the outcomes of any Federal, State, or local election, referendum, initiative, or similar procedure through in-kind or cash contributions, endorsements, publicity, or similar activity;
 - (ii) Establishing, administering, contributing to, or paying the expenses of a political party, campaign, political action committee, or other organization established to influence the outcomes of elections in the United States;
 - (iii) Any attempt to influence:
 - (A) The introduction of Federal or State legislation;
 - (B) The enactment or modification of any pending Federal or State legislation through communication with any member or employee of the Congress or State legislature (including efforts to influence State or local officials to engage in similar lobbying activity);
 - (C) The enactment or modification of any pending Federal or State legislation by preparing, distributing, or using publicity or propaganda or by urging members of the general public, or any segment thereof, to contribute to or participate in any mass demonstration, march, rally, fundraising drive, lobbying campaign or letter writing or telephone campaign; or
 - (D) Any government official or employee in connection with a decision to sign or veto enrolled legislation;
 - (iv) Legislative liaison activities, including attendance at legislative sessions or committee hearings, gathering information regarding legislation, and analyzing the effect of legislation, when such activities are carried on in support of or in knowing preparation for an effort to engage in unallowable lobbying.
 - (2) The following activities are excepted from the coverage of paragraph (c)(1) of this section:
 - (i) Technical and factual presentations on topics directly related to the performance of a grant, contract, or other agreement (through hearing testimony, statements, or letters to the Congress or a State legislature, or subdivision, member, or cognizant staff member thereof), in response to a documented request (including a Congressional Record notice requesting testimony or statements for the record at a regularly scheduled hearing) made by the recipient's or subrecipient's member of congress, legislative body, subdivision, or a cognizant staff member thereof, provided such information is readily obtainable and can be readily put in deliverable form, and further provided that costs under this section for travel, lodging or meals are

unallowable unless incurred to offer testimony at a regularly scheduled Congressional hearing pursuant to a written request for such presentation made by the Chairman or Ranking Minority Member of the Committee or Subcommittee conducting such hearings;

- (ii) Any lobbying made unallowable by paragraph (c)(1)(iii) of this section to influence State legislation to directly reduce the cost, or to avoid material impairment of the recipient's or subrecipient's authority to perform the grant, contract, or other agreement;
- (iii) Any activity specifically authorized by statute to be undertaken with funds from the Federal award; or
- (iv) Any activity excepted from the definitions of "lobbying" or "influencing legislation" by the Internal Revenue Code provisions that require nonprofit organizations to limit their participation in direct and "grass roots" lobbying activities to retain their charitable deduction status and avoid punitive excise taxes, 26 U.S.C. (I.R.C.) 501(c)(3), 501(h), 4911(a), including:
 - (A) Nonpartisan analysis, study, or research reports;
 - (B) Examinations and discussions of broad social, economic, and similar problems; and
 - (C) Information provided upon request by a legislator for technical advice and assistance, as defined by I.R.C. 4911(d)(2) and 26 CFR 56.4911-2(c)(1) through (c)(3).
- (3) When a recipient or subrecipient seeks reimbursement for indirect costs, total lobbying costs must be identified separately in the indirect cost rate proposal and thereafter be treated as other unallowable activity costs in accordance with § 200.413.
- (4) The recipient or subrecipient must submit a certification that the requirements and standards of this section have been complied with as part of its annual indirect cost rate proposal. (See § 200.415.)
- (5)
 - (i) Time logs, calendars, or similar records are not required to be created for purposes of complying with the record-keeping requirements in § 200.302 with respect to lobbying costs during a particular calendar month when:
 - (A) The employee engages in lobbying (as defined in paragraphs (c)(1) and (2) of this section) for 25 percent or less of the employee's compensated hours of employment during that calendar month; and
 - (B) Within the preceding five-year period, the recipient or subrecipient has not materially misstated allowable or unallowable costs of any nature, including legislative lobbying costs.
 - (ii) When conditions in paragraph (c)(5)(i)(A) and (B) of this section are met, recipients and subrecipients are not required to establish records to support the allowability of claimed costs in addition to records already required or maintained. Also, when conditions in paragraphs (c)(5)(i)(A) and (B) of this section are met, the absence of time logs, calendars, or similar records will not serve as a basis for disallowing costs by contesting estimates of lobbying time spent by employees during a calendar month.
 - (iii) In consultation with OMB, the Federal agency must establish procedures for resolving, in advance, any significant questions or disagreements concerning the interpretation or application of this section. Any such advance resolutions must be binding in any subsequent

settlements, audits, or investigations with respect to that grant or contract for purposes of interpretation of this part, provided, however, that this must not be construed to prevent a contractor or recipient or subrecipient from contesting the lawfulness of such a determination.

§ 200.451 Losses on other awards or contracts.

Any excess costs over income under any other award or contract of any nature is unallowable. This includes, but is not limited to, the recipient's or subrecipient's contributed portion by reason of cost sharing agreements or any under-recoveries through negotiation of flat amounts for indirect costs. Also, any excess of costs over authorized funding levels transferred from any award or contract to another is unallowable. All losses are not allowable indirect costs and must be included in the appropriate indirect cost rate base for allocating indirect costs.

§ 200.452 Maintenance and repair costs.

Costs incurred for utilities, insurance, security, necessary maintenance, janitorial services, repair, or upkeep of buildings and equipment (including Federal property unless otherwise provided for) which neither add to the permanent value of the property nor appreciably prolong its intended life, but keep it in an efficient operating condition, are allowable. Costs incurred for improvements that add to the permanent value of the buildings and equipment or appreciably prolong their intended life must be treated as capital expenditures (see § 200.439). These costs are only allowable to the extent not paid through rental or other agreements.

§ 200.453 Materials and supplies costs, including costs of computing devices.

- (a) Costs incurred for materials, supplies, and fabricated parts necessary for the performance of a Federal award are allowable.
- (b) Purchased materials and supplies must be charged at their actual prices, net of applicable credits. Withdrawals from general stores or stockrooms must be charged at their actual net cost under any recognized method of pricing inventory withdrawals, consistently applied. Incoming transportation charges are an allowable part of materials and supplies costs.
- (c) Materials and supplies used for the performance of a Federal award may be charged as direct costs. Charging computing devices as direct costs is allowable for devices that are essential and allocable, but not solely dedicated, to the performance of a Federal award.
- (d) Where Federally-donated or furnished materials are used in performing the Federal award, the materials will be used without charge.

§ 200.454 Memberships, subscriptions, and professional activity costs.

- (a) Costs of the recipient's or subrecipient's membership in business, technical, and professional organizations are allowable.
- (b) Costs of the recipient's or subrecipient's subscriptions to business, professional, and technical periodicals are allowable.
- (c) Costs of membership in any civic or community organization are allowable.
- (d) Costs of membership in any country club or social or dining club or organization are unallowable.
- (e) Costs of membership in organizations whose primary purpose is lobbying are unallowable. See § 200.450.

§ 200.455 Organization costs.

- (a) Costs such as incorporation fees, brokers' fees, fees to promoters, organizers or management consultants, attorneys, accountants, or investment counselors, whether or not employees of the recipient or subrecipient in connection with the establishment or reorganization of an organization, are unallowable except with prior approval of the Federal agency.
- (b) The costs of any of the following activities are unallowable: activities undertaken to persuade employees of the recipient or subrecipient, or any other entity, to exercise or not to exercise, or concerning the manner of exercising, the right to organize and bargain collectively through representatives of the employees' own choosing.
- (c) The costs related to data and evaluation are allowable. Data costs include (but are not limited to) the expenditures needed to gather, store, track, manage, analyze, disaggregate, secure, share, publish, or otherwise use data to administer or improve the program, such as data systems, personnel, data dashboards, cybersecurity, and related items. Data costs may also include direct or indirect costs associated with building integrated data systems—data systems that link individual-level data from multiple State and local government agencies for purposes of management, research, and evaluation. Evaluation costs include (but are not limited to) evidence reviews, evaluation planning and feasibility assessment, conducting evaluations, sharing evaluation results, and other personnel or materials costs related to the effective building and use of evidence and evaluation for program design, administration, or improvement.

§ 200.456 Participant support costs.

Participant support costs are allowable (see § 200.1). The classification of items as participant support costs must be documented in the recipient's or subrecipient's written policies and procedures and treated consistently across all Federal awards.

§ 200.457 Plant and security costs.

Necessary and reasonable expenses incurred for the protection and security of facilities, personnel, and work products are allowable. Such costs include, but are not limited to, wages and uniforms of personnel engaged in security activities; equipment; barriers; protective (non-military) gear, devices, and equipment; contractual security services; and consultants. Capital expenditures for plant security purposes are subject to § 200.439.

§ 200.458 Pre-award costs.

Pre-award costs are those incurred before the start date of the Federal award or subaward directly pursuant to the negotiation and in anticipation of the Federal award where such costs are necessary for efficient and timely performance of the scope of work. These costs are allowable only to the extent that they would have been allowed if incurred after the start date of the Federal award and only with the written approval of the Federal agency. If approved, these costs must be charged to the initial budget period of the Federal award unless otherwise specified by the Federal agency or pass-through entity.

§ 200.459 Professional service costs.

- (a) Costs of professional and consultant services rendered by persons who are members of a particular profession or possess a special skill and who are not officers or employees of the recipient or subrecipient are allowable, subject to paragraphs (b) and (c) of this section when reasonable in relation to the services rendered and when not contingent upon recovery of the costs from the Federal Government. In addition, legal and related services are limited under § 200.435.
- (b) In determining the allowability of costs in a particular case, no single factor or any combination of factors is necessarily determinative. However, the following factors are relevant:
 - (1) The nature and scope of the service rendered in relation to the service required.
 - (2) The necessity of contracting for the service, considering the recipient's or subrecipient's capability in the particular area.
 - (3) The past pattern of such costs, particularly in the years prior to receiving a Federal award(s).
 - (4) The impact of Federal awards on the recipient's or subrecipient's business (meaning, what new problems have arisen).
 - (5) Whether the proportion of Federal work to the recipient's or subrecipient's total business influences the recipient or subrecipient in favor of incurring the cost, particularly where the services rendered are not of a continuing nature and have little relationship to work under Federal awards.
 - (6) Whether the service can be performed more economically by direct employment rather than contracting.
 - (7) The qualifications of the individual or entity providing the service and the customary fees charged, especially on non-federally funded activities.
 - (8) Adequacy of the contractual agreement for the service (for example, description of the service, estimate of the time required, rate of compensation, and termination provisions).
- (c) To be allowable, retainer fees must be supported by evidence of bona fide services available or rendered in addition to the factors in paragraph (b) of this section.

§ 200.460 Proposal costs.

Proposal costs are the costs of preparing bids, proposals, or applications on potential Federal and non-Federal awards or projects, including developing data necessary to support the recipient's or subrecipient's bids or proposals. Proposal costs of the current accounting period of both successful and unsuccessful bids and proposals normally should be treated as indirect costs and allocated to all current activities of the recipient or subrecipient. No proposal costs of past accounting periods may be allocated to the current period.

§ 200.461 Publication and printing costs.

- (a) Publication costs for electronic and print media, including distribution, promotion, and general handling, are allowable. These costs should be allocated as indirect costs to all benefiting activities of the recipient or subrecipient if they are not identifiable with a particular cost objective.
- (b) Page charges, article processing charges (APCs), or similar fees such as open access fees for professional journal publications and other peer-reviewed publications resulting from a Federal award are allowable where:

- (1) The publications report work supported by the Federal Government; and
- (2) The charges are levied impartially on all items published by the journal, whether or not under a Federal award.
- (3) The recipient or subrecipient may charge the Federal award during closeout for the costs of publication or sharing of research results if the costs were not incurred during the period of performance of the Federal award. These costs must be charged to the final budget period of the award unless otherwise specified by the Federal agency.

§ 200.462 Rearrangement and reconversion costs.

- (a) Costs incurred for ordinary and normal rearrangement and alteration of facilities are allowable as indirect costs. Special arrangements and alterations are allowable as a direct cost if the costs are incurred specifically for a Federal award and with the prior approval of the Federal agency or pass-through entity.
- (b) Costs incurred in restoring or rehabilitating the recipient's or subrecipient's facilities to approximately the same condition existing immediately before the commencement of a Federal award(s), less costs related to normal wear and tear, are allowable.

§ 200.463 Recruiting costs.

- (a) Subject to paragraphs (b) and (c) of this section, and provided that the size of the staff recruited and maintained is in keeping with workload requirements, costs of "help wanted" advertising, operating costs of an employment office necessary to secure and maintain adequate staff, costs of operating an aptitude and educational testing program, travel costs of employees while engaged in recruiting personnel, travel costs of applicants for interviews for prospective employment, and relocation costs incurred incident to recruitment of new employees, are allowable to the extent that such costs are incurred pursuant to the recipient's or subrecipient's standard recruitment program. When the recipient or subrecipient uses employment agencies, costs not in excess of standard commercial rates for such services are allowable.
- (b) Special emoluments, fringe benefits, and salary allowances incurred to attract professional personnel that do not meet the test of reasonableness or do not conform with the established practices of the recipient or subrecipient, are unallowable.
- (c) If relocation costs incurred incident to recruitment of a new employee have been funded in whole or in part by a Federal award, and the newly hired employee resigns for reasons within the employee's control within 12 months after hire, the recipient or subrecipient must refund or credit the Federal Government for its share of those relocation costs. See § 200.464.
- (d) Short-term visas (as opposed to longer-term immigration visas) are generally an allowable cost and they may be proposed as a direct cost because they are issued for a specific period and purpose and can be clearly identified as directly connected to work performed on a Federal award. For these costs to be directly charged to a Federal award, they must:
 - (1) Be critical and necessary for the conduct of the project;
 - (2) Be allowable under the applicable cost principles;
 - (3) Be consistent with the recipient's or subrecipient's cost accounting practices and established written policy; and
 - (4) Meet the definition of "direct cost" as described in the applicable cost principles.

§ 200.464 Relocation costs of employees.

- (a) Relocation costs are costs incident to the permanent change of duty assignment (for an indefinite period or a stated period of not less than 12 months) of an existing employee or upon recruitment of a new employee. Relocation costs are allowable, subject to the limitations described in paragraphs (b), (c), and (d) of this section, provided that:
 - (1) The move is for the benefit of the employer.
 - (2) Reimbursement to the employee is in accordance with an established written policy consistently followed by the employer.
 - (3) The reimbursement does not exceed the employee's actual (or reasonably estimated) expenses.
- (b) Allowable relocation costs for current employees are limited to the following:
 - (1) The costs of transportation of the employee, members of their immediate family and their household, and personal effects to the new location.
 - (2) The costs of finding a new home, such as advance trips by employees and spouses to locate living quarters and temporary lodging during the transition period, up to a maximum period of 30 calendar days.
 - (3) Closing costs, such as brokerage, legal, and appraisal fees, incidental to the disposition of the employee's former home. These costs, together with those described in paragraph (b)(4) of this section, are limited to eight percent of the sales price of the employee's former home.
 - (4) The continuing costs of ownership (for up to six months) of the vacant former home after the settlement or lease date of the employee's new permanent home, such as maintenance of buildings and grounds (exclusive of fixing-up expenses), utilities, taxes, and property insurance.
 - (5) Other necessary and reasonable expenses normally incident to relocation, such as canceling an unexpired lease, transportation of personal property, and purchasing insurance against loss of or damages to personal property. The cost of canceling an unexpired lease is limited to three times the monthly rental.
- (c) Allowable relocation costs for new employees are limited to those described in paragraphs (b)(1) and (2) of this section. If relocation costs incurred incident to the recruitment of a new employee have been funded in whole or in part by a Federal award, and the newly hired employee resigns for reasons within the employee's control within 12 months after hire, the recipient or subrecipient must refund or credit the Federal Government for its share of the cost. If a new employee is relocating to an overseas location and dependents are not permitted for any reason, and the costs do not include transporting household goods, the costs must be considered travel costs in accordance with § 200.474, *not relocation costs under this section*.
- (d) The following costs related to relocation are unallowable:
 - (1) Fees and other costs associated with acquiring a new home.
 - (2) A loss on the sale of a former home.
 - (3) Continuing mortgage principal and interest payments on a home being sold.
 - (4) Income taxes paid by an employee related to reimbursed relocation costs.

§ 200.465 Rental costs of real property and equipment.

- (a) Subject to the limitations described in paragraphs (b) through (d) of this section, rental costs are allowable to the extent that the rates are reasonable in light of such factors as costs of comparable rental properties; market conditions in the area; alternatives available; and the type, life expectancy, condition, and value of the property leased. Rental arrangements should be reviewed periodically to determine if circumstances have changed and if other options are available.
- (b) Rental costs under "sale and lease back" arrangements are allowable only up to the amount that would have been allowed if the recipient or subrecipient had continued to own the property. This amount would include expenses such as depreciation, maintenance, taxes, and insurance.
- (c) Rental costs under "less-than-arm's-length" leases are allowable only up to the amount described in paragraph (b) of this section. For this purpose, a less-than-arm's-length lease is one under which one party to the lease agreement can control or substantially influence the actions of the other. Such leases include, but are not limited to, those between:
 - (1) Divisions of the recipient or subrecipient;
 - (2) The recipient or subrecipient and another entity under common control through common officers, directors, or members; and
 - (3) The recipient or subrecipient and a director, trustee, officer, or key employee of the recipient or subrecipient or an immediate family member, either directly or through corporations, trusts, or similar arrangements in which they hold a controlling interest. For example, the recipient or subrecipient may establish a separate corporation to own property and lease it back to the recipient or subrecipient.
- (4) Family members include one party with any of the following relationships to another party:
 - (i) Spouse and parents thereof;
 - (ii) Children and spouses thereof;
 - (iii) Parents and spouses thereof;
 - (iv) Siblings and spouses thereof;
 - (v) Grandparents and grandchildren and spouses thereof;
 - (vi) Domestic partner and parents thereof, including domestic partners of any individual in 2 through 5 of this definition; and
 - (vii) Any individual related by blood or affinity whose close association with the employee is the equivalent of a family relationship.
- (d) Rental costs under leases which are required to be accounted for as a financed purchase under GASB standards or a finance lease under FASB standards are allowable only up to the amount (described in paragraph (b) of this section) that would have been allowed if the recipient or subrecipient had purchased the property on the date the lease agreement was executed. Interest costs related to these leases are allowable if they meet the criteria in § 200.449. Unallowable costs include costs that would not have been incurred if the recipient or subrecipient had purchased the property, such as amounts paid for profit, management fees, and taxes.

- (e) Rental or lease payments are allowable under lease contracts where the recipient or subrecipient is required to recognize an intangible right-to-use lease asset under GASB standards or right-of-use operating lease asset under FASB standards for purposes of financial reporting in accordance with GAAP.
- (f) The rental of any property owned by any individuals or entities affiliated with the recipient or subrecipient, including commercial or residential real estate, for purposes such as the home office is unallowable.

§ 200.466 Scholarships, student aid costs, and tuition remission.

- (a) Costs of scholarships, fellowships, and student aid programs at IHEs are allowable only when the purpose of the Federal award is to provide training to participants, and the Federal agency approves the cost.
- (b) Tuition remission and other forms of compensation paid as, or instead of, wages to students performing necessary work are allowable provided that:
 - (1) The individual is conducting activities necessary to the Federal award;
 - (2) Tuition remission and other support are provided in accordance with the established written policy of the IHE and consistently provided in a like manner to students in return for similar activities conducted under Federal awards as well as other activities; and
 - (3) The student is enrolled in an advanced degree program at the IHE or an affiliated institution during the academic period and the student's activities under the Federal award are related to their degree program;
 - (4) The tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work; and
 - (5) The IHE compensates students under Federal awards as well as other activities in similar manners.
- (c) Charges for tuition remission and other forms of compensation paid to students as, or instead of, salaries and wages are subject to the reporting requirements in § 200.430. The charges must be treated as a direct or indirect cost in accordance with the actual work performed. Tuition remission may be charged on an average rate basis. See § 200.431.

§ 200.467 Selling and marketing costs.

Costs of selling and marketing any products or services of the recipient or subrecipient are unallowable unless they are allowed under § 200.421 *and are necessary to meet the requirements of the Federal award.*

§ 200.468 Specialized service facilities.

- (a) The costs of services provided by highly complex or specialized facilities operated by the recipient or subrecipient are allowable provided the charges for the services meet the conditions of either paragraph (b) or (c) of this section *and* take into account any items of income or Federal financing that qualify as applicable credits under § 200.406. These costs include charges for facilities such as computing facilities, wind tunnels, and reactors.
- (b) The costs of such services, when material, must be charged directly to the applicable Federal awards based on actual usage of the services on the basis of a schedule of rates or established methodology that:
 - (1) Does not discriminate between activities under Federal awards and other activities of the recipient or subrecipient, including usage by the recipient or subrecipient for internal purposes; and

- (2) Is designed to recover only the aggregate costs of the services. Each service's costs must normally consist of its direct costs and an allocable share of all indirect costs. Rates must be adjusted at least biennially and must consider any over or under-applied costs of the previous period(s).
- (c) Where the costs incurred for a service are not material, they may be allocated as indirect costs.
- (d) Under extraordinary circumstances, the cognizant agency for indirect costs and the recipient or subrecipient may negotiate and establish an alternative costing arrangement if it is in the Federal Government's best interest.

§ 200.469 Student activity costs.

Costs incurred for intramural activities, student publications, student clubs, and other student activities are unallowable unless expressly authorized in the Federal award.

§ 200.470 Taxes (including Value Added Tax).

- (a) *For States, local governments, and Indian Tribes.*
 - (1) Taxes that a governmental unit is legally required to pay are allowable, except for self-assessed taxes that disproportionately affect Federal programs or changes in tax policies that disproportionately affect Federal programs.
 - (2) Gasoline taxes, motor vehicle fees, and other taxes that are, in effect, user fees for benefits provided to the Federal Government are allowable.
 - (3) This provision does not restrict the authority of the Federal agency to identify taxes where Federal participation is inappropriate. The cognizant agency for indirect costs may accept a reasonable approximation in circumstances where determining the amount of unallowable taxes would require an excessive amount of effort.
- (b) *For nonprofit organizations and IHEs.*
 - (1) Taxes that the recipient or subrecipient is required to pay and which are paid or accrued in accordance with GAAP are generally allowable. These costs include payments made to local governments instead of taxes and that are commensurate with the local government services received. The following taxes are unallowable:
 - (i) Taxes for which exemptions are available to the recipient or subrecipient directly or which are available to the recipient or subrecipient based on an exemption afforded the Federal Government and, in the latter case, when the Federal agency makes available the necessary exemption certificates;
 - (ii) Special assessments on land which represent capital improvements; and
 - (iii) Federal income taxes.
 - (2) Any refund of taxes and interest thereon, which were allowed as Federal award costs, must be credited to the Federal Government as a cost reduction or cash refund, as appropriate. However, any interest paid or credited to a recipient or subrecipient incident to a refund of tax, interest, and penalty will be paid or credited to the Federal Government only to the extent that such interest accrued over the period during which the Federal Government has reimbursed the recipient or subrecipient for the taxes, interest, and penalties.

- (c) **Value Added Tax (VAT).** Foreign taxes charged for procurement transactions that a recipient or subrecipient is legally required to pay in a country are allowable. Foreign tax refunds or applicable credits under Federal awards refer to receipts or reduction of expenditures, which operate to offset or reduce expense items that are allocable to Federal awards as direct or indirect costs. To the extent that such credits accrued or received by the recipient or subrecipient relate to allowable cost, these costs must be credited to the Federal agency as a cost reduction or cash refunds, as appropriate. In cases where the costs are credited back to the Federal award, the recipient or subrecipient may reduce the Federal share of costs by the amount of the foreign tax reimbursement, or where Federal award has not expired, the Federal agency may allow the recipient or subrecipient to use the foreign government tax refund for approved activities under the Federal award.

§ 200.471 Telecommunication and video surveillance costs.

- (a) Costs incurred for telecommunications and video surveillance services or equipment such as phones, internet, video surveillance, and cloud servers are allowable except for the following circumstances:
- (b) Obligor or expending covered telecommunications and video surveillance services or equipment or services as described in § 200.216 to:
 - (1) Procure or obtain, extend or renew a contract to procure or obtain;
 - (2) Enter into a contract (or extend or renew a contract) to procure; or
 - (3) Obtain the equipment, services, or systems.

§ 200.472 Termination and standard closeout costs.

- (a) **Termination Costs.** Termination of a Federal award generally gives rise to the incurrence of costs or the need for special treatment of costs, which would not have arisen had the Federal award not been terminated. Cost principles covering these items are set forth in this section. They must be used in conjunction with the other termination requirements of this part.
 - (1) The cost of items reasonably usable on the recipient's or subrecipient's other work is unallowable unless the recipient or subrecipient submits evidence that it would not retain such items without sustaining a loss. In deciding whether such items are reasonably usable on other work of the recipient or subrecipient, the Federal agency or pass-through entity should consider the recipient's or subrecipient's plans and orders for current and scheduled activity. Contemporaneous purchases of common items by the recipient or subrecipient must be considered evidence that the items are reasonably usable on the recipient's or subrecipient's other work. Any acceptance of common items as allocable to the terminated portion of the Federal award must be limited to the extent that the quantities of such items on hand, in transit, and on order do not exceed the reasonable quantitative requirements of other work.
 - (2) If the recipient or subrecipient cannot discontinue certain costs immediately after the effective termination date, despite making all reasonable efforts, then the costs are generally allowable within the limitations of this part. Any costs continuing after termination due to the negligent or willful failure of the recipient or subrecipient to immediately discontinue the costs are unallowable.
 - (3) Loss of useful value of special tooling, machinery, and equipment is generally allowable if:
 - (i) Such special tooling, special machinery, or equipment is not reasonably capable of use in the other work of the recipient or subrecipient;

- (ii) The interest of the Federal Government is protected by transfer of title or by other means deemed appropriate by the Federal agency (see § 200.313 (d)); and
 - (iii) The loss of useful value for any one terminated Federal award is limited to the portion of the acquisition cost which bears the same ratio to the total acquisition cost as the terminated portion of the Federal award bears to the entire terminated Federal award and other Federal awards for which the special tooling, machinery, or equipment was acquired.
- (4) If paragraph (a)(4)(i) and (ii) below are satisfied, rental costs under unexpired leases (less the residual value of such leases) are generally allowable where clearly shown to have been reasonably necessary for the performance of the terminated Federal award. These rental costs may include the cost of alterations of the leased property and the cost of reasonable restoration required by the lease, provided the alterations were necessary for the performance of the Federal award.
 - (i) The amount of claimed rental costs does not exceed the reasonable use value of the property leased for the period of the Federal award and a further period as may be reasonable; and
 - (ii) The recipient or subrecipient makes all reasonable efforts to terminate, assign, settle, or otherwise reduce the cost of the lease.
- (5) The following settlement expenses are generally allowable.
 - (i) Accounting, legal, clerical, and similar costs that are reasonably necessary for:
 - (A) The preparation and presentation to the Federal agency or pass-through entity of settlement claims and supporting data with respect to the terminated portion of the Federal award, unless the termination is for cause (see §§ 200.339-200.343); and
 - (B) The termination and settlement of subawards.
 - (ii) Reasonable costs for the storage, transportation, protection, and disposition of property provided by the Federal Government or acquired or produced for the Federal award.
- (6) Claims under subawards, including the allocable portion of claims common to the Federal award and other work of the recipient or subrecipient, are generally allowable. An appropriate share of the recipient's or subrecipient's indirect costs may be allocated to the amount of settlements with contractors and subrecipients, provided that the amount allocated is consistent with the requirements of § 200.414. These allocated indirect costs must exclude the same and similar costs claimed directly or indirectly as settlement expenses.
- (b) **Closeout Costs.** Administrative costs associated with the closeout activities of a Federal award are allowable. The recipient or subrecipient may charge the Federal award during the closeout for the necessary administrative costs of that Federal award (for example, salaries of personnel preparing final reports, publication and printing costs, costs associated with the disposition of equipment and property, and related indirect costs). These costs may be incurred until the due date of the final report(s). If incurred, these costs must be liquidated prior to the due date of the final report(s) and charged to the final budget period of the award unless otherwise specified by the Federal agency.

§ 200.473 Training and education costs.

The cost of training and education provided for employee development is allowable.

§ 200.474 Transportation costs.

Costs incurred for freight, express, cartage, postage, and other transportation services relating to goods purchased, in process, or delivered, are allowable. When the costs can be readily identified with the items involved, they may be charged directly as transportation costs or added to the cost of such items. When identification with the materials received cannot be readily made, the inbound transportation cost may be charged to the appropriate indirect cost accounts if the recipient or subrecipient follows a consistent, equitable procedure in this respect. If reimbursable under the terms and conditions of the Federal award, outbound freight should be treated as a direct cost.

§ 200.475 Travel costs.

- (a) **General.** Travel costs include the transportation, lodging, subsistence, and related items incurred by employees who are in travel status on official business of the recipient or subrecipient. These costs may be charged on an actual cost basis, on a per diem or mileage basis, or on a combination of the two, provided the method used is applied to an entire trip and not to selected days of the trip. The method used must be consistent with those normally allowed in like circumstances in the recipient's or subrecipient's other activities and in accordance with the recipient's or subrecipient's established written policies. Notwithstanding the provisions of § 200.444, travel costs of officials covered by that section are allowable with the prior written approval of the Federal agency or pass-through entity when they are specifically related to the Federal award.
- (b) **Lodging and subsistence.** Costs incurred by employees and officers for travel, including costs of lodging, other subsistence, and incidental expenses, must be considered reasonable and otherwise allowable only to the extent such costs do not exceed charges normally allowed by the recipient or subrecipient in its regular operations as the result of the recipient's or subrecipient's established written policy. In addition, if these costs are charged directly to the Federal award documentation must justify that:
 - (1) Participation of the individual is necessary for the Federal award; and
 - (2) The costs are reasonable and consistent with the recipient's or subrecipient's established written policy.
- (c) **Dependents.**
 - (1) Temporary dependent care costs (dependent is defined in 26 U.S.C. 152) above and beyond regular dependent care are allowable provided that these costs:
 - (i) Are a direct result of the individual's travel to a conference for the Federal award;
 - (ii) Are consistent with the recipient's or subrecipient's established written policy for all travel; and
 - (iii) Are only temporary during the travel period.
 - (2) Travel costs for dependents are unallowable, except for travel of six months or more with prior approval of the Federal agency. See § 200.432.
- (d) **Establishing rates and amounts.** In the absence of an established written policy regarding travel costs, the rates and amounts established under 5 U.S.C. 5701-11 ("Travel and Subsistence Expenses; Mileage Allowances"), by the Administrator of General Services, or by the President (or their designee) pursuant to any provisions of such subchapter must apply to travel under Federal awards (48 CFR 31.205-46(a)).
- (e) **Commercial air travel.**

- (1) Airfare costs in excess of the basic least expensive unrestricted accommodations class offered by commercial airlines are unallowable except when such accommodations would:
 - (i) Require circuitous routing;
 - (ii) Require travel during unreasonable hours;
 - (iii) Excessively prolong travel;
 - (iv) Result in additional costs that would offset the transportation savings; or
 - (v) Offer accommodations not reasonably adequate for the traveler's medical needs. The recipient or subrecipient must justify and document these conditions on a case-by-case basis for the use of first-class or business-class airfare to be allowable in such cases.
 - (2) Unless a pattern of avoidance is detected, the Federal Government will generally not question a recipient's or subrecipient's determinations that customary standard airfare or other discount airfare is unavailable for specific trips if the recipient or subrecipient can demonstrate that such airfare was not available in the specific case.
- (f) ***Air travel by other than commercial carrier.*** Travel costs by recipient or subrecipient-owned, -leased, or -chartered aircraft include the cost of the lease, charter, operation (including personnel costs), maintenance, depreciation, insurance, and other related costs. The portion of these costs that exceeds the cost of airfare, as provided for in paragraph (d), is unallowable.

§ 200.476 Trustees.

Travel and subsistence costs of trustees (or directors) at IHEs and nonprofit organizations are allowable. See § 200.475.

Subpart F—Audit Requirements

GENERAL

§ 200.500 Purpose.

This part sets forth standards for obtaining consistency and uniformity among Federal agencies for the audit of non-Federal entities expending Federal awards.

AUDITS

§ 200.501 Audit requirements.

- (a) ***Audit required.*** A non-Federal entity that expends \$1,000,000 or more during the non-Federal entity's fiscal year in Federal awards must have a single or program-specific audit conducted for that year in accordance with the provisions of this part.
- (b) ***Single audit.*** A non-Federal entity that expends \$1,000,000 or more in Federal awards during the non-Federal entity's fiscal year must have a single audit conducted in accordance with § 200.514 except when it elects to have a program-specific audit conducted in accordance with paragraph (c) or (d) of this section.

- (c) **Program-specific audit election (in general).** A non-Federal entity may elect to have a program-specific audit conducted in accordance with § 200.507 if the following conditions are met:
 - (1) The non-Federal entity expends Federal awards under only one Federal program (excluding research and development); and
 - (2) The Federal program's statutes or regulations, or terms and conditions of the Federal award, do not require a financial statement audit of the non-Federal entity.
- (d) **Program-specific audit election for research and development.** A non-Federal entity may elect to have a program-specific audit for research and development conducted in accordance with § 200.507, but only if all of the following conditions are met:
 - (1) The non-Federal entity expends Federal awards only from the same Federal agency, or the same Federal agency and the same pass-through entity; and
 - (2) The Federal agency, or pass-through entity in the case of a subrecipient, approves a program-specific audit in advance.
- (e) **Exemption when Federal awards expended are less than \$1,000,000.** A non-Federal entity that expends less than \$1,000,000 in Federal awards during its fiscal year is exempt from Federal audit requirements for that year, except as noted in § 200.503. However, in all instances, the records of the non-Federal entity must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and the Government Accountability Office (GAO).
- (f) **Federally Funded Research and Development Centers (FFRDC).** Management of an auditee that owns or operates a FFRDC may elect to treat the FFRDC as a separate entity for purposes of this part.
- (g) **Subrecipients and contractors.** An auditee may simultaneously be a recipient, a subrecipient, and a contractor. Unless a program is exempt by Federal statute, Federal awards expended as a recipient or a subrecipient are subject to audit under this part. Payments received for goods or services provided as a contractor under a Federal award (see § 200.331) are not subject to audit under this part.
- (h) **Compliance responsibility for contractors.** In most cases, the auditee's compliance responsibility for contractors is to ensure that the procurement, receipt, and payment for goods and services comply with Federal statutes, regulations, and the terms and conditions of a Federal award. Federal award compliance requirements normally do not flow down to contractors. However, for procurement transactions in which the contractor is made responsible for meeting program requirements, the auditee must ensure those requirements are met, including by clearly stating the contractor's responsibilities within the contract and reviewing the contractor's records to determine compliance. Also, when these procurement transactions relate to a major program, the scope of the audit must include a determination of whether these transactions comply with Federal statutes, regulations, and the terms and conditions of a Federal award. See also § 200.318(b).
- (i) **For-profit subrecipient.** This subpart does not apply to for-profit organizations. As necessary, the pass-through entity is responsible for establishing requirements to ensure compliance by for-profit subrecipients. The subaward with a for-profit subrecipient must describe applicable compliance requirements and the for-profit subrecipient's compliance responsibility. Methods to ensure compliance for Federal awards made to for-profit subrecipients may include pre-award audits, monitoring throughout the performance of the subaward, and post-award audits (see § 200.332).

§ 200.502 Basis for determining Federal awards expended.

- (a) **Determining Federal awards expended.** The determination of when a Federal award is expended must be based on when the activity related to the Federal award occurs. Generally, the activity related to the Federal award pertains to events that require the non-Federal entity to comply with Federal statutes, regulations, and the terms and conditions of Federal awards, such as:
- (1) Expenditure/expense transactions associated with grants, cooperative agreements, cost-reimbursement contracts under the FAR, compacts with Indian Tribes, and direct appropriations;
 - (2) The disbursement of funds to subrecipients;
 - (3) The use of loan proceeds under loan and loan guarantee programs;
 - (4) The receipt of property (including surplus property);
 - (5) The receipt or use of program income;
 - (6) The distribution or use of food commodities;
 - (7) The disbursement of amounts entitling the non-Federal entity to an interest subsidy; and
 - (8) The period when insurance is in force.
- (b) **Loan and loan guarantees (loans).** The Federal Government is at risk for loans until the debt is repaid. Therefore, the following guidelines must be used to calculate the value of Federal awards expended under loan programs (except as noted in paragraphs (c) and (d)):
- (1) The value of new loans made or received during the audit period; plus
 - (2) The balance of loans from previous years at the beginning of the audit period for which the Federal Government imposes continuing compliance requirements; plus
 - (3) Any interest subsidy, cash, or administrative cost allowance received.
- (c) **Loan and loan guarantees (loans) at Institutions of Higher Education (IHE).** When loans are made to students of an IHE, but the IHE itself does not have continuing compliance requirements for the loans, then only the value of loans made during the audit period are considered Federal awards expended in that audit period. The balance of loans for previous audit periods is not included as Federal awards expended because the lender accounts for the prior balances.
- (d) **Prior loan and loan guarantees (loans).** Loans, the proceeds of which were received and expended in prior years, are not considered Federal awards expended under this part when Federal statutes, regulations, and the terms and conditions of Federal awards pertaining to such loans impose no continuing compliance requirements other than to repay the loans.
- (e) **Endowment funds.** The cumulative balance of Federal awards for endowment funds that are federally restricted is considered Federal awards expended in each audit period in which the funds are still restricted.
- (f) **Free rent.** Free rent received by itself is not considered a Federal award expended under this part. However, free rent received as part of a Federal award to carry out a Federal program must be included in determining Federal awards expended and is subject to audit under this part.

- (g) **Valuing non-cash assistance.** Federal non-cash assistance (such as free rent, food commodities, donated property, or donated surplus property that is received as part of a Federal award to carry out a Federal program) must be valued at fair market value at the time of receipt or the assessed value provided by the Federal agency and must be included in determining Federal awards expended under this part.
- (h) **Medicare.** Medicare payments to a non-Federal entity for providing patient care services to Medicare-eligible individuals are not considered Federal awards expended under this part.
- (i) **Medicaid.** Medicaid payments to a subrecipient for providing patient care services to Medicaid-eligible individuals are not considered Federal awards expended under this part unless a State requires the funds to be treated as Federal awards expended because reimbursement is on a cost-reimbursement basis.
- (j) **Certain loans provided by the National Credit Union Administration.** For purposes of this part, loans from the National Credit Union Share Insurance Fund and the Central Liquidity Facility funded by contributions from insured non-Federal entities are not considered Federal awards expended.

§ 200.503 Relation to other audit requirements.

- (a) **Other financial audits.** An audit conducted in accordance with this part must be in lieu of any financial audit of Federal awards which a non-Federal entity is required to undergo under any other Federal statute or regulation. To the extent that such an audit provides a Federal agency with the information it requires to carry out its responsibilities under Federal statute or regulation, a Federal agency must rely upon and use that information.
- (b) **Conducting additional audits.** Notwithstanding paragraph (a) of this section, a Federal agency, Inspector General, or GAO may conduct or arrange additional audits to carry out its responsibilities under Federal statute or regulation. The provisions of this part do not authorize any non-Federal entity to constrain, in any manner, such Federal agency from carrying out or arranging for such additional audits, except that the Federal agency must plan such audits not to be duplicative of other audits of Federal awards. Prior to commencing such an audit, the Federal agency or pass-through entity must review the FAC for recent audits submitted by the non-Federal entity, and to the extent such audits meet a Federal agency or pass-through entity's needs, the Federal agency or pass-through entity must rely upon and use such audits. Any additional audits must be planned and performed in such a way as to build upon work performed, including the audit documentation, sampling, and testing already performed by other auditors.
- (c) **Authority to conduct additional audits.** The provisions of this part do not limit the authority of Federal agencies to conduct, or arrange for the conduct of, audits and evaluations of Federal awards, nor limit the authority of any Federal agency Inspector General or other Federal officials. For example, requirements that may be applicable under the FAR or CAS and the terms and conditions of a cost-reimbursement contract may include additional applicable audits to be conducted or arranged for by Federal agencies.
- (d) **Federal agency to pay for additional audits.** A Federal agency that conducts or arranges for additional audits must, consistent with other applicable Federal statutes and regulations, arrange for funding the full cost of such additional audits.
- (e) **Request for a program to be audited as a major program.** A Federal agency may request that an auditee have a particular Federal program audited as a major program in lieu of the Federal agency conducting or arranging for the additional audits. Such requests should be made at least 180 calendar days prior to the end of the fiscal year to be audited to allow for planning. After consultation with its auditor, the auditee should promptly respond to such a request by informing the Federal agency whether the program would otherwise be audited as a major program using the risk-based audit approach described in § 200.518 and, if not, the estimated incremental cost. The Federal agency must then promptly confirm to the auditee

whether it wants the program audited as a major program. If the program is to be audited as a major program based upon this Federal agency request, and the Federal agency agrees to pay the full incremental costs, then the auditee must have the program audited as a major program. With approval of the Federal agency, a pass-through entity may use the provisions of this paragraph for a subrecipient.

§ 200.504 Frequency of audits.

Audits required by this part must be performed annually unless biennial audits are permitted under paragraph (a) or (b) of this section. Biennial audits must cover both fiscal years within the biennial period.

- (a) A State, local government, or Indian Tribe that is required by constitution or statute, in effect on January 1, 1987, to undergo its audits less frequently than annually, is permitted to undergo biennial (every other year) audits pursuant to this part. This requirement must still be in effect for the biennial period.
- (b) Any nonprofit organization that had biennial audits for all biennial periods ending between July 1, 1992, and January 1, 1995, is permitted to undergo biennial audits pursuant to this part.

§ 200.505 Remedies for audit noncompliance.

In cases of continued inability or unwillingness of a non-federal entity to have an audit conducted in accordance with this part, Federal agencies or pass-through entities must take appropriate action as provided in § 200.339.

§ 200.506 Audit costs.

See § 200.425.

§ 200.507 Program-specific audits.

- (a) **Program-specific audit guide available.** In some cases, a program-specific audit guide will be available to provide specific guidance to the auditor concerning internal controls, compliance requirements, suggested audit procedures, and audit reporting requirements. A listing of current program-specific audit guides can be found in the compliance supplement (Appendix VI, Program-Specific Audit Guides). When a current program-specific audit guide is available, the auditor must follow Generally Accepted Government Auditing Standards (GAGAS) and the guide when performing a program-specific audit.
- (b) **Program-specific audit guide not available.**
 - (1) When a current program-specific audit guide is not available, the auditee and auditor must have basically the same responsibilities for the Federal program as they would have for an audit of a major program in a single audit.
 - (2) The auditee must prepare the financial statement(s) for the Federal program that includes a schedule of expenditures of Federal awards for the program and notes that describe the significant accounting policies used in preparing the schedule, a summary schedule of prior audit findings consistent with the requirements of § 200.511(b), and a corrective action plan consistent with the requirements of § 200.511(c).
 - (3) The auditor must:
 - (i) Perform an audit of the financial statement(s) for the Federal program in accordance with GAGAS;

- (ii) Obtain an understanding of internal controls and perform tests of internal controls over the Federal program consistent with the requirements for a major program in accordance with § 200.514(c);
 - (iii) Determine whether the auditee has complied with Federal statutes, regulations, and the terms and conditions of Federal awards that could have a direct and material effect on the Federal program consistent with the requirements for a major program under § 200.514(d);
 - (iv) Follow up on prior audit findings and perform procedures to assess the reasonableness of the summary schedule of prior audit findings prepared by the auditee in accordance with the requirements of § 200.511. When the auditor concludes that the summary schedule of prior audit findings materially misrepresents the status of any prior audit finding, the auditor must report this condition as a current-year audit finding.; and
 - (v) Report any audit findings consistent with the requirements of § 200.516.
- (4) The auditor's report(s) may be in the form of either combined or separate reports. It may be organized differently from the manner presented in this section. The auditor's report(s) must state that the audit was conducted in accordance with this part and include the following:
- (i) An opinion (or disclaimer of opinion) as to whether the financial statement(s) of the Federal program is presented fairly in all material respects in accordance with the stated accounting policies;
 - (ii) A report on internal control related to the Federal program, which must describe the scope of testing of internal control and the results of the tests;
 - (iii) A report on compliance that includes an opinion (or disclaimer of opinion) as to whether the auditee complied with laws, regulations, and the terms and conditions of Federal awards which could have a direct and material effect on the Federal program; and
 - (iv) A schedule of findings and questioned costs for the Federal program that includes a summary of the auditor's results relative to the Federal program in a format consistent with § 200.515(d)(1) and findings and questioned costs consistent with the requirements of § 200.515(d)(3).

(c) **Report submission for program-specific audits.**

- (1) **Submission deadline and public availability.** The audit must be completed and submitted in accordance with paragraph (c)(2) or (c)(3) of this section. Unless a different period is specified in the program-specific audit guide, the audit must be submitted within 30 calendar days after the auditee receives the auditor's report(s) or nine months after the end of the audit period (whichever is earlier). The submission is due the next business day when the due date falls on a Saturday, Sunday, or Federal holiday. Unless restricted by Federal law or regulation, the auditee must make copies of the reporting package available for public inspection. Auditees and auditors must ensure that their respective parts of the reporting package do not include protected personally identifiable information.
- (2) **Program-specific audit guide available.** When a program-specific audit guide is available, the auditee must electronically submit the data collection form prepared in accordance with § 200.512(b), as applicable to the program-specific audit, to the Federal Audit Clearinghouse (FAC). The submission must also include the reporting required by the program-specific audit guide.

- (3) **Program-specific audit guide not available.** When a program-specific audit guide is not available, the auditee must electronically submit the data collection form prepared in accordance with § 200.512(b) to the FAC. The submission must also include the financial statement(s) of the Federal program, summary schedule of prior audit findings, and corrective action plan as described in paragraph § 200.507(b)(2) and the auditor's report(s) described in paragraph § 200.507(b)(4).
- (d) **Other sections of this part may apply.** Program-specific audits are subject to:
 - (1) 200.500 Purpose through 200.503 Relation to other audit requirements, paragraph (d);
 - (2) 200.504 Frequency of audits through 200.506 Audit costs;
 - (3) 200.508 Auditee responsibilities through 200.509 Auditor selection;
 - (4) 200.511 Audit findings follow-up;
 - (5) 200.512 Report submission, paragraphs (e) through (h);
 - (6) 200.513 Responsibilities;
 - (7) 200.516 Audit findings through 200.517 Audit documentation;
 - (8) 200.521 Management decision; and
 - (9) Other referenced provisions of this part unless contrary to the provisions of this section, a program-specific audit guide, or program statutes and regulations.

AUDITEES

§ 200.508 Auditee responsibilities.

The auditee must:

- (a) Arrange for the audit required by this part in accordance with § 200.509, and ensure it is properly performed and submitted in accordance with § 200.512.
- (b) Prepare financial statements, including the schedule of expenditures of Federal awards in accordance with § 200.510.
- (c) Promptly follow up and take corrective action on audit findings. This includes preparing a summary schedule of prior audit findings and a corrective action plan in accordance with § 200.511(b) and (c), respectively.
- (d) Provide the auditor access to personnel, accounts, books, records, supporting documentation, and any other information needed for the auditor to perform the audit required by this part.

§ 200.509 Auditor selection.

- (a) **Auditor procurement.** When procuring audit services, the auditee must follow the procurement standards in §§ 200.317 through 200.327 of subpart D or the FAR (48 CFR part 42), as applicable. When requesting proposals for audit services, the objectives and scope of the audit must be made clear, and the non-Federal entity must request a copy of the audit organization's peer review report, which the auditor must provide under GAGAS. Factors to be considered in evaluating each proposal for audit services include the responsiveness to the request for proposal, relevant experience, availability of staff with professional

qualifications and technical abilities, the results of peer and external quality control reviews, and price. Whenever possible, the auditee must make efforts to contract with businesses as stated in § 200.321 or the FAR (48 CFR part 42), as applicable.

- (b) **Restriction on auditor preparing indirect cost proposals.** An auditor who prepares the indirect cost proposal or cost allocation plan may not be selected to perform the audit required by this part when the indirect costs recovered by the auditee during the prior year exceed \$1 million. This restriction applies to the base year used to prepare the indirect cost proposal or cost allocation plan and any subsequent years in which the resulting indirect cost agreement or cost allocation plan is used to recover costs.
- (c) **Use of Federal auditors.** Federal auditors may perform all or part of the work required under this part if they fully comply with the requirements of this part.

§ 200.510 Financial statements.

- (a) **Financial statements.** The auditee must prepare financial statements that reflect its financial position, results of operations or changes in net assets, and, where appropriate, cash flows for the fiscal year audited. The financial statements must be for the same organizational unit and fiscal year chosen to meet this part's requirements. However, organization-wide financial statements of the non-Federal entity may also include departments, agencies, and other organizational units that have separate audits in accordance with § 200.514(a) and prepare separate financial statements.
- (b) **Schedule of expenditures of Federal awards.** The auditee must also prepare a schedule of expenditures of Federal awards for the period covered by the auditee's financial statements. The schedule must include the total Federal awards expended as determined in accordance with § 200.502. The auditee may choose to provide information requested by Federal agencies or pass-through entities to make the schedule easier to use. For example, when a Federal program has multiple Federal award years, the auditee may separately list the amount of Federal awards expended for each year of a Federal award. The schedule must:
 - (1) List individual Federal programs by Federal agency using the applicable Assistance Listing number(s). For a cluster of programs, the non-Federal entity must provide the cluster name, a list of individual Federal programs within the cluster, and provide the Federal agency name and the applicable Assistance Listing number(s). For research and development, total Federal awards expended must be shown either by individual Federal award or by Federal agency and major subdivision within the Federal agency. For example, the National Institutes of Health is a major subdivision within the Department of Health and Human Services.
 - (2) For Federal awards received as a subrecipient, the name of the pass-through entity and identifying number assigned by the pass-through entity must be included.
 - (3) Provide total Federal awards expended for each individual Federal program and the Assistance Listings number or other identifying number when the Assistance Listings information is unavailable. For a cluster of programs, the auditee must also provide the total for the cluster.
 - (4) Include the total amount provided to subrecipients from each Federal program.
 - (5) For loan or loan guarantee programs described in § 200.502(b), identify in the notes to the schedule the balances outstanding at the end of the audit period. This requirement is in addition to including the total Federal awards expended for loan or loan guarantee programs in the schedule.

- (6) Include notes describing the significant accounting policies used in preparing the schedule and whether the auditee elected to use the de minimis indirect cost rate of up to 15 percent (see § 200.414).

§ 200.511 Audit findings follow-up.

- (a) **General.** The auditee is responsible for follow-up and corrective action on all audit findings. As part of this responsibility, the auditee must prepare a summary schedule of prior audit findings. The auditee must also prepare a corrective action plan for current year audit findings. The summary schedule of prior audit findings and the corrective action plan must include the reference numbers the auditor assigns to audit findings under § 200.516(c). Since the summary schedule may include audit findings from multiple years, it must include the fiscal year in which the finding initially occurred. The corrective action plan and summary schedule of prior audit findings must include financial statement findings that the auditor was required to report in accordance with GAGAS.
- (b) **Summary schedule of prior audit findings.** The summary schedule of prior audit findings must report the status of all audit findings included in the prior audit's schedule of findings and questioned costs. The summary schedule must also include audit findings reported in the prior audit's summary schedule of prior audit findings except audit findings listed as corrected in accordance with paragraph (b)(1) of this section or no longer valid or not warranting further action in accordance with paragraph (b)(3) of this section.
 - (1) When audit findings were fully corrected, the summary schedule need only list the audit findings and state that corrective action was taken.
 - (2) When audit findings were not corrected or only partially corrected, the summary schedule must describe the reasons for the finding's recurrence, planned corrective action, and any partial corrective action taken. When the corrective action taken significantly differs from the corrective action previously reported in a corrective action plan or the Federal agency's or pass-through entity's management decision, the summary schedule must provide an explanation.
 - (3) When the auditee believes the audit findings are no longer valid or do not warrant further action, the reasons for this position must be described in the summary schedule. A valid reason for considering an audit finding as not warranting further action is that all of the following have occurred:
 - (i) Two years have passed since the audit report in which the finding occurred was submitted to the FAC;
 - (ii) The Federal agency or pass-through entity is not currently following up with the auditee on the audit finding; and
 - (iii) A management decision was not issued.
- (c) **Corrective action plan.** At the completion of the audit, the auditee must prepare a corrective action plan to address each audit finding included in the auditor's report for the current year. The corrective action plan must be a document separate from the auditor's findings described in § 200.516. The corrective action plan must also provide the name(s) of the contact person(s) responsible for the corrective action, the corrective action to be taken, and the anticipated completion date. When the auditee does not agree with the audit findings or believes corrective action is not required, the corrective action plan must include a detailed explanation of the reasons.

§ 200.512 Report submission.

(a) **General.**

- (1) The audit, the data collection form, and the reporting package must be submitted within 30 calendar days after the auditee receives the auditor's report(s) or nine months after the end of the audit period (whichever is earlier). The cognizant agency for audit or oversight agency for audit (in the absence of a cognizant agency for audit) may authorize an extension when the nine-month timeframe would place an undue burden on the auditee. If the due date falls on a Saturday, Sunday, or Federal holiday, the reporting package is due the next business day.
- (2) The auditee must make copies available for public inspection unless restricted by Federal statute or regulation. Auditees and auditors must ensure that their respective parts of the reporting package do not include protected personally identifiable information.

(b) **Data collection.** The FAC is the repository of record for subpart F reporting packages and the data collection form. All Federal agencies, pass-through entities and others interested in a reporting package and data collection form must obtain it by accessing the FAC.

- (1) The auditee must submit the required data collection form described in Appendix X of this part. This form provides information about the auditee, its Federal programs, the results of the audit, and whether the audit was completed in accordance with this part. The form must include all information required by this part that is necessary for Federal agencies to use the audit to ensure the integrity of Federal programs. The form includes data elements and a format that OMB must approve, is available from the FAC, and include collections of information from the reporting package described in paragraph (c).
- (2) A senior-level representative of the auditee (for example, a State controller, director of finance, chief executive officer, or chief financial officer) must sign a statement to be included as part of the data collection form stating that the auditee complied with the requirements of this part, including that:
 - (i) The data collection form was prepared in accordance with this part (and the instructions accompanying the form);
 - (ii) The reporting package does not include protected personally identifiable information;
 - (iii) The information included in its entirety is accurate and complete; and
 - (iv) The FAC is authorized to make the reporting package and the form publicly available on a website.
- (3) An auditee that is an Indian Tribe or a tribal organization (as defined in the Indian Self-Determination, Education and Assistance Act (ISDEAA), 25 U.S.C. 450b(l)) may opt not to authorize the FAC to make the reporting package publicly available on a website. To opt-out, an Indian Tribe or tribal organization must exclude the authorization described in paragraph (b)(2)(iv) of this section. In these instances, the Indian Tribe is responsible for submitting the reporting package directly to any pass-through entities through which it has received a Federal award and to pass-through entities for which the summary schedule of prior audit findings reported the status of any findings related to those Federal awards that the pass-through entity provided. Unless restricted by Federal statute or regulation, if the Indian Tribe opts not to authorize publication, it must make copies of the reporting package available for public inspection.

- (4) The auditor must complete the applicable data elements of the data collection form using the information included in the reporting package described in paragraph (c) of this section. The auditor must sign a statement to be included as part of the data collection form stating:
 - (i) The source of information included in the data collection form;
 - (ii) The auditor's responsibility for the information;
 - (iii) The data collection form is not a substitute for the reporting package described in paragraph (c); and
 - (iv) The content of the form is limited to the collection of information prescribed by OMB.
- (c) **Reporting package.** The reporting package must include the following:
 - (1) Financial statements and schedule of expenditures of Federal awards discussed in § 200.510(a) and (b), respectively;
 - (2) Summary schedule of prior audit findings discussed in § 200.511(b);
 - (3) Auditor's report(s) discussed in § 200.515; and
 - (4) Corrective action plan discussed in § 200.511(c).
- (d) **Submission to FAC.** The auditee must electronically submit the data collection form described in paragraph (b) of this section and the reporting package described in paragraph (c) of this section to the FAC.
- (e) **Requests for management letters issued by the auditor.** Auditees must submit, when requested by a Federal agency or pass-through entity, a copy of any management letters issued by the auditor.
- (f) **Report retention requirements.** Auditees must keep a copy of the data collection form described in paragraph (b) of this section and a copy of the reporting package described in paragraph (c) on file for three years from the date of submission to the FAC. Copies of audit records must be maintained in accordance with § 200.336.
- (g) **FAC responsibilities.** The FAC must make available the reporting packages received in accordance with paragraph (c) of this section and § 200.507(c) to the public, except for Indian Tribes exercising the option in paragraph (b)(3) of this section, and maintain a database of completed audits, provide appropriate information to Federal agencies, and follow up with known auditees that have not submitted the required data collection forms and reporting packages.
- (h) **Electronic filing.** Nothing in this part must preclude electronic submissions to the FAC in such a manner as may be approved by OMB.

FEDERAL AGENCIES

§ 200.513 Responsibilities.

- (a) **Cognizant agency for audit responsibilities.**
 - (1) A non-Federal entity expending more than \$50 million a year in Federal awards must have a cognizant agency for audit. The cognizant agency for audit must be the Federal agency that provides the largest amount of direct funding (as listed on the non-Federal entity's Schedule of expenditures of Federal awards, see § 200.510(b)) unless OMB designates a specific cognizant agency for audit.

When the direct funding represents less than 25 percent of the total expenditures (as direct and subawards) by the non-Federal entity, then the Federal agency with the predominant amount of total funding is the designated cognizant agency for audit.

- (2) To provide for continuity of cognizance, the determination of the predominant amount of direct funding must be based upon direct Federal awards expended in the non-Federal entity's fiscal years ending in 2019 and every fifth year after that.
- (3) Notwithstanding how audit cognizance is determined, a Federal agency may reassign cognizance to another Federal agency that provides substantial funding to an auditee if it agrees to be the cognizant agency for audit. Within 30 calendar days after any reassignment, both the old and the new cognizant agency for audit must notify the FAC, the auditee, and the auditor (if known) of the change.
- (4) The cognizant agency for audit must:
 - (i) Provide technical audit advice and liaison assistance to auditees and auditors.
 - (ii) Obtain or conduct quality control reviews on selected audits made by non-Federal auditors and provide the results to other interested organizations.
 - (iii) Cooperate and support the Federal agency designated by OMB to lead a government-wide analysis to assess the quality of single audits. The government-wide analysis may rely on the current and ongoing quality control review work performed by Federal agencies, State auditors, and professional audit associations. This government-wide audit analysis must be performed at an interval determined by OMB, and the results must be posted publicly. In providing support to the government-wide analysis, a Federal agency must provide the following:
 - (A) An assessment of the extent to which single audits conform to the requirements, standards, and procedures of this part; and
 - (B) Recommendations to address audit quality issues, including recommendations for any changes to this part's requirements, standards, and procedures.
 - (iv) Promptly inform the appropriate Federal law enforcement officials and impacted Federal agencies of any direct reporting by the auditee or its auditor required by GAGAS, Federal statute, or regulation.
 - (v) Advise the community of independent auditors of any noteworthy or important factual trends related to the quality of audits stemming from quality control reviews. Significant problems or quality issues consistently identified through quality control reviews of audit reports must be referred to appropriate State licensing agencies and professional bodies.
 - (vi) Advise the auditor, Federal awarding agencies, and, where appropriate, the auditee of any deficiencies found in the audits when the deficiencies require corrective action by the auditor. When advised of deficiencies, the auditee must work with the auditor to take corrective action. If corrective action is not taken, the cognizant agency for audit must notify the auditor, the auditee, and applicable Federal awarding agencies and pass-through entities of the facts and make recommendations for follow-up action. Major inadequacies or repetitive substandard performance by auditors must be referred to appropriate State licensing agencies and professional bodies for disciplinary action.

- (vii) Coordinate, to the extent practical, audits or reviews made by or for Federal agencies that are in addition to the audits made pursuant to this part, so that the additional audits or reviews build upon, rather than duplicate, audits performed in accordance with this part.
 - (viii) Coordinate a management decision for cross-cutting audit findings that affect the Federal programs of more than one agency when requested by any Federal agency whose awards are included in the audit finding of the auditee. Cross-cutting audit finding means an audit finding where the same underlying condition or issue affects all Federal awards (including Federal awards of more than one Federal agency or pass-through entity); for example, a cross-cutting audit finding may include an issue related to the recipient's accounting system.
 - (ix) Coordinate the audit work and reporting responsibilities among auditors to achieve the most cost-effective audit.
 - (x) Provide advice to auditees as to how to handle changes in fiscal year.
- (b) ***Oversight agency for audit responsibilities.*** An auditee who does not have a designated cognizant agency for audit will be under the general oversight of the Federal agency determined in accordance with § 200.1 oversight agency for audit. A Federal agency with oversight for an auditee may reassign oversight to another Federal agency that agrees to be the oversight agency for audit. Within 30 calendar days after any reassignment, both the old and the new oversight agency for audit must provide notice of the change to the FAC, the auditee, and, if known, the auditor. The oversight agency for audit:
- (1) Must provide technical advice and assistance to auditees and auditors.
 - (2) May assume all or some of the responsibilities normally performed by a cognizant agency for audit.
- (c) ***Awarding Federal agency responsibilities.*** In addition to all other requirements of this part, the awarding Federal agency must:
- (1) Ensure that audits are completed, and reports are received in a timely manner in accordance with the requirements of this part.
 - (2) Provide technical advice and assistance to auditees and auditors.
 - (3) Follow-up on audit findings to ensure that non-Federal entities take appropriate and timely corrective action. Follow-up includes:
 - (i) Issuing a management decision in accordance with § 200.521;
 - (ii) Monitoring the non-Federal entity's progress implementing a corrective action;
 - (iii) Using a cooperative audit resolution approach to improve Federal program outcomes through better audit resolution, follow-up, and corrective action, which means the use of audit follow-up techniques promoting prompt corrective action by improving communication, fostering collaboration, promoting trust, and developing an understanding between the Federal agency and the non-Federal entity. This approach is based upon:
 - (A) A strong commitment by Federal agency and non-Federal entity leadership to Federal program integrity;
 - (B) Federal agencies strengthening partnerships and working cooperatively with non-Federal entities and their auditors; non-Federal entities and their auditors working cooperatively with Federal agencies;

- (C) A focus on current conditions and corrective action going forward;
 - (D) Federal agencies offering appropriate relief for past noncompliance when audits show prompt corrective action has occurred; and
 - (E) Federal agency leadership sending a clear message that continued failure to correct conditions identified by audits likely to cause improper payments, fraud, waste, or abuse is unacceptable and will result in sanctions.
- (iv) Tracking the effectiveness of the Federal agency's follow-up processes, the effectiveness of single audits in improving non-Federal entity accountability, and the use of single audits in making Federal award decisions. The Federal agency should develop a baseline, metrics, and targets to track, over time, the effectiveness of the Federal agency's process to follow up on audit findings.
- (4) Provide OMB with annual updates to the compliance supplement. These updates include working with OMB to ensure that the compliance supplement focuses the auditor on testing the compliance requirements most likely to cause improper payments, fraud, waste, abuse, or generate audit findings for which the Federal agency will take action in accordance with § 200.505. Prior to submitting compliance supplement drafts to OMB, Federal agencies should engage with external audit stakeholders, the Federal agency's Office of Inspector General, and the National Single Audit Coordinator (NSAC).
- (5) Provide OMB with the name of a single audit accountable official from among the senior policy officials of the Federal agency. The accountable official must be:
 - (i) Responsible for ensuring that the Federal agency fulfills the requirements of this section and effectively uses the single audit process to reduce improper payments and improve Federal program outcomes.
 - (ii) Accountable for improving the effectiveness of the Federal agency's single audit processes in accordance with paragraph (c)(3)(iv).
 - (iii) Responsible for designating the Federal agency's key management single audit liaison.
- (6) Provide OMB with the name of a key management single audit liaison. The liaison must:
 - (i) Serve as the Federal agency's point of contact for the single audit process within and outside the Federal Government.
 - (ii) Promote interagency coordination, consistency, and information sharing. This includes coordinating audit follow-up, identifying higher risk non-Federal entities, providing input on single audit and follow-up policy, enhancing the utility of the FAC, and identifying ways to use single audit results to improve Federal award accountability and best practices.
 - (iii) Oversee training for the Federal agency's program management personnel related to the single audit process.
 - (iv) Promote the Federal agency's use of a cooperative audit resolution approach as described in paragraph (c)(3)(iii) of this section.
 - (v) Coordinate the Federal agency's audit follow-up processes and ensure non-Federal entities implement corrective actions for audit findings.

- (vi) Ensure the Federal agency fulfills its responsibility, as a cognizant agency for audit, to coordinate a management decision for cross-cutting audit findings under (a)(4)(viii) of this section. Cross-cutting audit findings means an audit finding where the same underlying condition or issue affects all Federal awards (including Federal awards of more than one Federal agency or pass-through entity). For example, this may include an issue related to the recipient's accounting system.
- (vii) Ensure the Federal agency provides OMB with annual updates to the compliance supplement consistent with the compliance supplement preparation guide.
- (viii) Support the mission of the Federal agency's single audit accountable official and coordinate with the Federal agency's Office of Inspector General and National Single Audit Coordinator (NSAC).

AUDITORS

§ 200.514 Standards and scope of audit.

- (a) **General.** The audit must be conducted in accordance with GAGAS. The audit must also cover the entire operations of the auditee, or, at the option of the auditee, such audit must include a series of audits that cover departments, agencies, and other organizational units that expended or otherwise administered Federal awards during the audit period. In these instances, the audit must include the financial statements and schedule of expenditures of Federal awards for each such department, agency, and other organizational unit, which must be considered to be a non-Federal entity. The financial statements and schedule of expenditures of Federal awards must be for the same audit period.
- (b) **Financial statements.** The auditor must determine whether the auditee's financial statements are presented fairly in all material respects in accordance with generally accepted accounting principles (or a special purpose framework such as cash, modified cash, or regulatory as required by State law). The auditor must also determine whether the schedule of expenditures of Federal awards is stated fairly in all material respects in relation to the auditee's financial statements as a whole.
- (c) **Internal control.**
 - (1) The compliance supplement provides guidance on internal controls over Federal programs based upon the guidance in Standards for Internal Control in the Federal Government issued by the Comptroller General of the United States and the Internal Control-Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).
 - (2) In addition to the requirements of GAGAS, the auditor must perform procedures to obtain an understanding of internal control over Federal programs sufficient to plan the audit to support a low assessed level of control risk of noncompliance for major programs.
 - (3) Except as provided in paragraph (c)(4) of this section, the auditor must:
 - (i) Plan the testing of internal control over compliance for major programs to support a low assessed level of control risk for assertions relevant to the compliance requirements for each major program; and
 - (ii) Perform testing of internal control as planned in paragraph (c)(3)(i) of this section.

- (4) When internal control over some or all of the compliance requirements for a major program are likely to be ineffective in preventing or detecting noncompliance, the planning and performing of testing described in paragraph (c)(3) of this section are not required for those compliance requirements. However, the auditor must report a significant deficiency or material weakness in accordance with § 200.516, assess the related control risk at the maximum, and consider whether additional compliance tests are required because of ineffective internal control.

(d) **Compliance.**

- (1) In addition to the requirements of GAGAS, the auditor must determine whether the auditee has complied with Federal statutes, regulations, and the terms and conditions of Federal awards that may have a direct and material effect on each of its major programs.
- (2) The principal compliance requirements applicable to most Federal programs and the compliance requirements of the largest Federal programs are included in the compliance supplement.
- (3) For the compliance requirements related to Federal programs contained in the compliance supplement, an audit of these compliance requirements will meet the requirements of this part. Where there have been changes to the compliance requirements, and the changes are not reflected in the compliance supplement, the auditor must determine the current compliance requirements and modify the audit procedures accordingly. For those Federal programs not covered in the compliance supplement, the auditor must follow the compliance supplement's guidance for programs not included.
- (4) The compliance testing must include tests of transactions or other auditing procedures necessary to provide the auditor with sufficient appropriate audit evidence to support an opinion on compliance.

- (e) **Audit follow-up.** The auditor must follow up on prior audit findings regardless of whether a prior audit finding is related to a major program in the current year. Audit follow-up includes performing procedures to assess the reasonableness of the summary schedule of prior audit findings prepared by the auditee in accordance with the requirements of § 200.511. When the auditor concludes that the summary schedule of prior audit findings materially misrepresents the status of any prior audit finding, the auditor must report this condition as a current-year audit finding.

- (f) **Data collection form.** As required in § 200.512(b)(4), the auditor must complete and sign specified sections of the data collection form.

§ 200.515 Audit reporting.

The auditor's report(s) may be in the form of either combined or separate reports. It may be organized differently from the manner presented in this section. The auditor's report(s) must state that the audit was conducted in accordance with this part and include the following:

- (a) An opinion (or disclaimer of opinion) on whether the financial statement(s) of the auditee is presented fairly in all material respects in accordance with generally accepted accounting principles (or a special purpose framework such as cash, modified cash, or regulatory as required by State law). The auditor must also decide whether the schedule of expenditures of Federal awards is stated fairly in all material respects in relation to the auditee's financial statements as a whole.

- (b) A report on internal control over financial reporting and compliance with provisions of laws, regulations, contracts, and award agreements, noncompliance with which could have a material effect on the financial statements. This report must describe the scope of internal control and compliance testing and the results of the tests. Where applicable, the report must refer to the separate schedule of findings and questioned costs described in paragraph (d) of this section.
- (c) A report on compliance for each major program and a report on internal control over compliance. This report must describe the scope of testing of internal control over compliance and include an opinion (or disclaimer of opinion) as to whether the auditee complied with Federal statutes, regulations, and the terms and conditions of Federal awards that could have a direct and material effect on each major program and refer to the separate schedule of findings and questioned costs described in paragraph (d) of this section.
- (d) A schedule of findings and questioned costs which must include the following three components:
 - (1) A summary of the auditor's results, which must include:
 - (i) The type of report the auditor issued (unmodified opinion, qualified opinion, adverse opinion, or disclaimer of opinion) on whether the audited financial statements were prepared in accordance with GAAP;
 - (ii) A statement about whether significant deficiencies or material weaknesses in internal control were disclosed by the audit of the financial statements;
 - (iii) A statement as to whether the audit disclosed any noncompliance that is material to the financial statements of the auditee;
 - (iv) A statement about whether significant deficiencies or material weaknesses in internal control over major programs were disclosed by the audit;
 - (v) The type of report the auditor issued (unmodified opinion, qualified opinion, adverse opinion, or disclaimer of opinion) on compliance for major programs;
 - (vi) A statement as to whether the audit disclosed any audit findings that the auditor is required to report under § 200.516(a);
 - (vii) An identification of major programs by listing each individual major program; however, in the case of a cluster of programs, only the cluster name as shown on the schedule of expenditures of Federal Awards is required;
 - (viii) The dollar threshold used to distinguish between Type A and Type B programs, as described in § 200.518(b)(1) or (3) when a recalculation of the Type A threshold is required for large loan or loan guarantees; and
 - (ix) A statement as to whether the auditee qualified as a low-risk auditee under § 200.520.
 - (2) Findings relating to the financial statements required to be reported in accordance with GAGAS.
 - (3) Findings and questioned costs for Federal awards which must include audit findings as defined in § 200.516(a) and be reported in the following manner:
 - (i) Audit findings (for example, internal control findings, compliance findings, questioned costs, or fraud) that relate to the same issue must be presented as a single audit finding. Where practical, audit findings should be organized by Federal agency or pass-through entity.

- (ii) Audit findings that relate to both the financial statements (paragraph (d)(2) of this section) and Federal awards (this paragraph (d)(3)) must be reported in both sections of the schedule. However, the reporting in one section of the schedule may be in summary form and reference a detailed reporting in the other section.
- (e) Nothing in this part precludes combining the reporting required by this section with the reporting required by § 200.512(b) when allowed by GAGAS and Appendix X of this part.

§ 200.516 Audit findings.

- (a) **Audit findings reported.** The auditor must report the following as an audit finding in the schedule of findings and questioned costs:
 - (1) Significant deficiencies and material weaknesses in internal control over major programs. The auditor's determination of whether a deficiency in internal control is a significant deficiency or a material weakness for the purpose of reporting an audit finding is in relation to a type of compliance requirement for a major program identified in the compliance supplement.
 - (2) Material noncompliance with the provisions of Federal statutes, regulations, or the terms and conditions of Federal awards related to a major program. The auditor's determination of whether noncompliance with the provisions of Federal statutes, regulations, or the terms and conditions of Federal awards is material for the purpose of reporting an audit finding is in relation to a type of compliance requirement for a major program identified in the compliance supplement.
 - (3) Known questioned costs when either known or likely questioned costs are greater than \$25,000 for a type of compliance requirement for a major program. When reporting questioned costs, the auditor must include information to provide proper perspective for evaluating the prevalence and consequences of the questioned costs.
 - (4) Known questioned costs greater than \$25,000 for a Federal program that is not audited as a major program. Except for audit follow-up, the auditor is not required to perform audit procedures for such a Federal program; therefore, the auditor will normally not find questioned costs for a program that is not audited as a major program. However, if the auditor does become aware of questioned costs for a Federal program that is not audited as a major program (for example, as part of audit follow-up or other audit procedures) and the known questioned costs are greater than \$25,000, the auditor must report this as an audit finding.
 - (5) The circumstances concerning why the auditor's report on compliance for each major program is other than an unmodified opinion. This must be included unless the circumstances are otherwise reported as audit findings in the schedule of findings and questioned costs.
 - (6) Known or likely fraud affecting a Federal award, unless the fraud is otherwise reported as an audit finding in the schedule of findings and questioned costs. This paragraph does not require the auditor to publicly report information that could compromise investigative or legal proceedings or to make an additional reporting when the auditor confirms that the fraud was reported outside the auditor's reports under the direct reporting requirements of GAGAS.
 - (7) Instances where the results of audit follow-up procedures disclosed that the summary schedule of prior audit findings prepared by the auditee in accordance with § 200.511(b) materially misrepresents the status of any prior audit finding.

- (b) **Audit finding detail and clarity.** Audit findings must be presented with sufficient detail and clarity for the auditee to prepare a corrective action plan and take corrective action and for Federal agencies or pass-through entities to arrive at a management decision. As applicable, the following information must be included in audit findings:
- (1) The Federal program and specific Federal award identification, including the Assistance Listings title and number, Federal award identification number and year, the name of the Federal agency, and name of the applicable pass-through entity. When information, such as the Assistance Listings title and number or Federal award identification number, is unavailable, the auditor must provide the best information available to describe the Federal award.
 - (2) The criteria or specific requirement for the audit finding (for example, the specific Federal statute, regulation, or term and condition of the Federal award). The criteria or specific requirement provides a context for evaluating evidence and understanding findings. The criteria should generally identify the required or desired state or expectation with respect to the program or operation.
 - (3) The condition found, including facts that support the deficiency identified in the audit finding.
 - (4) A statement of cause that identifies the reason or explanation for the condition or the factors responsible for the difference between the situation that exists (condition) and the required or desired state (criteria), which may also serve as a basis for recommendations for corrective action.
 - (5) The possible asserted effect to provide sufficient information to the auditee and Federal agency or pass-through entity to permit them to determine the cause and effect to facilitate prompt and proper corrective action. A statement of the effect or potential effect should provide a clear, logical link to establish the impact or potential impact of the difference between the condition and the criteria.
 - (6) The identification of known questioned costs, by applicable Assistance Listing number(s) and Federal award identification number(s), and how these questioned costs were computed.
 - (7) When there are known questioned costs but the dollar amount is undetermined or not reported, a description of why the dollar amount was undetermined or otherwise could not be reported.
 - (8) Information to provide proper perspective for evaluating the prevalence and consequences of the audit finding. For example, whether the audit finding represents an isolated instance or a systemic problem. Where appropriate, instances identified must be related to the universe and the number of cases examined and be quantified in terms of dollar value. In addition, the audit finding should indicate whether the sampling was a statistically valid sample.
 - (9) The identification of whether the audit finding is a repeat of a finding in the immediately prior audit. The audit finding must identify the applicable prior year audit finding reference numbers in these instances.
 - (10) Recommendations to prevent future occurrences of the deficiency identified in the audit finding.
 - (11) Views of responsible officials of the auditee.
- (c) **Reference numbers.** Each audit finding in the schedule of findings and questioned costs must include a reference number in the format meeting the requirements of the data collection form submission (see § 200.512(b)).

§ 200.517 Audit documentation.

- (a) **Retention of audit documentation.** The auditor must retain audit documentation and reports for a minimum of three years after the date of issuance of the auditor's report(s) to the auditee. The cognizant agency for audit, oversight agency for audit, cognizant agency for indirect costs, or pass-through entity may extend the retention period by providing written notification to the auditor. When the auditor is aware that the Federal agency, pass-through entity, or auditee is contesting an audit finding, the auditor must contact the parties contesting the audit finding for guidance prior to the destruction of the audit documentation and reports.
- (b) **Access to audit documentation.** Audit documentation must be made available upon request to the cognizant or oversight agency for audit or its designee, cognizant agency for indirect cost, a Federal agency, or GAO at the completion of the audit, as part of a quality review, to resolve audit findings, or to carry out oversight responsibilities consistent with the purposes of this part. Access to audit documentation includes the right of Federal agencies to obtain copies of audit documentation as is reasonable and necessary.

§ 200.518 Major program determination.

- (a) **General.** The auditor must use a risk-based approach to determine which Federal programs are major programs. This risk-based approach must consider current and prior audit experience, oversight by Federal agencies and pass-through entities, and the inherent risk of the Federal program. The process described in paragraphs (b) through (h) of this section must be followed.
- (b) **Step one.**

(1) The auditor must identify and label the larger Federal programs as Type A programs. Type A programs are defined as Federal programs with Federal awards expended during the audit period exceeding the levels outlined in table 1:

TABLE 1 TO PARAGRAPH (b)(1)

Total Federal awards expended	Type A threshold
Equal to or exceed \$1,000,000 but less than or equal to \$34 million	\$1,000,000.
Exceed \$34 million but less than or equal to \$100 million	Total Federal awards expended times .03.
Exceed \$100 million but less than or equal to \$1 billion	\$3 million.
Exceed \$1 billion but less than or equal to \$10 billion	Total Federal awards expended times .003.
Exceed \$10 billion but less than or equal to \$20 billion	\$30 million.
Exceed \$20 billion	Total Federal awards expended times .0015.

- (2) Federal programs not labeled Type A under paragraph (b)(1) of this section must be labeled Type B programs.

- (3) Including large loans and loan guarantees (loans) must not result in the exclusion of other programs as Type A programs. A Federal program providing loans is considered a large loan program when it exceeds four times the largest non-loan program. The auditor must identify each large loan program as a Type A program and exclude its values in determining other Type A programs. This recalculation of the Type A program is performed after removing the total of all large loan programs. For this paragraph, a program is only considered a Federal program providing loans if the value of Federal awards expended for loans within the program comprises 50 percent or more of the total Federal awards expended for the program. A cluster of programs is treated as one program, and the value of Federal awards expended under a loan program is determined as described in § 200.502.
- (4) For biennial audits (see § 200.504), the determination of Type A and Type B programs must be based on the Federal awards expended during the two-year audit period.

(c) **Step two.**

- (1) The auditor must identify Type A programs that are low-risk. In making this determination, the auditor must consider whether the requirements in § 200.519(c), the results of audit follow-up, or any changes in personnel or systems affecting the program indicate significantly increased risk and preclude the program from being low-risk. For a Type A program to be considered low-risk, it must have been audited as a major program in at least one of the two most recent audit periods (in the most recent audit period in the case of a biennial audit), and, in the most recent audit period, the program must not have had:
 - (i) Internal control deficiencies that were identified as material weaknesses in the auditor's report on internal control for major programs as required under § 200.515(c);
 - (ii) A modified opinion on the program in the auditor's report on major programs as required under § 200.515(c); or
 - (iii) Known or likely questioned costs that exceed five percent of the total Federal awards expended for the program.
- (2) Notwithstanding paragraph (c)(1) of this section, OMB may approve a Federal agency request that a Type A program not be considered low-risk for a specific recipient. For example, it may be necessary for a large Type A program to be audited as a major program each year for a particular recipient for the Federal agency to comply with 31 U.S.C. 3515. The Federal agency must notify the auditee and, if known, the auditor of OMB's approval at least 180 calendar days prior to the end of the fiscal year to be audited.

(d) **Step three.**

- (1) The auditor must identify high-risk Type B programs using professional judgment and the criteria in § 200.519. However, the auditor is not required to identify more high-risk Type B programs than at least one-fourth of the number of low-risk Type A programs identified as low-risk under step two. Except for known material weakness in internal control or compliance problems as discussed in § 200.519(b)(1), (2), and (c)(1), a single criterion in risk would rarely cause a Type B program to be considered high-risk. When identifying which Type B programs to assess for risk, the auditor is encouraged to use an approach that provides an opportunity for different high-risk Type B programs to be audited as major programs over a period of time.

- (2) The auditor is not expected to perform risk assessments on relatively small Federal programs. Therefore, the auditor is only required to perform risk assessments on Type B programs that exceed 25 percent (0.25) of the Type A threshold determined in step one.
- (e) **Step four.** At a minimum, the auditor must audit all of the following as major programs:
 - (1) All Type A programs not identified as low-risk under step two.
 - (2) All Type B programs identified as high-risk under step three.
 - (3) Additional programs as necessary to comply with the percentage of coverage rule described in paragraph (f). This rule may require the auditor to audit more programs as major programs than the number of Type A programs.
- (f) **Percentage of coverage rule.** When the auditee meets the criteria in § 200.520, the auditor only needs to audit the major programs identified in paragraphs (e)(1) and (2) of this section and such additional Federal programs with Federal awards expended that, in the aggregate, all major programs encompass at least 20 percent (0.20) of total Federal awards expended. Otherwise, the auditor must audit the major programs identified in paragraphs (e)(1) and (2) of this section and such additional Federal programs with Federal awards expended that, in the aggregate, all major programs encompass at least 40 percent (0.40) of total Federal awards expended.
- (g) **Documentation of risk.** The auditor must include in the audit documentation the risk analysis used for determining major programs.
- (h) **Auditor's judgment.** The auditor's judgment in applying the risk-based approach to determine major programs must be presumed correct when the determination was performed and documented in accordance with this part. Challenges by a Federal agency or pass-through entity must only be for clearly improper use of the requirements in this part. However, a Federal agency or pass-through entity may provide auditors guidance about the risk of a particular Federal program. The auditor must consider this guidance in determining major programs in audits not yet completed.

§ 200.519 Criteria for Federal program risk.

- (a) **General.** The auditor's determination should be based on an overall evaluation of the risk of noncompliance occurring that could be material to the Federal program. The auditor must consider criteria, such as those described in paragraphs (b), (c), and (d) of this section, to identify risk in Federal programs. Also, as part of the risk analysis, the auditor may wish to discuss a particular Federal program with auditee management and the Federal agency or pass-through entity.
- (b) **Current and prior audit experience.**
 - (1) Weaknesses in internal control over Federal programs would indicate higher risk. Therefore, consideration should be given to the control environment over Federal programs. This includes considering factors such as the expectation of management's adherence to Federal statutes, regulations, and the terms and conditions of Federal awards, and the competence and experience of personnel who administer the Federal programs.
 - (i) A Federal program administered under multiple internal control structures may have higher risk. When assessing risk in a large single audit, the auditor must consider whether weaknesses are isolated in a single operating unit (for example, one college campus) or pervasive throughout the entity.

(ii) A weak system for monitoring subrecipients would indicate higher risk when significant parts of a Federal program are passed to subrecipients through subawards.

(2) Prior audit findings would indicate higher risk, especially when the situations identified in the audit findings could significantly impact a Federal program or have not been corrected.

(3) Federal programs not recently audited as major programs may be of higher risk than those recently audited as major programs without audit findings.

(c) ***Oversight exercised by Federal agencies and pass-through entities.***

(1) The oversight exercised by Federal agencies or pass-through entities may be used to assess risk. For example, recent monitoring or other reviews performed by an oversight entity that disclosed no significant problems would indicate lower risk, whereas monitoring that disclosed significant problems would indicate higher risk.

(2) With the concurrence of OMB, a Federal agency may identify Federal programs that are higher risk. OMB will identify these Federal programs in the compliance supplement.

(d) ***Inherent risk of the Federal program.***

(1) The nature of a Federal program may indicate risk. Consideration should be given to the complexity of the program and the extent to which the Federal program contracts for goods and services. For example, Federal programs that disburse funds through third-party contracts or have eligibility criteria may be higher risk. Federal programs primarily involving staff payroll costs may be at high risk for noncompliance with the requirements of § 200.430 but otherwise be at low risk.

(2) The phase of a Federal program in its lifecycle at the Federal agency may indicate risk. For example, a new Federal program with new or interim regulations may have higher risk than an established program with time-tested regulations. Also, significant changes in Federal programs, statutes, regulations, or the terms and conditions of Federal awards may increase risk.

(3) The phase of a Federal program in its lifecycle at the auditee may indicate risk. For example, during the first and last years that an auditee participates in a Federal program, the risk may be higher due to the start-up or closeout of program activities and staff.

(4) Type B programs with larger Federal awards expended would be of higher risk than programs with substantially smaller Federal awards expended.

§ 200.520 Criteria for a low-risk auditee.

An auditee that meets all of the following conditions for each of the preceding two audit periods must qualify as a low-risk auditee and be eligible for reduced audit coverage in accordance with § 200.518.

(a) Single audits were performed on an annual basis in accordance with the provisions of this subpart, including submitting the data collection form and the reporting package to the FAC within the timeframe specified in § 200.512. A non-Federal entity that has biennial audits does not qualify as a low-risk auditee.

(b) The auditor's opinion on whether the financial statements were prepared in accordance with generally accepted accounting principles (or a special purpose framework such as cash, modified cash, or regulatory as required by State law), and the auditor's in-relation-to opinion on the schedule of expenditures of Federal awards were unmodified.

(c) No internal control deficiencies were identified as material weaknesses under the requirements of GAGAS.

- (d) The auditor did not report a substantial doubt about the auditee's ability to continue as a going concern.
- (e) None of the Federal programs had audit findings from any of the following in either of the preceding two audit periods in which they were classified as Type A programs:
 - (1) Internal control deficiencies that were identified as material weaknesses in the auditor's report on internal control for major programs as required under § 200.515(c);
 - (2) A modified opinion on a major program in the auditor's report on major programs as required under § 200.515(c); or
 - (3) Known or likely questioned costs that exceeded five percent (.05) of the total Federal awards expended for a Type A program during the audit period.

MANAGEMENT DECISIONS

§ 200.521 Management decisions.

- (a) **General.** The management decision must clearly state whether or not the audit finding is sustained, the reasons for the decision, and the expected auditee action to repay disallowed costs, make financial adjustments or take other action. If the auditee has not completed corrective action, a timetable for follow-up should be given. Prior to issuing the management decision, the Federal agency or pass-through entity may request additional information or documentation from the auditee, including a request for auditor assurance related to the documentation, as a way of mitigating disallowed costs. The management decision should describe any appeal process available to the auditee. While not required, the Federal agency or pass-through entity may also issue a management decision on findings relating to the financial statements, which are required to be reported in accordance with GAGAS.
- (b) **Federal agency.** The cognizant agency for audit is responsible for coordinating a management decision for audit findings that affect the programs of more than one Federal agency (see § 200.513(a)(4)(viii)). The awarding Federal agency is responsible for issuing a management decision for audit findings that affect the Federal awards it makes to a non-Federal entity (see § 200.513(c)(3)(i)).
- (c) **Pass-through entity.** The pass-through entity is responsible for issuing a management decision for audit findings that affect subawards it issues to subrecipients under a Federal award (see § 200.332(e)).
- (d) **Time requirements.** The Federal agency or pass-through entity responsible for issuing a management decision must do so within six months of the FAC's acceptance of the audit report. The auditee must initiate and proceed with corrective action as rapidly as possible and corrective action should begin no later than upon receipt of the audit report.
- (e) **Reference numbers.** Management decisions must include the reference numbers the auditor assigned to each audit finding in accordance with § 200.516(c).

Appendix I to Part 200—Full Text of Notice of Funding Opportunity

- (a) **General Requirements.**
 - (1) **Requirements for developing NOFOs.** In developing a notice of funding opportunity (NOFO), Federal agencies must:
 - (i) Be concise and use plain language per the guidance at *PlainLanguage.gov* wherever possible.

- (ii) For electronic NOFOs and other information about them, comply with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

(2) **Considerations for developing NOFOs.** Federal agencies may:

- (i) Link to standard content to include required information rather than including the full language in the NOFO. The NOFO should make clear if linked information is critical—for example, standard terms and conditions, administrative and national policy requirements, and standard templates.
- (ii) Include links to relevant regulations and other sources.
- (iii) Use cross-references between the sections, including hyperlinks in electronic versions.

(3) **Required Consistency.** Potential applicants must be able to find similar information across all Federal NOFOs. To that end, Federal agencies must include the same or similar section headings and a table of contents with at least these sections:

- (i) Basic Information
- (ii) Eligibility
- (iii) Program Description
- (iv) Application Contents and Format
- (v) Submission Requirements and Deadlines
- (vi) Application Review Information
- (vii) Award Notices
- (viii) Post-Award Requirements and Administration

(b) **Required Sections and Information.**

As required below, the Federal agency must include the following sections and information in the text of a NOFO and a table of contents.

(1) **Basic Information.**

This section provides sufficient information to help an applicant make an informed decision about whether to submit a proposal.

- (i) This section must include the following:
 - (A) Federal Agency Name.
 - (B) Funding Opportunity Title.
 - (C) Announcement Type (whether the funding opportunity is the initial announcement or a modification of a previously announced opportunity).
 - (D) Funding Opportunity Number (required, if the Federal agency has assigned a number to the funding opportunity announcement).
 - (E) Assistance Listing Number(s).

- (F) Funding Details. The total amount of funding that the Federal agency expects to award, the anticipated number of awards, and the expected dollar values of individual awards, which may be a range.
 - (G) Key Dates. Key dates include due dates for submitting applications or Executive Order 12372 submissions, as well as for any letters of intent or preapplications. For any announcement issued before a program's application materials are available, key dates also include the date on which those materials will be released; and any other additional information, as deemed applicable by the Federal agency. If possible, the Federal agency should provide an anticipated award date. If the NOFO is evaluated on a "rolling" basis, the Federal agency should provide an estimate of the time needed to process an application and notify the applicant of the Federal agency's decision.
 - (H) Executive Summary. A brief description that is written in plain language and summarizes the goals and objectives of the program, the target audience, and eligible recipients. The text of the executive summary should not exceed 500 words
 - (I) Agency contact information.
- (ii) This section could include the following:
- (A) The amount of funding per Federal award, on average, experienced in previous years.
 - (B) Whether this is a new program or a one-time initiative.

(2) **Eligibility.**

This section addresses the factors that determine applicant or application eligibility.

- (i) **Eligible Applicants.** This subsection must identify the following:
- (A) A complete and specific list of entity types eligible to apply.
 - (B) Any additional restrictions on eligibility beyond the type of entity.
 - (C) Eligibility factors for the principal investigator or project director, if any.
 - (D) Criteria that would make any particular projects ineligible.
 - (E) A reference to any funding restriction elsewhere in the NOFO that could affect an applicant's or project's eligibility.
 - (F) A reference or link to any other factors that would disqualify an applicant or application, such as the responsiveness criteria in 6a.
 - (G) Any limit on the number of applications an applicant may submit under the announcement. Make clear whether the limitation is on the submitting organization, individual investigator or program director, or both.
- (ii) **Cost Sharing.** This subsection must state:
- (A) Whether there is required cost sharing. This statement must be clear that not committing to the required cost sharing will make the application ineligible. If cost sharing is not required, the announcement must say so.

- (B) An explanation of the calculation for the required cost sharing. Required cost sharing may be a certain percentage or amount or in the form of contributions of specified items or activities (*for example*, provision of equipment).
 - (C) Any restrictions on the types of cost, such as in-kind contributions, acceptable as cost sharing.
 - (D) Any requirement to commit to cost sharing. This section should refer to the appropriate portions of section (b)(4) stating any pre-award requirements for the submission of letters or other documentation to verify commitments to meet cost-sharing requirements if a Federal award is made.
- (3) **Program Description.** This section contains the full program description of the funding opportunity.
 - (i) This section must include the following:
 - (A) The general purpose of the funding and what it is expected to achieve for the public good.
 - (B) The Federal agency's funding priorities or focus areas, if any.
 - (C) Program goals and objectives.
 - (D) A description of how the award will contribute to achieving the program's goals and objectives.
 - (E) The expected performance goals, indicators, targets, baseline data, data collection, and other outcomes the Federal agency expects recipients to achieve.
 - (F) For cooperative agreements, the "substantial involvement" that the Federal agency expects to have or should reference where the potential applicant can find that information.
 - (G) Information on program specific unallowable costs so that the applicant can develop an application and budget consistent with program requirements and any limits on indirect costs.
 - (H) Any eligibility criteria for beneficiaries or program participants other than Federal award recipients.
 - (I) Citations for authorizing statutes and regulations for the funding opportunity.
 - (ii) This section could also include the following:
 - (A) Any program history, such as whether it is a new program or a new or changed area of program emphasis.
 - (B) Examples of successful projects funded in the past.
 - (C) For infrastructure projects subject to Build America, Buy America requirements, information on key items anticipated to be purchased under the program, and any related domestic sourcing concerns based on market research.
 - (D) Other information the Federal agency finds necessary.

(4) ***Application Contents and Format.*** This section must identify the required content of an application and the forms or formats an applicant must use. If any requirements are stated elsewhere, this section should refer to where those requirements may be found. This section also should include required forms or formats as part of the announcement or state where the applicant may obtain them.

(i) This section must specifically address content and form or format requirements for:

- (A) Whether pre-applications, letters of intent, or white papers are required or encouraged.
- (B) The application as a whole.
- (C) Component pieces of the application.
- (D) Information that successful applicants must submit after notification of intent to make a Federal award but prior to a Federal award. For example, this could include evidence of compliance with requirements relating to human subjects or information needed to comply with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 *et seq.*).

(ii) Within each of the categories above, this subsection must include, where relevant:

- (A) Limitations on page numbers.
- (B) Formatting requirements, including font and font size, margins, paper size, and color limitations.
- (C) Any requirements for file naming, file size limitations, or file format such as PDF.
- (D) The number of copies required if paper submissions are allowed.
- (E) The sequence required for application sections or components.
- (F) Signature requirements, including those for electronic submissions.
- (G) Any requirements for third-party information such as references, letters of support, or letters of commitment to the project or to contribute to cost sharing.
- (H) A reference to any requirements to provide documentation to support an eligibility determination, such as proof of 501(c)(3) status or an authorizing tribal resolution.
- (I) Instructions needed to develop the narrative portions of the application. Include any requirements for its order, format, or required headings.
- (J) If applicable, the need to identify proprietary information. Include how to do so and how the Federal agency will handle it.

(5) ***Submission Requirements and Deadlines.***

(i) ***Address to Request Application Package.*** This section must include the following:

- (A) How to get application forms, kits, or other materials needed to apply. If the announcement contains everything needed, this section needs only say so. If not, the guidance must include:
 - (1) An internet address where the materials can be accessed.
 - (2) An email address.

- (3) A U.S. Postal Service mailing address.
 - (4) Telephone number.
 - (5) Telephone Device for the Deaf (TDD), Text Telephone (TTY) number, or other appropriate telecommunication relay service.
- (ii) **Unique entity identifier and System for Award Management (SAM.gov).** This section must state the requirements for unique entity identifiers and registration in SAM.gov. It must include the following:
 - (A) Each applicant must:
 - (1) Be registered in SAM.gov before submitting its application;
 - (2) Provide a valid unique entity identifier in its application; and
 - (3) Continue to maintain an active registration in SAM.gov with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal agency.
 - (B) If individuals are eligible to apply, they are exempt from this requirement under 2 CFR 25.110(b).
 - (C) If the Federal agency exempts any applicants from this requirement under 2 CFR 25.110(c) or (d), a statement to that effect.
- (iii) **Submission Instructions.** This section addresses how the applicant will submit the application. It must include the following:
 - (A) Actions needed prior to applying:
 - (1) Instructions on any registrations required to access electronic submission systems or links to them. Where possible, provide the expected time frames needed to complete the registration process.
 - (B) The methods for submitting the application:
 - (1) Whether the applicant must submit in electronic or paper form or whether the applicant has an option. Applicants should not be required to submit in more than one format.
 - (2) Instructions on how to submit electronically or links to them. Must include the URL to the electronic submission system and information on or links to information about the system or software requirements needed by the system.
 - (3) If the Federal agency allows paper submissions, the process used to approve this option if it is not automatically allowed.
 - (4) If the Federal agency allows paper submissions, the method for submitting the application. This information must include a postal address and "care of" information needed to route the application to the appropriate person, office, or email address, if the Federal agency allows such submissions.

- (C) If applicable, this section also must say how applicants must submit pre-applications, letters of intent, third-party information, or other information required before the award. It must include the following:
 - (1) Instructions on how to submit electronically or links to them.
 - (2) Whether the applicant must submit in electronic or paper form or whether the applicant has an option.
 - (3) If the Federal agency allows paper submissions, the method for submitting the required information. This information must include a postal address and “care of” information needed to route the application to the appropriate person, office, or email address.
- (D) This section must also include what to do in the event of system problems and a point of contact who will be available if the applicant experiences technical difficulties.
- (iv) **Submission Dates and Times.** This section must include due dates and times for all submissions. If they are different for electronic and paper submissions, be clear about the differences. This includes the following:
 - (A) Full applications.
 - (B) Any preliminary submissions, such as letters of intent, white papers, or pre-applications.
 - (C) Any other submissions required before Federal award separate from the full application.
 - (D) If the funding opportunity is a general announcement that is open for a period of time with no specific due dates for applications, this section should say so.
- (v) **Intergovernmental Review.** This section must include the following:
 - (A) Whether or not the funding opportunity is subject to Executive Order 12372, “Intergovernmental Review of Federal Programs”.
 - (B) If it is applicable, include the following:
 - (1) A short description of this requirement.
 - (2) Where applicants can find their State's Single Point of Contact, learn whether their State has an intergovernmental review process, and if so, get information on their State's process. The list of SPOCs is on the Office of Management and Budget's website.
- (6) **Application Review Information.**
 - (i) **Responsiveness Review.** This section includes information on the criteria that make an application or project ineligible. These are sometimes referred to as “responsiveness” criteria, “go-no-go” criteria, or “threshold” criteria. Federal agencies may change the title of this section as appropriate. This section must include the following:
 - (A) A brief understanding of the Federal agency responsiveness review process.
 - (B) A list and enough detail to understand the criteria or disqualifying factors to be reviewed.

(C) A reference to the regulation or requirement that describes the restriction, if applicable. For example, if entities that have been found to be in violation of a particular Federal statute are ineligible, say so.

(ii) **Review Criteria.** This section must address the review criteria that the Federal agency will use to evaluate applications for merit. This information includes the merit and other review criteria evaluators will use to judge applications, including any statutory, regulatory, or other preferences that will be applied in the review process. These criteria are distinct from eligibility criteria that are addressed before an application is accepted for review and any program policy or other factors that are applied during the selection process, after the review process is completed.

The intent is to make the application process transparent so applicants can make informed decisions when preparing their applications to maximize the fairness of the process.

(A) This section must include the following:

- (1) A clear description of each criterion and sub-criterion used.
- (2) If criteria vary in importance, the relative percentages, weights, or other means used to distinguish between them.
- (3) For statutory, regulatory, or other preferences, an explanation of those preferences with an explicit indication of their effect, for example, if they result in additional points being assigned.
- (4) How an applicant's proposed cost sharing will be considered in the review process if it is not an eligibility criterion in Section 2b. For example, to assign a certain number of additional points to applicants who offer cost sharing or to break ties among applications with equivalent scores after evaluation against all other factors. If cost sharing will not be considered in the evaluation, the announcement should say so. Do not include statements that cost sharing is encouraged without providing clarity about what that means.
- (5) The relevant information if the Federal agency permits applicants to nominate reviewers of their applications or suggest those they feel may be inappropriate due to a conflict of interest.

(B) This section could include the following:

- (1) The types of people responsible for evaluation against the merit criteria. For example, peers external to the Federal agency or Federal agency personnel.
- (2) The number of people on an evaluation panel and how it operates, how reviewers are selected, reviewer qualifications, and how conflicts of interest are avoided.

(iii) **Review and Selection Process.** This section may vary in the level of detail provided.

(A) It must include the following:

- (1) Any program policy, factors, or elements that the selecting official may use in selecting applications for the award. For example, geographical dispersion, program balance, or diversity.

- (2) A brief description of the merit review process, including how the Federal agency uses merit review outcomes in final decision-making. For example, whether they are advisory only.

(B) It could also include the following:

- (1) Who makes the final selections for awards.
- (2) Any multi-phase review methods. For example, an external panel that advises on, makes, or approves final recommendations to the deciding official.

(iv) **Risk Review.**

(A) This section must include the following:

- (1) A brief description of the factors used for the Federal agency's risk review as required by § 200.206.
- (2) If the Federal agency expects that any award under the NOFO will be more than the simplified acquisition threshold during its period of performance, include the following information:
 - (i) That before making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold, the Federal agency must review and consider any information about the applicant that is in the responsibility/qualification records available in SAM.gov (see 41 U.S.C. 2313).
 - (ii) That an applicant can review and comment on any information in the responsibility/qualification records available in SAM.gov.
 - (iii) That before making decisions in the risk review required by § 200.206 the Federal agency will consider any comments by the applicant, along with information available in the responsibility/qualification records in SAM.gov.

(7) **Award Notices.** This section must address what a successful applicant can expect to receive following selection.

(i) It must include the following:

- (A) If the Federal agency's practice is to provide a separate notice stating that an application has been selected before it makes the Federal award, indicate that the letter is not an authorization to begin performance and that the Federal award is the authorizing document.
- (B) If pre-award costs are allowed, beginning performance is at the applicant's own risk.
- (C) This section should indicate that the notice of Federal award signed by the grants officer, or equivalent, is the official document that obligates funds, and whether it is provided through postal mail or by electronic means and to whom.
- (D) The timing, form, and content of notifications to unsuccessful applicants. See also § 200.211.

(8) **Post-Award Requirements and Administration.**

(i) **Administrative and National Policy Requirements.** Providing information on administrative and policy requirements lets a potential applicant identify any requirements with which it would have difficulty complying. This section must include the following:

- (A) A statement related to the “general” terms and conditions of the award, including requirements that the Federal agency normally includes.
- (B) Any relevant specific terms and conditions.
- (C) Any special requirements that could apply to specific awards after the review of applications and other information based on the particular circumstances of the effort to be supported. For example, if human subjects were to be involved or if some situations may justify specific terms on intellectual property, data sharing, or security requirements.
- (D) As in other sections, the announcement need not include all terms and conditions of the award but may refer to documents with details on terms and conditions.

(ii) **Reporting.** This section includes information needed to understand the post-award reporting requirements. Highlight any special reporting requirements for Federal awards under this funding opportunity that differ from what the Federal agency's Federal awards usually require. For example, differences in report type, frequency, form, format, or circumstances for use. This section must include the following:

- (A) The type of reporting required, such as financial or performance.
- (B) The reporting frequency.
- (C) The means of submission, such as paper or electronic.
- (D) References to all relevant requirements, such as those at 2 CFR 180.335 and 180.350.
- (E) If the Federal share of any Federal award may include more than \$500,000 over the period of performance, this section must inform potential applicants about the post-award reporting requirements reflected in appendix XII to this part.

(9) **Other Information—Optional.** This section may include any additional information to help potential applicants. For example, the section could include the following:

- (i) Related programs or other upcoming or ongoing Federal agency funding opportunities for similar activities.
- (ii) Current internet addresses for Federal agency websites that may be useful to an applicant in understanding the program.
- (iii) Routine notices to applicants. For example, the Federal Government is not obligated to make any Federal award as a result of the announcement, or only grants officers can bind the Federal Government to the expenditure of funds.

[89 FR 30204, Apr. 22, 2024]

Appendix II to Part 200—Contract Provisions for Non-Federal Entity Contracts Under Federal Awards

In addition to other provisions required by the Federal agency or non-Federal entity, all contracts made by the non-Federal entity under the Federal award must contain provisions covering the following, as applicable.

- (A) Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.
- (B) All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.
- (C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”
- (D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, “Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction”). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland “Anti-Kickback” Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States”). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.
- (E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction

work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

- (F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of “funding agreement” under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.
- (G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
- (H) Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.
- (I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- (J) See § 200.323.
- (K) See § 200.216.
- (L) See § 200.322.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75888, Dec. 19, 2014; 85 FR 49577, Aug. 13, 2020]

Appendix III to Part 200—Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Institutions of Higher Education (IHEs)

A. General

This appendix provides criteria for identifying and computing indirect (or indirect (F&A)) rates at IHEs (institutions). Indirect (F&A) costs are those that are incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored project, an instructional activity, or any other institutional activity. See subsection B.1 for a discussion of the components of indirect (F&A) costs.

1. Major Functions/Activities of an IHE

Refers to instruction, organized research, other sponsored activities and other institutional activities as defined in this section:

- a. **Instruction** means the teaching and training activities of an institution. Except for research training as provided in subsection b, this term includes all teaching and training activities, whether they are offered for credits toward a degree or certificate or on a non-credit basis, and whether they are offered through regular academic departments or separate divisions, such as a summer school division or an extension division. Also considered part of this major function are departmental research, and, where agreed to, university research.
 - (1) **Sponsored instruction and training** means specific instructional or training activity established by grant, contract, or cooperative agreement. For purposes of the cost principles, this activity may be considered a major function even though an institution's accounting treatment may include it in the instruction function.
 - (2) **Departmental research** means research, development and scholarly activities that are not organized research and, consequently, are not separately budgeted and accounted for. Departmental research, for purposes of this document, is not considered as a major function, but as a part of the instruction function of the institution.
 - (3) Only mandatory cost sharing or cost sharing specifically committed in the project budget must be included in the organized research base for computing the indirect (F&A) cost rate or reflected in any allocation of indirect costs. Salary costs above statutory limits are not considered cost sharing.
- b. **Organized research** means all research and development activities of an institution that are separately budgeted and accounted for. It includes:
 - (1) **Sponsored research** means all research and development activities that are sponsored by Federal and non-Federal agencies and organizations. This term includes activities involving the training of individuals in research techniques (commonly called research training) where such activities utilize the same facilities as other research and development activities and where such activities are not included in the instruction function.
 - (2) **University research** means all research and development activities that are separately budgeted and accounted for by the institution under an internal application of institutional funds. University research, for purposes of this document, must be combined with sponsored research under the function of organized research.

- c. **Other sponsored activities** means programs and projects financed by Federal and non-Federal agencies and organizations which involve the performance of work other than instruction and organized research. Examples of such programs and projects are health service projects and community service programs. However, when any of these activities are undertaken by the institution without outside support, they may be classified as other institutional activities.
- d. **Other institutional activities** means all activities of an institution except for instruction, departmental research, organized research, and other sponsored activities, as defined in this section; indirect (F&A) cost activities identified in this Appendix paragraph B, Identification and assignment of indirect (F&A) costs; and specialized services facilities described in § 200.468 of this part.

2. Criteria for Distribution

- a. **Base period.** A base period for distribution of indirect (F&A) costs is the period during which the costs are incurred. The base period normally should coincide with the fiscal year established by the institution, but in any event the base period should be so selected as to avoid inequities in the distribution of costs.
- b. **Need for cost groupings.** The overall objective of the indirect (F&A) cost allocation process is to distribute the indirect (F&A) costs described in Section B, Identification and assignment of indirect (F&A) costs, to the major functions of the institution in proportions reasonably consistent with the nature and extent of their use of the institution's resources. In order to achieve this objective, it may be necessary to provide for selective distribution by establishing separate groupings of cost within one or more of the indirect (F&A) cost categories referred to in subsection B.1. In general, the cost groupings established within a category should constitute, in each case, a pool of those items of expense that are considered to be of like nature in terms of their relative contribution to (or degree of remoteness from) the particular cost objectives to which distribution is appropriate. Cost groupings should be established considering the general guides provided in subsection c of this section. Each such pool or cost grouping should then be distributed individually to the related cost objectives, using the distribution base or method most appropriate in light of the guidelines set forth in subsection d of this section.
- c. **General considerations on cost groupings.** The extent to which separate cost groupings and selective distribution would be appropriate at an institution is a matter of judgment to be determined on a case-by-case basis. Typical situations which may warrant the establishment of two or more separate cost groupings (based on account classification or analysis) within an indirect (F&A) cost category include but are not limited to the following:
 - (1) If certain items or categories of expense relate solely to one of the major functions of the institution or to less than all functions, such expenses should be set aside as a separate cost grouping for direct assignment or selective allocation in accordance with the guides provided in subsections b and d.
 - (2) If any types of expense ordinarily treated as general administration or departmental administration are charged to Federal awards as direct costs, expenses applicable to other activities of the institution when incurred for the same purposes in like

circumstances must, through separate cost groupings, be excluded from the indirect (F&A) costs allocable to those Federal awards and included in the direct cost of other activities for cost allocation purposes.

- (3) If it is determined that certain expenses are for the support of a service unit or facility whose output is susceptible of measurement on a workload or other quantitative basis, such expenses should be set aside as a separate cost grouping for distribution on such basis to organized research, instructional, and other activities at the institution or within the department.
- (4) If activities provide their own purchasing, personnel administration, building maintenance or similar service, the distribution of general administration and general expenses, or operation and maintenance expenses to such activities should be accomplished through cost groupings which include only that portion of central indirect (F&A) costs (such as for overall management) which are properly allocable to such activities.
- (5) If the institution elects to treat fringe benefits as indirect (F&A) charges, such costs should be set aside as a separate cost grouping for selective distribution to related cost objectives.
- (6) The number of separate cost groupings within a category should be held within practical limits, after taking into consideration the materiality of the amounts involved and the degree of precision attainable through less selective methods of distribution.

d. Selection of distribution method.

- (1) Actual conditions must be taken into account in selecting the method or base to be used in distributing individual cost groupings. The essential consideration in selecting a base is that it be the one best suited for assigning the pool of costs to cost objectives in accordance with benefits derived; with a traceable cause-and-effect relationship; or with logic and reason, where neither benefit nor a cause-and-effect relationship is determinable.
- (2) If a cost grouping can be identified directly with the cost objective benefitted, it should be assigned to that cost objective.
- (3) If the expenses in a cost grouping are more general in nature, the distribution may be based on a cost analysis study which results in an equitable distribution of the costs. Such cost analysis studies may take into consideration weighting factors, population, or space occupied if appropriate. Cost analysis studies, however, must
 - (a) be appropriately documented in sufficient detail for subsequent review by the cognizant agency for indirect costs,
 - (b) distribute the costs to the related cost objectives in accordance with the relative benefits derived,
 - (c) be statistically sound,
 - (d) be performed specifically at the institution at which the results are to be used, and

- (e) be reviewed periodically, but not less frequently than rate negotiations, updated if necessary, and used consistently. Any assumptions made in the study must be stated and explained. The use of cost analysis studies and periodic changes in the method of cost distribution must be fully justified.
 - (4) If a cost analysis study is not performed, or if the study does not result in an equitable distribution of the costs, the distribution must be made in accordance with the appropriate base cited in Section B, unless one of the following conditions is met:
 - (a) It can be demonstrated that the use of a different base would result in a more equitable allocation of the costs, or that a more readily available base would not increase the costs charged to Federal awards, or
 - (b) The institution qualifies for, and elects to use, the simplified method for computing indirect (F&A) cost rates described in Section D.
 - (5) Notwithstanding subsection (3), effective July 1, 1998, a cost analysis or base other than that in Section B must not be used to distribute utility or student services costs. Instead, subsection B.4.c, may be used in the recovery of utility costs.
- e. Order of distribution.
- (1) Indirect (F&A) costs are the broad categories of costs discussed in Section B.1.
 - (2) Depreciation, interest expenses, operation and maintenance expenses, and general administrative and general expenses should be allocated in that order to the remaining indirect (F&A) cost categories as well as to the major functions and specialized service facilities of the institution. Other cost categories may be allocated in the order determined to be most appropriate by the institutions. When cross allocation of costs is made as provided in subsection (3), this order of allocation does not apply.
 - (3) Normally an indirect (F&A) cost category will be considered closed once it has been allocated to other cost objectives, and costs may not be subsequently allocated to it. However, a cross allocation of costs between two or more indirect (F&A) cost categories may be used if such allocation will result in a more equitable allocation of costs. If a cross allocation is used, an appropriate modification to the composition of the indirect (F&A) cost categories described in Section B is required.

B. Identification and Assignment of Indirect (F&A) Costs

1. Definition of Facilities and Administration

See § 200.414 which provides the basis for these indirect cost requirements.

2. Depreciation

- a. The expenses under this heading are the portion of the costs of the institution's buildings, capital improvements to land and buildings, and equipment which are computed in accordance with § 200.436.

- b. In the absence of the alternatives provided for in Section A.2.d, the expenses included in this category must be allocated in the following manner:
 - (1) Depreciation on buildings used exclusively in the conduct of a single function, and on capital improvements and equipment used in such buildings, must be assigned to that function.
 - (2) Depreciation on buildings used for more than one function, and on capital improvements and equipment used in such buildings, must be allocated to the individual functions performed in each building on the basis of usable square feet of space, excluding common areas such as hallways, stairwells, and rest rooms.
 - (3) Depreciation on buildings, capital improvements and equipment related to space (e.g., individual rooms, laboratories) used jointly by more than one function (as determined by the users of the space) must be treated as follows. The cost of each jointly used unit of space must be allocated to benefitting functions on the basis of:
 - (a) The employee full-time equivalents (FTEs) or salaries and wages of those individual functions benefitting from the use of that space; or
 - (b) Institution-wide employee FTEs or salaries and wages applicable to the benefitting major functions (see Section A.1) of the institution.
 - (4) Depreciation on certain capital improvements to land, such as paved parking areas, fences, sidewalks, and the like, not included in the cost of buildings, must be allocated to user categories of students and employees on a full-time equivalent basis. The amount allocated to the student category must be assigned to the instruction function of the institution. The amount allocated to the employee category must be further allocated to the major functions of the institution in proportion to the salaries and wages of all employees applicable to those functions.

3. Interest

Interest on debt associated with certain buildings, equipment and capital improvements, as defined in § 200.449, must be classified as an expenditure under the category Facilities. These costs must be allocated in the same manner as the depreciation on the buildings, equipment and capital improvements to which the interest relates.

4. Operation and Maintenance Expenses

- a. The expenses under this heading are those that have been incurred for the administration, supervision, operation, maintenance, preservation, and protection of the institution's physical plant. They include expenses normally incurred for such items as janitorial and utility services; repairs and ordinary or normal alterations of buildings, furniture and equipment; care of grounds; maintenance and operation of buildings and other plant facilities; security; earthquake and disaster preparedness; environmental safety; hazardous waste disposal; property, liability and all other insurance relating to property; space and capital leasing; facility planning and management; and central receiving. The operation and maintenance expense category should also include its allocable share of fringe benefit costs, depreciation, and interest costs.
- b. In the absence of the alternatives provided for in Section A.2.d, the expenses included in this category must be allocated in the same manner as described in subsection 2.b for depreciation.

- c. A utility cost adjustment of up to 1.3 percentage points may be included in the negotiated indirect cost rate of the IHE for organized research, per the computation alternatives in paragraphs (c)(1) and (2) of this section:
 - (1) Where space is devoted to a single function and metering allows unambiguous measurement of usage related to that space, costs must be assigned to the function located in that space.
 - (2) Where space is allocated to different functions and metering does not allow unambiguous measurement of usage by function, costs must be allocated as follows:
 - (i) Utilities costs should be apportioned to functions in the same manner as depreciation, based on the calculated difference between the site or building actual square footage for monitored research laboratory space (site, building, floor, or room), and a separate calculation prepared by the IHE using the “effective square footage” described in subsection (c)(2)(ii) of this section.
 - (ii) **“Effective square footage”** allocated to research laboratory space must be calculated as the actual square footage times the relative energy utilization index (REUI) posted on the OMB Web site at the time of a rate determination.
 - A. This index is the ratio of a laboratory energy use index (lab EUI) to the corresponding index for overall average college or university space (college EUI).
 - B. In July 2012, values for these two indices (taken respectively from the Lawrence Berkeley Laboratory “Labs for the 21st Century” benchmarking tool and the US Department of Energy “Buildings Energy Databook” and were 310 kBtu/sq ft-yr. and 155 kBtu/sq ft-yr., so that the adjustment ratio is 2.0 by this methodology. To retain currency, OMB will adjust the EUI numbers from time to time (no more often than annually nor less often than every 5 years), using reliable and publicly disclosed data. Current values of both the EUIs and the REUI will be posted on the OMB website.

5. General Administration and General Expenses

- a. The expenses under this heading are those that have been incurred for the general executive and administrative offices of educational institutions and other expenses of a general character which do not relate solely to any major function of the institution; *i.e.*, solely to
 - (1) instruction,
 - (2) organized research,
 - (3) other sponsored activities, or
 - (4) other institutional activities. The general administration and general expense category should also include its allocable share of fringe benefit costs, operation and maintenance expense, depreciation, and interest costs. Examples of general administration and general expenses include: Those expenses incurred by administrative offices that serve the entire university system of which the institution is a part; central offices of the institution such as the President's or Chancellor's office, the offices for institution-wide financial management, business services, budget and planning, personnel management, and safety and risk management; the office of the General Counsel; and the operations of the central administrative management information

systems. General administration and general expenses must not include expenses incurred within non-university-wide deans' offices, academic departments, organized research units, or similar organizational units. (See subsection 6.)

- b. In the absence of the alternatives provided for in Section A.2.d, the expenses included in this category must be grouped first according to common major functions of the institution to which they render services or provide benefits. The aggregate expenses of each group must then be allocated to serviced or benefitted functions on the modified total cost basis. Modified total costs consist of the same elements as those in Section C.2. When an activity included in this indirect (F&A) cost category provides a service or product to another institution or organization, an appropriate adjustment must be made to either the expenses or the basis of allocation or both, to assure a proper allocation of costs.

6. Departmental Administration Expenses

- a. The expenses under this heading are those that have been incurred for administrative and supporting services that benefit common or joint departmental activities or objectives in academic deans' offices, academic departments and divisions, and organized research units. Organized research units include such units as institutes, study centers, and research centers. Departmental administration expenses are subject to the following limitations.
 - (1) Academic deans' offices. Salaries and operating expenses are limited to those attributable to administrative functions.
 - (2) Academic departments:
 - (a) Salaries and fringe benefits attributable to the administrative work (including bid and proposal preparation) of faculty (including department heads) and other professional personnel conducting research and/or instruction, must be allowed at a rate of 3.6 percent of modified total direct costs. This category does not include professional business or professional administrative officers. This allowance must be added to the computation of the indirect (F&A) cost rate for major functions in Section C; the expenses covered by the allowance must be excluded from the departmental administration cost pool. No documentation is required to support this allowance.
 - (b) Other administrative and supporting expenses incurred within academic departments are allowable provided they are treated consistently in like circumstances. This would include expenses such as the salaries of secretarial and clerical staffs, the salaries of administrative officers and assistants, travel, office supplies, stockrooms, and the like.
 - (3) Other fringe benefit costs applicable to the salaries and wages included in subsections (1) and (2) are allowable, as well as an appropriate share of general administration and general expenses, operation and maintenance expenses, and depreciation.
 - (4) Federal agencies may authorize reimbursement of additional costs for department heads and faculty only in exceptional cases where an institution can demonstrate undue hardship or detriment to project performance.
- b. The following guidelines apply to the determination of departmental administrative costs as direct or indirect (F&A) costs.

- (1) In developing the departmental administration cost pool, special care should be exercised to ensure that costs incurred for the same purpose in like circumstances are treated consistently as either direct or indirect (F&A) costs. For example, salaries of technical staff, laboratory supplies (e.g., chemicals), telephone toll charges, animals, animal care costs, computer costs, travel costs, and specialized shop costs must be treated as direct costs wherever identifiable to a particular cost objective. Direct charging of these costs may be accomplished through specific identification of individual costs to benefitting cost objectives, or through recharge centers or specialized service facilities, as appropriate under the circumstances. See §§ 200.413(c) and 200.468.
 - (2) Items such as office supplies, postage, local telephone costs, and memberships must normally be treated as indirect (F&A) costs.
- c. In the absence of the alternatives provided for in Section A.2.d, the expenses included in this category must be allocated as follows:
- (1) The administrative expenses of the dean's office of each college and school must be allocated to the academic departments within that college or school on the modified total cost basis.
 - (2) The administrative expenses of each academic department, and the department's share of the expenses allocated in subsection (1) must be allocated to the appropriate functions of the department on the modified total cost basis.

7. Sponsored Projects Administration

- a. The expenses under this heading are limited to those incurred by a separate organization(s) established primarily to administer sponsored projects, including such functions as grant and contract administration (Federal and non-Federal), special security, purchasing, personnel, administration, and editing and publishing of research and other reports. They include the salaries and expenses of the head of such organization, assistants, and immediate staff, together with the salaries and expenses of personnel engaged in supporting activities maintained by the organization, such as stock rooms, print shops, and the like. This category also includes an allocable share of fringe benefit costs, general administration and general expenses, operation and maintenance expenses, and depreciation. Appropriate adjustments will be made for services provided to other functions or organizations.
- b. In the absence of the alternatives provided for in Section A.2.d, the expenses included in this category must be allocated to the major functions of the institution under which the sponsored projects are conducted on the basis of the modified total cost of sponsored projects.
- c. An appropriate adjustment must be made to eliminate any duplicate charges to Federal awards when this category includes similar or identical activities as those included in the general administration and general expense category or other indirect (F&A) cost items, such as accounting, procurement, or personnel administration.

8. Library Expenses

- a. The expenses under this heading are those that have been incurred for the operation of the library, including the cost of books and library materials purchased for the library, less any items of library income that qualify as applicable credits under § 200.406. The library expense category should also include the fringe benefits applicable to the salaries and wages included therein, an appropriate

share of general administration and general expense, operation and maintenance expense, and depreciation. Costs incurred in the purchases of rare books (museum-type books) with no value to Federal awards should not be allocated to them.

- b. In the absence of the alternatives provided for in Section A.2.d, the expenses included in this category must be allocated first on the basis of primary categories of users, including students, professional employees, and other users.
 - (1) The student category must consist of full-time equivalent students enrolled at the institution, regardless of whether they earn credits toward a degree or certificate.
 - (2) The professional employee category must consist of all faculty members and other professional employees of the institution, on a full-time equivalent basis. This category may also include post-doctorate fellows and graduate students.
 - (3) The other users category must consist of a reasonable factor as determined by institutional records to account for all other users of library facilities.
- c. Amount allocated in paragraph b of this section must be assigned further as follows:
 - (1) The amount in the student category must be assigned to the instruction function of the institution.
 - (2) The amount in the professional employee category must be assigned to the major functions of the institution in proportion to the salaries and wages of all faculty members and other professional employees applicable to those functions.
 - (3) The amount in the other users category must be assigned to the other institutional activities function of the institution.

9. Student Administration and Services

- a. The expenses under this heading are those that have been incurred for the administration of student affairs and for services to students, including expenses of such activities as deans of students, admissions, registrar, counseling and placement services, student advisers, student health and infirmary services, catalogs, and commencements and convocations. The salaries of members of the academic staff whose responsibilities to the institution require administrative work that benefits sponsored projects may also be included to the extent that the portion charged to student administration is determined in accordance with subpart E of this Part. This expense category also includes the fringe benefit costs applicable to the salaries and wages included therein, an appropriate share of general administration and general expenses, operation and maintenance, interest expense, and depreciation.
- b. In the absence of the alternatives provided for in Section A.2.d, the expenses in this category must be allocated to the instruction function, and subsequently to Federal awards in that function.

10. Offset for Indirect (F&A) Expenses Otherwise Provided for by the Federal Government

- a. The items to be accumulated under this heading are the reimbursements and other payments from the Federal Government which are made to the institution to support solely, specifically, and directly, in whole or in part, any of the administrative or service activities described in subsections 2 through 9.

- b. The items in this group must be treated as a credit to the affected individual indirect (F&A) cost category before that category is allocated to benefitting functions.

C. Determination and Application of Indirect (F&A) Cost Rate or Rates

1. Indirect (F&A) Cost Pools

- a.
 - (1) Subject to subsection b, the separate categories of indirect (F&A) costs allocated to each major function of the institution as prescribed in Section B, must be aggregated and treated as a common pool for that function. The amount in each pool must be divided by the distribution base described in subsection 2 to arrive at a single indirect (F&A) cost rate for each function.
 - (2) The rate for each function is used to distribute indirect (F&A) costs to individual Federal awards of that function. Since a common pool is established for each major function of the institution, a separate indirect (F&A) cost rate would be established for each of the major functions described in Section A.1 under which Federal awards are carried out.
 - (3) Each institution's indirect (F&A) cost rate process must be appropriately designed to ensure that Federal sponsors do not in any way subsidize the indirect (F&A) costs of other sponsors, specifically activities sponsored by industry and foreign governments. Accordingly, each allocation method used to identify and allocate the indirect (F&A) cost pools, as described in Sections A.2 and B.2 through B.9, must contain the full amount of the institution's modified total costs or other appropriate units of measurement used to make the computations. In addition, the final rate distribution base (as defined in subsection 2) for each major function (organized research, instruction, etc., as described in Section A.1 functions of an institution) must contain all the programs or activities which utilize the indirect (F&A) costs allocated to that major function. At the time an indirect (F&A) cost proposal is submitted to a cognizant agency for indirect costs, each institution must describe the process it uses to ensure that Federal funds are not used to subsidize industry and foreign government funded programs.

2. The Distribution Basis

Indirect (F&A) costs must be distributed to applicable Federal awards and other benefitting activities within each major function (see section A.1) on the basis of modified total direct costs (MTDC), consisting of all salaries and wages, fringe benefits, materials and supplies, services, travel, and up to the first \$50,000 of each subaward (regardless of the period covered by the subaward). MTDC is defined in § 200.1. For this purpose, an indirect (F&A) cost rate should be determined for each of the separate indirect (F&A) cost pools developed pursuant to subsection 1. The rate in each case should be stated as the percentage which the amount of the particular indirect (F&A) cost pool is of the modified total direct costs identified with such pool.

3. Negotiated Lump Sum for Indirect (F&A) Costs

A negotiated fixed amount in lieu of indirect (F&A) costs may be appropriate for self-contained, off-campus, or primarily subcontracted activities where the benefits derived from an institution's indirect (F&A) services cannot be readily determined. Such negotiated indirect (F&A) costs will be treated as an

offset before allocation to instruction, organized research, other sponsored activities, and other institutional activities. The base on which such remaining expenses are allocated should be appropriately adjusted.

4. Predetermined Rates for Indirect (F&A) Costs

Public Law 87-638 (76 Stat. 437) as amended (41 U.S.C. 4708) authorizes the use of predetermined rates in determining the "indirect costs" (indirect (F&A) costs) applicable under research agreements with educational institutions. The stated objectives of the law are to simplify the administration of cost-type research and development contracts (including grants) with educational institutions, to facilitate the preparation of their budgets, and to permit more expeditious closeout of such contracts when the work is completed. In view of the potential advantages offered by this procedure, negotiation of predetermined rates for indirect (F&A) costs for a period of two to four years should be the norm in those situations where the cost experience and other pertinent facts available are deemed sufficient to enable the parties involved to reach an informed judgment as to the probable level of indirect (F&A) costs during the ensuing accounting periods.

5. Negotiated Fixed Rates and Carry-Forward Provisions

When a fixed rate is negotiated in advance for a fiscal year (or other time period), the over- or under-recovery for that year may be included as an adjustment to the indirect (F&A) cost for the next rate negotiation. When the rate is negotiated before the carry-forward adjustment is determined, the carry-forward amount may be applied to the next subsequent rate negotiation. When such adjustments are to be made, each fixed rate negotiated in advance for a given period will be computed by applying the expected indirect (F&A) costs allocable to Federal awards for the forecast period plus or minus the carry-forward adjustment (over- or under-recovery) from the prior period, to the forecast distribution base. Unrecovered amounts under lump-sum agreements or cost-sharing provisions of prior years must not be carried forward for consideration in the new rate negotiation. There must, however, be an advance understanding in each case between the institution and the cognizant agency for indirect costs as to whether these differences will be considered in the rate negotiation rather than making the determination after the differences are known. Further, institutions electing to use this carry-forward provision may not subsequently change without prior approval of the cognizant agency for indirect costs. In the event that an institution returns to a post-determined rate, any over- or under-recovery during the period in which negotiated fixed rates and carry-forward provisions were followed will be included in the subsequent post-determined rates. Where multiple rates are used, the same procedure will be applicable for determining each rate.

6. Provisional and Final Rates for Indirect (F&A) Costs

Where the cognizant agency for indirect costs determines that cost experience and other pertinent facts do not justify the use of predetermined rates, or a fixed rate with a carry-forward, or if the parties cannot agree on an equitable rate, a provisional rate must be established. To prevent substantial overpayment or underpayment, the provisional rate may be adjusted by the cognizant agency for indirect costs during the institution's fiscal year. Predetermined or fixed rates may replace provisional rates at any time prior to the

close of the institution's fiscal year. If a provisional rate is not replaced by a predetermined or fixed rate prior to the end of the institution's fiscal year, a final rate will be established and upward or downward adjustments will be made based on the actual allowable costs incurred for the period involved.

7. Fixed Rates for the Life of the Sponsored Agreement

- a. Except as provided in paragraph (c)(1) of § 200.414, Federal agencies must use the negotiated rates in effect at the time of the initial award throughout the life of the Federal award. Award levels for Federal awards may not be adjusted in future years as a result of changes in negotiated rates. "Negotiated rates" per the rate agreement include final, fixed, and predetermined rates and exclude provisional rates. "Life" for the purpose of this subsection means each competitive segment of a project. A competitive segment is a period of years approved by the Federal awarding agency at the time of the Federal award. If negotiated rate agreements do not extend through the life of the Federal award at the time of the initial award, then the negotiated rate for the last year of the Federal award must be extended through the end of the life of the Federal award.
- b. Except as provided in § 200.414, when an educational institution does not have a negotiated rate with the Federal Government at the time of an award (because the educational institution is a new recipient or the parties cannot reach agreement on a rate), the provisional rate used at the time of the award must be adjusted once a rate is negotiated and approved by the cognizant agency for indirect costs.

8. Limitation on Reimbursement of Administrative Costs

- a. Notwithstanding the provisions of subsection C.1.a, the administrative costs charged to Federal awards awarded or amended (including continuation and renewal awards) with effective dates beginning on or after the start of the institution's first fiscal year which begins on or after October 1, 1991, must be limited to 26% of modified total direct costs (as defined in subsection 2) for the total of General Administration and General Expenses, Departmental Administration, Sponsored Projects Administration, and Student Administration and Services (including their allocable share of depreciation, interest costs, operation and maintenance expenses, and fringe benefits costs, as provided by Section B, and all other types of expenditures not listed specifically under one of the subcategories of facilities in Section B.
- b. Institutions should not change their accounting or cost allocation methods if the effect is to change the charging of a particular type of cost from F&A to direct, or to reclassify costs, or increase allocations from the administrative pools identified in paragraph B.1 of this Appendix to the other F&A cost pools or fringe benefits. Cognizant agencies for indirect cost are authorized to allow changes where an institution's charging practices are at variance with acceptable practices followed by a substantial majority of other institutions.

9. Alternative Method for Administrative Costs

- a. Notwithstanding the provisions of subsection C.1.a, an institution may elect to claim a fixed allowance for the "Administration" portion of indirect (F&A) costs. The allowance could be either 24% of modified total direct costs or a percentage equal to 95% of the most recently negotiated fixed or predetermined rate for the cost pools included under "Administration" as defined in Section B.1, whichever is less. Under this alternative, no cost proposal need be prepared for the "Administration"

portion of the indirect (F&A) cost rate nor is further identification or documentation of these costs required (see subsection c). Where a negotiated indirect (F&A) cost agreement includes this alternative, an institution must make no further charges for the expenditure categories described in Section B.5, Section B.6, Section B.7, and Section B.9.

- b. In negotiations of rates for subsequent periods, an institution that has elected the option of subsection a may continue to exercise it at the same rate without further identification or documentation of costs.
- c. If an institution elects to accept a threshold rate as defined in subsection a of this section, it is not required to perform a detailed analysis of its administrative costs. However, in order to compute the facilities components of its indirect (F&A) cost rate, the institution must reconcile its indirect (F&A) cost proposal to its financial statements and make appropriate adjustments and reclassifications to identify the costs of each major function as defined in Section A.1, as well as to identify and allocate the facilities components. Administrative costs that are not identified as such by the institution's accounting system (such as those incurred in academic departments) will be classified as instructional costs for purposes of reconciling indirect (F&A) cost proposals to financial statements and allocating facilities costs.

10. Individual Rate Components

In order to provide mutually agreed-upon information for management purposes, each indirect (F&A) cost rate negotiation or determination must include development of a rate for each indirect (F&A) cost pool as well as the overall indirect (F&A) cost rate.

11. Negotiation and Approval of Indirect (F&A) Rate

- a. Cognizant agency for indirect costs is defined in Subpart A.
 - (1) Cost negotiation cognizance is assigned to the Department of Health and Human Services (HHS) or the Department of Defense's Office of Naval Research (DOD), normally depending on which of the two agencies (HHS or DOD) provides more funds directly to the educational institution for the most recent three years. Information on funding must be derived from relevant data gathered by the National Science Foundation. In cases where neither HHS nor DOD provides Federal funding directly to an educational institution, the cognizant agency for indirect costs assignment must default to HHS. Notwithstanding the method for cognizance determination described in this section, other arrangements for cognizance of a particular educational institution may also be based in part on the types of research performed at the educational institution and must be decided based on mutual agreement between HHS and DOD. Where a non-Federal entity only receives funds as a subrecipient, see § 200.332.
 - (2) After cognizance is established, it must continue for a five-year period.
- b. Acceptance of rates. See § 200.414.
- c. Correcting deficiencies. The cognizant agency for indirect costs must negotiate changes needed to correct systems deficiencies relating to accountability for Federal awards. Cognizant agencies for indirect costs must address the concerns of other affected agencies, as appropriate, and must negotiate special rates for Federal agencies that are required to limit recovery of indirect costs by statute.

- d. Resolving questioned costs. The cognizant agency for indirect costs must conduct any necessary negotiations with an educational institution regarding amounts questioned by audit that are due the Federal Government related to costs covered by a negotiated agreement.
- e. Reimbursement. Reimbursement to cognizant agencies for indirect costs for work performed under this Part may be made by reimbursement billing under the Economy Act, 31 U.S.C. 1535.
- f. Procedure for establishing facilities and administrative rates must be established by one of the following methods:
 - (1) Formal negotiation. The cognizant agency for indirect costs is responsible for negotiating and approving rates for an educational institution on behalf of all Federal agencies. Federal awarding agencies that do not have cognizance for indirect costs must notify the cognizant agency for indirect costs of specific concerns (i.e., a need to establish special cost rates) which could affect the negotiation process. The cognizant agency for indirect costs must address the concerns of all interested agencies, as appropriate. A pre-negotiation conference may be scheduled among all interested agencies, if necessary. The cognizant agency for indirect costs must then arrange a negotiation conference with the educational institution.
 - (2) Other than formal negotiation. The cognizant agency for indirect costs and educational institution may reach an agreement on rates without a formal negotiation conference; for example, through correspondence or use of the simplified method described in this section D of this Appendix.
- g. Formalizing determinations and agreements. The cognizant agency for indirect costs must formalize all determinations or agreements reached with an educational institution and provide copies to other agencies having an interest. Determinations should include a description of any adjustments, the actual amount, both dollar and percentage adjusted, and the reason for making adjustments.
- h. Disputes and disagreements. Where the cognizant agency for indirect costs is unable to reach agreement with an educational institution with regard to rates or audit resolution, the appeal system of the cognizant agency for indirect costs must be followed for resolution of the disagreement.

12. Standard Format for Submission

For facilities and administrative (indirect (F&A)) rate proposals, educational institutions must use the standard format, shown in section E of this appendix, to submit their indirect (F&A) rate proposal to the cognizant agency for indirect costs. The cognizant agency for indirect costs may, on an institution-by-institution basis, grant exceptions from all or portions of Part II of the standard format requirement. This requirement does not apply to educational institutions that use the simplified method for calculating indirect (F&A) rates, as described in Section D of this Appendix.

As provided in section C.10 of this appendix, each F&A cost rate negotiation or determination must include development of a rate for each F&A cost pool as well as the overall F&A rate.

D. Simplified Method for Small Institutions

1. General

- a. Where the total direct cost of work covered by this Part at an institution does not exceed \$10 million in a fiscal year, the simplified procedure described in subsections 2 or 3 may be used in determining allowable indirect (F&A) costs. Under this simplified procedure, the institution's most recent annual financial report and immediately available supporting information must be utilized as a basis for determining the indirect (F&A) cost rate applicable to all Federal awards. The institution may use either the salaries and wages (see subsection 2) or modified total direct costs (see subsection 3) as the distribution basis.
- b. The simplified procedure should not be used where it produces results which appear inequitable to the Federal Government or the institution. In any such case, indirect (F&A) costs should be determined through use of the regular procedure.

2. Simplified Procedure—Salaries and Wages Base

- a. Establish the total amount of salaries and wages paid to all employees of the institution.
- b. Establish an indirect (F&A) cost pool consisting of the expenditures (exclusive of capital items and other costs specifically identified as unallowable) which customarily are classified under the following titles or their equivalents:
 - (1) General administration and general expenses (exclusive of costs of student administration and services, student activities, student aid, and scholarships).
 - (2) Operation and maintenance of physical plant and depreciation (after appropriate adjustment for costs applicable to other institutional activities).
 - (3) Library.
 - (4) Department administration expenses, which will be computed as 20 percent of the salaries and expenses of deans and heads of departments.

In those cases where expenditures classified under subsection (1) have previously been allocated to other institutional activities, they may be included in the indirect (F&A) cost pool. The total amount of salaries and wages included in the indirect (F&A) cost pool must be separately identified.

- c. Establish a salary and wage distribution base, determined by deducting from the total of salaries and wages as established in subsection a from the amount of salaries and wages included under subsection b.
- d. Establish the indirect (F&A) cost rate, determined by dividing the amount in the indirect (F&A) cost pool, subsection b, by the amount of the distribution base, subsection c.
- e. Apply the indirect (F&A) cost rate to direct salaries and wages for individual agreements to determine the amount of indirect (F&A) costs allocable to such agreements.

3. Simplified Procedure—Modified Total Direct Cost Base

- a. Establish the total costs incurred by the institution for the base period.
- b. Establish an indirect (F&A) cost pool consisting of the expenditures (exclusive of capital items and other costs specifically identified as unallowable) which customarily are classified under the following titles or their equivalents:

- (1) General administration and general expenses (exclusive of costs of student administration and services, student activities, student aid, and scholarships).
 - (2) Operation and maintenance of physical plant and depreciation (after appropriate adjustment for costs applicable to other institutional activities).
 - (3) Library.
 - (4) Department administration expenses, which will be computed as 20 percent of the salaries and expenses of deans and heads of departments. In those cases where expenditures classified under subsection (1) have previously been allocated to other institutional activities, they may be included in the indirect (F&A) cost pool. The modified total direct costs amount included in the indirect (F&A) cost pool must be separately identified.
- c. Establish a modified total direct cost distribution base, as defined in Section C.2, The distribution basis, that consists of all institution's direct functions.
 - d. Establish the indirect (F&A) cost rate, determined by dividing the amount in the indirect (F&A) cost pool, subsection b, by the amount of the distribution base, subsection c.
 - e. Apply the indirect (F&A) cost rate to the modified total direct costs for individual agreements to determine the amount of indirect (F&A) costs allocable to such agreements.

E. Documentation Requirements

The standard format for documentation requirements for indirect (indirect (F&A)) rate proposals for claiming costs under the regular method is available on the OMB website.

F. Certification

1. Certification of Charges

To assure that expenditures for Federal awards are proper and in accordance with the agreement documents and approved project budgets, the annual and/or final fiscal reports or vouchers requesting payment under the agreements will include a certification, signed by an authorized official of the university, which reads "By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and intent set forth in the award documents. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code, Title 18, Section 1001 and Title 31, Sections 3729-3733 and 3801-3812)".

2. Certification of Indirect (F&A) Costs

- a. **Policy.** Cognizant agencies must not accept a proposed indirect cost rate unless such costs have been certified by the educational institution using the Certificate of indirect (F&A) Costs set forth in subsection F.2.c
- b. The certificate must be signed on behalf of the institution by the chief financial officer or an individual designated by an individual at a level no lower than vice president or chief financial officer.

An indirect (F&A) cost rate is not binding upon the Federal Government if the most recent required proposal from the institution has not been certified. Where it is necessary to establish indirect (F&A) cost rates, and the institution has not submitted a certified proposal for establishing such rates in accordance with the requirements of this section, the Federal Government must unilaterally establish such rates. Such rates may be based upon audited historical data or such other data that have been furnished to the cognizant agency for indirect costs and for which it can be demonstrated that all unallowable costs have been excluded. When indirect (F&A) cost rates are unilaterally established by the Federal Government because of failure of the institution to submit a certified proposal for establishing such rates in accordance with this section, the rates established will be set at a level low enough to ensure that potentially unallowable costs will not be reimbursed.

c. **Certificate.** The certificate required by this section must be in the following form:

Certificate of Indirect (F&A) Costs

This is to certify that to the best of my knowledge and belief:

- (1) I have reviewed the indirect (F&A) cost proposal submitted herewith;
- (2) All costs included in this proposal [identify date] to establish billing or final indirect (F&A) costs rate for [identify period covered by rate] are allowable in accordance with the requirements of the Federal agreement(s) to which they apply and with the cost principles applicable to those agreements.
- (3) This proposal does not include any costs which are unallowable under subpart E of this part such as (without limitation): Public relations costs, contributions and donations, entertainment costs, fines and penalties, lobbying costs, and defense of fraud proceedings; and
- (4) All costs included in this proposal are properly allocable to Federal agreements on the basis of a beneficial or causal relationship between the expenses incurred and the agreements to which they are allocated in accordance with applicable requirements.

I declare that the foregoing is true and correct.

Institution of Higher Education:

Signature: _____

Name of Official: _____

Title: _____

Date of Execution: _____

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75888, Dec. 19, 2014; 80 FR 54409, Sept. 10, 2015; 85 FR 49577, Aug. 13, 2020; 89 FR 30206, Apr. 22, 2024]

Appendix IV to Part 200—Indirect (F&A) Costs Identification and Assignment, and Rate Determination for Nonprofit Organizations

A. General

1. Indirect costs are those that have been incurred for common or joint objectives and cannot be readily identified with a particular final cost objective. Direct cost of minor amounts may be treated as indirect costs under the conditions described in § 200.413(d). After direct costs have been determined and assigned directly to awards or other work as appropriate, indirect costs are those remaining to be allocated to benefitting cost objectives. A cost may not be allocated to a Federal award as an indirect cost if any other cost incurred for the same purpose, in like circumstances, has been assigned to a Federal award as a direct cost.
2. *“Major nonprofit organizations”* are defined in paragraph (a) of § 200.414. See indirect cost rate reporting requirements in sections B.2.e and B.3.g of this Appendix.

B. Allocation of Indirect Costs and Determination of Indirect Cost Rates

1. General

- a. If a nonprofit organization has only one major function, or where all its major functions benefit from its indirect costs to approximately the same degree, the allocation of indirect costs and the computation of an indirect cost rate may be accomplished through simplified allocation procedures, as described in section B.2 of this Appendix.
- b. If an organization has several major functions which benefit from its indirect costs in varying degrees, allocation of indirect costs may require the accumulation of such costs into separate cost groupings which then are allocated individually to benefitting functions by means of a base which best measures the relative degree of benefit. The indirect costs allocated to each function are then distributed to individual Federal awards and other activities included in that function by means of an indirect cost rate(s).
- c. The determination of what constitutes an organization's major functions will depend on its purpose in being; the types of services it renders to the public, its clients, and its members; and the amount of effort it devotes to such activities as fundraising, public information and membership activities.
- d. Specific methods for allocating indirect costs and computing indirect cost rates along with the conditions under which each method should be used are described in section B.2 through B.5 of this Appendix.
- e. The base period for the allocation of indirect costs is the period in which such costs are incurred and accumulated for allocation to work performed in that period. The base period normally should coincide with the organization's fiscal year but, in any event, must be so selected as to avoid inequities in the allocation of the costs.

2. Simplified Allocation Method

- a. Where an organization's major functions benefit from its indirect costs to approximately the same degree, the allocation of indirect costs may be accomplished by
 - (i) separating the organization's total costs for the base period as either direct or indirect, and
 - (ii) dividing the total allowable indirect costs (net of applicable credits) by an equitable distribution base. The result of this process is an indirect cost rate which is used to distribute indirect costs to individual Federal awards. The rate should be expressed as the percentage which the total amount of allowable indirect costs bears to the base selected. This method should also be used where an organization has only one major function encompassing a number of individual projects or activities, and may be used where the level of Federal awards to an organization is relatively small.
- b. Both the direct costs and the indirect costs must exclude capital expenditures and unallowable costs. However, unallowable costs which represent activities must be included in the direct costs under the conditions described in § 200.413(e).
- c. The distribution base may be total direct costs (excluding capital expenditures and other distorting items, such as subawards for \$50,000 or more), direct salaries and wages, or other base which results in an equitable distribution. The distribution base must exclude participant support costs as defined in § 200.1.
- d. Except where a special rate(s) is required in accordance with section B.5 of this Appendix, the indirect cost rate developed under the above principles is applicable to all Federal awards of the organization. If a special rate(s) is required, appropriate modifications must be made in order to develop the special rate(s).
- e. For an organization that receives more than \$10 million in direct Federal funding in a fiscal year, a breakout of the indirect cost component into two broad categories, Facilities and Administration as defined in paragraph (a) of § 200.414, is required. The rate in each case must be stated as the percentage which the amount of the particular indirect cost category (*i.e.*, Facilities or Administration) is of the distribution base identified with that category.

3. Multiple Allocation Base Method

- a. General. Where an organization's indirect costs benefit its major functions in varying degrees, indirect costs must be accumulated into separate cost groupings, as described in subparagraph b. Each grouping must then be allocated individually to benefitting functions by means of a base which best measures the relative benefits. The default allocation bases by cost pool are described in section B.3.c of this Appendix.
- b. Identification of indirect costs. Cost groupings must be established so as to permit the allocation of each grouping on the basis of benefits provided to the major functions. Each grouping must constitute a pool of expenses that are of like character in terms of functions they benefit and in terms of the allocation base which best measures the relative benefits provided to each function. The groupings are classified within the two broad categories: "Facilities" and "Administration," as described in section A.3 of this Appendix. The indirect cost pools are defined as follows:

- (1) Depreciation. The expenses under this heading are the portion of the costs of the organization's buildings, capital improvements to land and buildings, and equipment which are computed in accordance with § 200.436.
- (2) Interest. Interest on debt associated with certain buildings, equipment and capital improvements are computed in accordance with § 200.449.
- (3) Operation and maintenance expenses. The expenses under this heading are those that have been incurred for the administration, operation, maintenance, preservation, and protection of the organization's physical plant. They include expenses normally incurred for such items as: janitorial and utility services; repairs and ordinary or normal alterations of buildings, furniture and equipment; care of grounds; maintenance and operation of buildings and other plant facilities; security; earthquake and disaster preparedness; environmental safety; hazardous waste disposal; property, liability and other insurance relating to property; space and capital leasing; facility planning and management; and central receiving. The operation and maintenance expenses category must also include its allocable share of fringe benefit costs, depreciation, and interest costs.
- (4) General administration and general expenses. The expenses under this heading are those that have been incurred for the overall general executive and administrative offices of the organization and other expenses of a general nature which do not relate solely to any major function of the organization. This category must also include its allocable share of fringe benefit costs, operation and maintenance expense, depreciation, and interest costs. Examples of this category include central offices, such as the director's office, the office of finance, business services, budget and planning, personnel, safety and risk management, general counsel, management information systems, and library costs.

In developing this cost pool, special care should be exercised to ensure that costs incurred for the same purpose in like circumstances are treated consistently as either direct or indirect costs. For example, salaries of technical staff, project supplies, project publication, telephone toll charges, computer costs, travel costs, and specialized services costs must be treated as direct costs wherever identifiable to a particular program. The salaries and wages of administrative and pooled clerical staff should normally be treated as indirect costs. Direct charging of these costs may be appropriate as described in § 200.413. Items such as office supplies, postage, local telephone costs, periodicals and memberships should normally be treated as indirect costs.

- c. Allocation bases. Actual conditions must be taken into account in selecting the base to be used in allocating the expenses in each grouping to benefitting functions. The essential consideration in selecting a method or a base is that it is the one best suited for assigning the pool of costs to cost objectives in accordance with benefits derived; a traceable cause and effect relationship; or logic and reason, where neither the cause nor the effect of the relationship is determinable. When an allocation can be made by assignment of a cost grouping directly to the function benefitted, the allocation must be made in that manner. When the expenses in a cost grouping are more general in nature, the allocation must be made through the use of a selected base which produces results that are equitable to both the Federal Government and the organization. The distribution must be made in accordance with the bases described herein unless it can be demonstrated that the use of a different base would result in a more equitable allocation of the costs, or that a more readily available base

would not increase the costs charged to Federal awards. The results of special cost studies (such as an engineering utility study) must not be used to determine and allocate the indirect costs to Federal awards.

(1) Depreciation. Depreciation expenses must be allocated in the following manner:

- (a) Depreciation on buildings used exclusively in the conduct of a single function, and on capital improvements and equipment used in such buildings, must be assigned to that function.
- (b) Depreciation on buildings used for more than one function, and on capital improvements and equipment used in such buildings, must be allocated to the individual functions performed in each building on the basis of usable square feet of space, excluding common areas, such as hallways, stairwells, and restrooms.
- (c) Depreciation on buildings, capital improvements and equipment related space (e.g., individual rooms, and laboratories) used jointly by more than one function (as determined by the users of the space) must be treated as follows. The cost of each jointly used unit of space must be allocated to the benefitting functions on the basis of:
 - (i) the employees and other users on a full-time equivalent (FTE) basis or salaries and wages of those individual functions benefitting from the use of that space; or
 - (ii) organization-wide employee FTEs or salaries and wages applicable to the benefitting functions of the organization.
- (d) Depreciation on certain capital improvements to land, such as paved parking areas, fences, sidewalks, and the like, not included in the cost of buildings, must be allocated to user categories on a FTE basis and distributed to major functions in proportion to the salaries and wages of all employees applicable to the functions.

(2) Interest. Interest costs must be allocated in the same manner as the depreciation on the buildings, equipment and capital equipment to which the interest relates.

(3) Operation and maintenance expenses. Operation and maintenance expenses must be allocated in the same manner as the depreciation.

(4) General administration and general expenses. General administration and general expenses must be allocated to benefitting functions based on modified total costs (MTC). The MTC is the modified total direct costs (MTDC), as described in § 200.1, plus the allocated indirect cost proportion. The expenses included in this category could be grouped first according to major functions of the organization to which they render services or provide benefits. The aggregate expenses of each group must then be allocated to benefitting functions based on MTC.

d. Order of distribution.

- (1) Indirect cost categories consisting of depreciation, interest, operation and maintenance, and general administration and general expenses must be allocated in that order to the remaining indirect cost categories as well as to the major functions of the organization.

Other cost categories should be allocated in the order determined to be most appropriate by the organization. This order of allocation does not apply if cross allocation of costs is made as provided in section B.3.d.2 of this Appendix.

- (2) Normally, an indirect cost category will be considered closed once it has been allocated to other cost objectives, and costs must not be subsequently allocated to it. However, a cross allocation of costs between two or more indirect costs categories could be used if such allocation will result in a more equitable allocation of costs. If a cross allocation is used, an appropriate modification to the composition of the indirect cost categories is required.
- e. Application of indirect cost rate or rates. Except where a special indirect cost rate(s) is required in accordance with section B.5 of this Appendix, the separate groupings of indirect costs allocated to each major function must be aggregated and treated as a common pool for that function. The costs in the common pool must then be distributed to individual Federal awards included in that function by use of a single indirect cost rate.
- f. Distribution basis. Indirect costs must be distributed to applicable Federal awards and other benefitting activities within each major function on the basis of MTDC (see definition in § 200.1).
- g. Individual Rate Components. An indirect cost rate must be determined for each separate indirect cost pool developed. The rate in each case must be stated as the percentage which the amount of the particular indirect cost pool is of the distribution base identified with that pool. Each indirect cost rate negotiation or determination agreement must include development of the rate for each indirect cost pool as well as the overall indirect cost rate. The indirect cost pools must be classified within two broad categories: "Facilities" and "Administration," as described in § 200.414(a).

4. Direct Allocation Method

- a. Some nonprofit organizations treat all costs as direct costs except general administration and general expenses. These organizations generally separate their costs into three basic categories:
 - (i) General administration and general expenses,
 - (ii) fundraising, and
 - (iii) other direct functions (including projects performed under Federal awards). Joint costs, such as depreciation, rental costs, operation and maintenance of facilities, telephone expenses, information technology, and the like are prorated individually as direct costs to each category and to each Federal award or other activity using a base most appropriate to the particular cost being prorated.
- b. This method is acceptable, provided each joint cost is prorated using a base which accurately measures the benefits provided to each Federal award or other activity. The bases must be established in accordance with reasonable criteria and be supported by current data. This method is compatible with the Standards of Accounting and Financial Reporting for Voluntary

Health and Welfare Organizations issued jointly by the National Health Council, Inc., the National Assembly of Voluntary Health and Social Welfare Organizations, and the United Way of America.

- c. Under this method, indirect costs consist exclusively of general administration and general expenses. In all other respects, the organization's indirect cost rates must be computed in the same manner as that described in section B.2 of this Appendix.

5. Special Indirect Cost Rates

In some instances, a single indirect cost rate for all activities of an organization or for each major function of the organization may not be appropriate, since it would not take into account those different factors which may substantially affect the indirect costs applicable to a particular segment of work. For this purpose, a particular segment of work may be that performed under a single Federal award or it may consist of work under a group of Federal awards performed in a common environment. These factors may include the physical location of the work, the level of administrative support required, the nature of the facilities or other resources employed, the scientific disciplines or technical skills involved, the organizational arrangements used, or any combination thereof. When a particular segment of work is performed in an environment which appears to generate a significantly different level of indirect costs, provisions should be made for a separate indirect cost pool applicable to such work. The separate indirect cost pool should be developed during the course of the regular allocation process, and the separate indirect cost rate resulting therefrom should be used, provided it is determined that (i) the rate differs significantly from that which would have been obtained under sections B.2, B.3, and B.4 of this Appendix, and (ii) the volume of work to which the rate would apply is material.

C. Negotiation and Approval of Indirect Cost Rates

1. Definitions

As used in this section, the following terms have the meanings set forth in this section:

- a. **Cognizant agency for indirect costs** means the Federal agency responsible for negotiating and approving indirect cost rates for a nonprofit organization on behalf of all Federal agencies.
- b. **Predetermined rate** means an indirect cost rate, applicable to a specified current or future period, usually the organization's fiscal year. The rate is based on an estimate of the costs to be incurred during the period. A predetermined rate is not subject to adjustment.
- c. **Fixed rate** means an indirect cost rate which has the same characteristics as a predetermined rate, except that the difference between the estimated costs and the actual costs of the period covered by the rate is carried forward as an adjustment to the rate computation of a subsequent period.
- d. **Final rate** means an indirect cost rate applicable to a specified past period which is based on the actual costs of the period. A final rate is not subject to adjustment.

- e. **Provisional rate or billing rate** means a temporary indirect cost rate applicable to a specified period which is used for funding, interim reimbursement, and reporting indirect costs on Federal awards pending the establishment of a final rate for the period.
- f. **Indirect cost proposal** means the documentation prepared by an organization to substantiate its claim for the reimbursement of indirect costs. This proposal provides the basis for the review and negotiation leading to the establishment of an organization's indirect cost rate.
- g. **Cost objective** means a function, organizational subdivision, contract, Federal award, or other work unit for which cost data are desired and for which provision is made to accumulate and measure the cost of processes, projects, jobs and capitalized projects.

2. Negotiation and Approval of Rates

- a. Unless different arrangements are agreed to by the Federal agencies concerned, the Federal agency with the largest dollar value of Federal awards directly funded to an organization will be designated as the cognizant agency for indirect costs for the negotiation and approval of the indirect cost rates and, where necessary, other rates such as fringe benefit and computer charge-out rates. Once an agency is assigned cognizance for a particular nonprofit organization, the assignment will not be changed unless there is a shift in the dollar volume of the Federal awards directly funded to the organization for at least three years. All concerned Federal agencies must be given the opportunity to participate in the negotiation process but, after a rate has been agreed upon, it will be accepted by all Federal agencies. When a Federal agency has reason to believe that special operating factors affecting its Federal awards necessitate special indirect cost rates in accordance with section B.5 of this Appendix, it will, prior to the time the rates are negotiated, notify the cognizant agency for indirect costs. (See also § 200.414.) If the nonprofit does not receive any funding from any Federal agency, the pass-through entity is responsible for the negotiation of the indirect cost rates in accordance with § 200.332(a)(4).
- b. Except as otherwise provided in § 200.414(f), a nonprofit organization which has not previously established an indirect cost rate with a Federal agency must submit its initial indirect cost proposal immediately after the organization is advised that a Federal award will be made and, in no event, later than three months after the effective date of the Federal award.
- c. Unless approved by the cognizant agency for indirect costs in accordance with § 200.414(g), organizations that have previously established indirect cost rates must submit a new indirect cost proposal to the cognizant agency for indirect costs within six months after the close of each fiscal year.
- d. A predetermined rate may be negotiated for use on Federal awards where there is reasonable assurance, based on past experience and reliable projection of the organization's costs, that the rate is not likely to exceed a rate based on the organization's actual costs.
- e. Fixed rates may be negotiated where predetermined rates are not considered appropriate. A fixed rate, however, must not be negotiated if
 - (i) all or a substantial portion of the organization's Federal awards are expected to expire before the carry-forward adjustment can be made;

- (ii) the mix of Federal and non-Federal work at the organization is too erratic to permit an equitable carry-forward adjustment; or
 - (iii) the organization's operations fluctuate significantly from year to year.
- f. Provisional and final rates must be negotiated where neither predetermined nor fixed rates are appropriate. Predetermined or fixed rates may replace provisional rates at any time prior to the close of the organization's fiscal year. If that event does not occur, a final rate will be established and upward or downward adjustments will be made based on the actual allowable costs incurred for the period involved.
- g. The results of each negotiation must be formalized in a written agreement between the cognizant agency for indirect costs and the nonprofit organization. The cognizant agency for indirect costs must make available copies of the agreement to all concerned Federal agencies.
- h. If a dispute arises in a negotiation of an indirect cost rate between the cognizant agency for indirect costs and the nonprofit organization, the dispute must be resolved in accordance with the appeals procedures of the cognizant agency for indirect costs.
- i. To the extent that problems are encountered among the Federal agencies in connection with the negotiation and approval process, OMB will lend assistance as required to resolve such problems in a timely manner.

D. Certification of Indirect (F&A) Costs

- (1) Required Certification. No proposal to establish indirect (F&A) cost rates must be acceptable unless such costs have been certified by the nonprofit organization using the Certificate of Indirect (F&A) Costs set forth in section j. of this appendix. The certificate must be signed on behalf of the organization by an individual at a level no lower than vice president or chief financial officer for the organization.
- (2) Each indirect cost rate proposal must be accompanied by a certification in the following form:

Certificate of Indirect (F&A) Costs

This is to certify that to the best of my knowledge and belief:

- (1) I have reviewed the indirect (F&A) cost proposal submitted herewith;
- (2) All costs included in this proposal [identify date] to establish billing or final indirect (F&A) costs rate for [identify period covered by rate] are allowable in accordance with the requirements of the Federal awards to which they apply and with subpart E of this part.
- (3) This proposal does not include any costs which are unallowable under subpart E of this part such as (without limitation): Public relations costs, contributions and donations, entertainment costs, fines and penalties, lobbying costs, and defense of fraud proceedings; and
- (4) All costs included in this proposal are properly allocable to Federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the Federal awards to which they are allocated in accordance with applicable requirements.

I declare that the foregoing is true and correct.

Nonprofit Organization: _____

Signature: _____

Name of Official: _____

Title: _____

Date of Execution: _____

[78 FR 78608, Dec. 26, 2013, as amended at 80 FR 54410, Sept. 10, 2015; 85 FR 49579, Aug. 13, 2020; 89 FR 30206, Apr. 22, 2024]

Appendix V to Part 200—State/Local Governmentwide Central Service Cost Allocation Plans

A. General

1. Most governmental units provide certain services, such as motor pools, computer centers, purchasing, accounting, etc., to operating agencies on a centralized basis. Since federally-supported awards are performed within the individual operating agencies, there needs to be a process whereby these central service costs can be identified and assigned to benefitted activities on a reasonable and consistent basis. The central service cost allocation plan provides that process. All costs and other data used to distribute the costs included in the plan should be supported by formal accounting and other records that will support the propriety of the costs assigned to Federal awards.
2. Guidelines and illustrations of central service cost allocation plans are provided in a brochure published by the Department of Health and Human Services entitled "*A Guide for State, Local and Indian Tribal Governments: Cost Principles and Procedures for Developing Cost Allocation Plans and Indirect Cost Rates for Agreements with the Federal Government.*" A copy of this brochure may be obtained from the HHS Cost Allocation Services or at their website.

B. Definitions

1. **Agency or operating agency** means an organizational unit or sub-division within a governmental unit that is responsible for the performance or administration of Federal awards or activities of the governmental unit.
2. **Allocated central services** means central services that benefit operating agencies but are not billed to the agencies on a fee-for-service or similar basis. These costs are allocated to benefitted agencies on some reasonable basis. Examples of such services might include general accounting, personnel administration, purchasing, etc.
3. **Billed central services** means central services that are billed to benefitted agencies or programs on an individual fee-for-service or similar basis. Typical examples of billed central services include computer services, transportation services, insurance, and fringe benefits.
4. **Cognizant agency for indirect costs** is defined in § 200.1. The determination of cognizant agency for indirect costs for states and local governments is described in section F.1.

5. **Major local government** means local government that receives more than \$100 million in direct Federal awards subject to this Part.

C. Scope of the Central Service Cost Allocation Plans

The central service cost allocation plan will include all central service costs that will be claimed (either as a billed or an allocated cost) under Federal awards and will be documented as described in section E. omitted from the plan will not be reimbursed.

D. Submission Requirements

1. Each state will submit a plan to the Department of Health and Human Services for each year in which it claims central service costs under Federal awards. The plan should include
 - (a) a projection of the next year's allocated central service cost (based either on actual costs for the most recently completed year or the budget projection for the coming year), and
 - (b) a reconciliation of actual allocated central service costs to the estimated costs used for either the most recently completed year or the year immediately preceding the most recently completed year.
2. Each major local government is also required to submit a plan to its cognizant agency for indirect costs annually.
3. All other local governments claiming central service costs must develop a plan in accordance with the requirements described in this Part and maintain the plan and related supporting documentation for audit. These local governments are not required to submit their plans for Federal approval unless they are specifically requested to do so by the cognizant agency for indirect costs. Where a local government only receives funds as a subrecipient, the pass-through entity will be responsible for monitoring the subrecipient's plan.
4. All central service cost allocation plans will be prepared and, when required, submitted within six months prior to the beginning of each of the governmental unit's fiscal years in which it proposes to claim central service costs. Extensions may be granted by the cognizant agency for indirect costs on a case-by-case basis.

E. Documentation Requirements for Submitted Plans

The documentation requirements described in this section may be modified, expanded, or reduced by the cognizant agency for indirect costs on a case-by-case basis. For example, the requirements may be reduced for those central services which have little or no impact on Federal awards. Conversely, if a review of a plan indicates that certain additional information is needed, and will likely be needed in future years, it may be routinely requested in future plan submissions. Items marked with an asterisk (*) should be submitted only once; subsequent plans should merely indicate any changes since the last plan.

1. General

All proposed plans must be accompanied by the following: an organization chart sufficiently detailed to show operations including the central service activities of the state/local government whether or not they are shown as benefitting from central service functions; a copy of the Comprehensive Annual Financial Report (or a copy of the Executive Budget if budgeted costs are being proposed) to support the allowable costs of each central service activity included in the plan; and, a certification (see subsection 4.) that the plan was prepared in accordance with this Part, contains only allowable costs, and was prepared in a manner that treated similar costs consistently among the various Federal awards and between Federal and non-Federal awards/activities.

2. Allocated Central Services

For each allocated central service*, the plan must also include the following: a brief description of the service, an identification of the unit rendering the service and the operating agencies receiving the service, the items of expense included in the cost of the service, the method used to distribute the cost of the service to benefitted agencies, and a summary schedule showing the allocation of each service to the specific benefitted agencies. If any self-insurance funds or fringe benefits costs are treated as allocated (rather than billed) central services, documentation discussed in subsections 3.b. and c. must also be included.

3. Billed Services

- a. **General.** The information described in this section must be provided for all billed central services, including internal service funds, self-insurance funds, and fringe benefit funds.
- b. Internal service funds.
 - (1) For each internal service fund or similar activity with an operating budget of \$5 million or more, the plan must include: A brief description of each service; a balance sheet for each fund based on individual accounts contained in the governmental unit's accounting system; a revenue/expenses statement, with revenues broken out by source, e.g., regular billings, interest earned, etc.; a listing of all non-operating transfers (as defined by GAAP) into and out of the fund; a description of the procedures (methodology) used to charge the costs of each service to users, including how billing rates are determined; a schedule of current rates; and, a schedule comparing total revenues (including imputed revenues) generated by the service to the allowable costs of the service, as determined under this part, with an explanation of how variances will be handled.
 - (2) Revenues must consist of all revenues generated by the service, including unbilled and uncollected revenues. If some users were not billed for the services (or were not billed at the full rate for that class of users), a schedule showing the full imputed revenues associated with these users must be provided. Expenses must be broken out by object cost categories (e.g., salaries, supplies, etc.).
- c. **Self-insurance funds.** For each self-insurance fund, the plan must include: the fund balance sheet; a statement of revenue and expenses including a summary of billings and claims paid by agency; a listing of all non-operating transfers into and out of the fund; the type(s) of risk(s) covered by the fund (e.g., automobile liability, workers' compensation, etc.); an explanation of how the level of fund contributions are determined, including a copy of the current actuarial

report (with the actuarial assumptions used) if the contributions are determined on an actuarial basis; and, a description of the procedures used to charge or allocate fund contributions to benefitted activities. Reserve levels in excess of claims

- (1) submitted and adjudicated but not paid,
- (2) submitted but not adjudicated, and
- (3) incurred but not submitted must be identified and explained.

- d. **Fringe benefits.** For fringe benefit costs, the plan must include: a listing of fringe benefits provided to covered employees, and the overall annual cost of each type of benefit; current fringe benefit policies; and procedures used to charge or allocate the costs of the benefits to benefitted activities. In addition, for pension and post-retirement health insurance plans, the following information must be provided: the governmental unit's funding policies, e.g., legislative bills, trust agreements, or state-mandated contribution rules, if different from actuarially determined rates; the pension plan's costs accrued for the year; the amount funded, and date(s) of funding; a copy of the current actuarial report (including the actuarial assumptions); the plan trustee's report; and, a schedule from the activity showing the value of the interest cost associated with late funding.

4. Required Certification

Each central service cost allocation plan will be accompanied by a certification in the following form:

CERTIFICATE OF COST ALLOCATION PLAN

This is to certify that I have reviewed the cost allocation plan submitted herewith and to the best of my knowledge and belief:

- (1) All costs included in this proposal [identify date] to establish cost allocations or billings for [identify period covered by plan] are allowable in accordance with the requirements of this Part and the Federal award(s) to which they apply. Unallowable costs have been adjusted for in allocating costs as indicated in the cost allocation plan.
- (2) All costs included in this proposal are properly allocable to Federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the Federal awards to which they are allocated in accordance with applicable requirements. Further, the same costs that have been treated as indirect costs have not been claimed as direct costs. Similar types of costs have been accounted for consistently.

I declare that the foregoing is true and correct.

Governmental Unit: _____

Signature: _____

Name of Official: _____

Title: _____

Date of Execution: _____

F. Negotiation and Approval of Central Service Plans

1. Federal Cognizant Agency for Indirect Costs Assignments for Cost Negotiation

In general, unless different arrangements are agreed to by the concerned Federal agencies, for central service cost allocation plans, the cognizant agency responsible for review and approval is the Federal agency with the largest dollar value of total Federal awards with a governmental unit. For indirect cost rates and departmental indirect cost allocation plans, the cognizant agency is the Federal agency with the largest dollar value of direct Federal awards with a governmental unit or component, as appropriate. Once designated as the cognizant agency for indirect costs, the Federal agency must remain so for a period of five years. In addition, the following Federal agencies continue to be responsible for the indicated governmental entities:

Department of Health and Human Services —Public assistance and state-wide cost allocation plans for all states (including the District of Columbia and Puerto Rico), state and local hospitals, libraries and health districts.

Department of the Interior —Indian tribal governments, territorial governments, and state and local park and recreational districts.

Department of Labor —State and local labor departments.

Department of Education —School districts and state and local education agencies.

Department of Agriculture —State and local agriculture departments.

Department of Transportation —State and local airport and port authorities and transit districts.

Department of Commerce —State and local economic development districts.

Department of Housing and Urban Development —State and local housing and development districts.

Environmental Protection Agency —State and local water and sewer districts.

2. Review

All proposed central service cost allocation plans that are required to be submitted will be reviewed, negotiated, and approved by the cognizant agency for indirect costs on a timely basis. The cognizant agency for indirect costs will review the proposal within six months of receipt of the proposal and either negotiate/approve the proposal or advise the governmental unit of the additional documentation needed to support/evaluate the proposed plan or the changes required to make the proposal acceptable. Once an agreement with the governmental unit has been reached, the agreement will be accepted and used by all Federal agencies, unless prohibited or limited by statute. Where a Federal awarding agency has reason to believe that special operating factors affecting its Federal awards necessitate special consideration, the funding agency will, prior to the time the plans are negotiated, notify the cognizant agency for indirect costs.

3. Agreement

The results of each negotiation must be formalized in a written agreement between the cognizant agency for indirect costs and the governmental unit. This agreement will be subject to re-opening if the agreement is subsequently found to violate a statute or the information upon which the plan was negotiated is later found to be materially incomplete or inaccurate. The results of the negotiation must be made available to all Federal agencies for their use.

4. Adjustments

Negotiated cost allocation plans based on a proposal later found to have included costs that: (a) are unallowable (i) as specified by law or regulation, (ii) as identified in subpart F, General Provisions for selected Items of Cost of this Part, or (iii) by the terms and conditions of Federal awards, or (b) are unallowable because they are clearly not allocable to Federal awards, must be adjusted, or a refund must be made at the option of the cognizant agency for indirect costs, including earned or imputed interest from the date of transfer and debt interest, if applicable, chargeable in accordance with applicable Federal cognizant agency for indirect costs regulations. Adjustments or cash refunds may include, at the option of the cognizant agency for indirect costs, earned or imputed interest from the date of expenditure and delinquent debt interest, if applicable, chargeable in accordance with applicable cognizant agency claims collection regulations. These adjustments or refunds are designed to correct the plans and do not constitute a reopening of the negotiation.

G. Other Policies

1. Billed Central Service Activities

Each billed central service activity must separately account for all revenues (including imputed revenues) generated by the service, expenses incurred to furnish the service, and profit/loss.

2. Working Capital Reserves

Internal service funds are dependent upon a reasonable level of working capital reserve to operate from one billing cycle to the next. Charges by an internal service activity to provide for the establishment and maintenance of a reasonable level of working capital reserve, in addition to the full recovery of costs, are allowable. A working capital reserve as part of retained earnings of up to 60 calendar days cash expenses for normal operating purposes is considered reasonable. A working capital reserve exceeding 60 calendar days may be approved by the cognizant agency for indirect costs in exceptional cases.

3. Carry-Forward Adjustments of Allocated Central Service Costs

Allocated central service costs are usually negotiated and approved for a future fiscal year on a "fixed with carry-forward" basis. Under this procedure, the fixed amounts for the future year covered by agreement are not subject to adjustment for that year. However, when the actual costs of the year involved become known, the differences between the fixed amounts previously approved and the

actual costs will be carried forward and used as an adjustment to the fixed amounts established for a later year. This "carry-forward" procedure applies to all central services whose costs were fixed in the approved plan. However, a carry-forward adjustment is not permitted, for a central service activity that was not included in the approved plan, or for unallowable costs that must be reimbursed immediately.

4. Adjustments of Billed Central Services

Billing rates used to charge Federal awards must be based on the estimated costs of providing the services, including an estimate of the allocable central service costs. A comparison of the revenue generated by each billed service (including total revenues whether or not billed or collected) to the actual allowable costs of the service will be made at least annually, and an adjustment will be made for the difference between the revenue and the allowable costs. These adjustments will be made through one of the following adjustment methods: (a) a cash refund including earned or imputed interest from the date of transfer and debt interest, if applicable, chargeable in accordance with applicable Federal cognizant agency for indirect costs regulations to the Federal Government for the Federal share of the adjustment, (b) credits to the amounts charged to the individual programs, (c) adjustments to future billing rates, or (d) adjustments to allocated central service costs.

Adjustments to allocated central services will not be permitted where the total amount of the adjustment for a particular service (Federal share and non-Federal) share exceeds \$500,000.

Adjustment methods may include, at the option of the cognizant agency, earned or imputed interest from the date of expenditure and delinquent debt interest, if applicable, chargeable in accordance with applicable cognizant agency claims collection regulations.

5. Records Retention

All central service cost allocation plans and related documentation used as a basis for claiming costs under Federal awards must be retained for audit in accordance with the records retention requirements contained in subpart D of this part.

6. Appeals

If a dispute arises in the negotiation of a plan between the cognizant agency for indirect costs and the governmental unit, the dispute must be resolved in accordance with the appeals procedures of the cognizant agency for indirect costs.

7. OMB Assistance

To the extent that problems are encountered among the Federal agencies or governmental units in connection with the negotiation and approval process, OMB will lend assistance, as required, to resolve such problems in a timely manner.

[78 FR 78608, Dec. 26, 2013, as amended at 80 FR 54410, Sept. 10, 2015; 85 FR 49581, Aug. 13, 2020]

Appendix VI to Part 200—Public Assistance Cost Allocation Plans

A. General

Federally-financed programs administered by state public assistance agencies are funded predominately by the Department of Health and Human Services (HHS). In support of its stewardship requirements, HHS has published requirements for the development, documentation, submission, negotiation, and approval of public assistance cost allocation plans in Subpart E of 45 CFR Part 95. All administrative costs (direct and indirect) are normally charged to Federal awards by implementing the public assistance cost allocation plan. This Appendix extends these requirements to all Federal awarding agencies whose programs are administered by a state public assistance agency. Major federally-financed programs typically administered by state public assistance agencies include: Temporary Aid to Needy Families (TANF), Medicaid, Food Stamps, Child Support Enforcement, Adoption Assistance and Foster Care, and Social Services Block Grant.

B. Definitions

1. **State public assistance agency** means a state agency administering or supervising the administration of one or more public assistance programs operated by the state as identified in Subpart E of 45 CFR Part 95. For the purpose of this Appendix, these programs include all programs administered by the state public assistance agency.
2. **State public assistance agency costs** means all costs incurred by, or allocable to, the state public assistance agency, except expenditures for financial assistance, medical contractor payments, food stamps, and payments for services and goods provided directly to program recipients.

C. Policy

State public assistance agencies will develop, document and implement, and the Federal Government will review, negotiate, and approve, public assistance cost allocation plans in accordance with Subpart E of 45 CFR Part 95. The plan will include all programs administered by the state public assistance agency. Where a letter of approval or disapproval is transmitted to a state public assistance agency in accordance with Subpart E, the letter will apply to all Federal agencies and programs. The remaining sections of this Appendix (except for the requirement for certification) summarize the provisions of Subpart E of 45 CFR Part 95.

D. Submission, Documentation, and Approval of Public Assistance Cost Allocation Plans

1. State public assistance agencies are required to promptly submit amendments to the cost allocation plan to HHS for review and approval.
2. Under the coordination process outlined in section E, affected Federal agencies will review all new plans and plan amendments and provide comments, as appropriate, to HHS. The effective date of the plan or plan amendment will be the first day of the calendar quarter following the event that required the amendment, unless another date is specifically approved by HHS. HHS, as the cognizant agency for indirect costs acting on behalf of all affected Federal agencies, will, as necessary, conduct negotiations with the state public assistance agency and will inform the state agency of the action taken on the plan or plan amendment.

E. Review of Implementation of Approved Plans

1. Since public assistance cost allocation plans are of a narrative nature, the review during the plan approval process consists of evaluating the appropriateness of the proposed groupings of costs (cost centers) and the related allocation bases. As such, the Federal Government needs some assurance that the cost allocation plan has been implemented as approved. This is accomplished by reviews by the Federal awarding agencies, single audits, or audits conducted by the cognizant agency for indirect costs.
2. Where inappropriate charges affecting more than one Federal awarding agency are identified, the cognizant HHS cost negotiation office will be advised and will take the lead in resolving the issue(s) as provided for in Subpart E of 45 CFR Part 95.
3. If a dispute arises in the negotiation of a plan or from a disallowance involving two or more Federal awarding agencies, the dispute must be resolved in accordance with the appeals procedures set out in 45 CFR Part 16. Disputes involving only one Federal awarding agency will be resolved in accordance with the Federal awarding agency's appeal process.
4. To the extent that problems are encountered among the Federal awarding agencies or governmental units in connection with the negotiation and approval process, the Office of Management and Budget will lend assistance, as required, to resolve such problems in a timely manner.

F. Unallowable Costs

Claims developed under approved cost allocation plans will be based on allowable costs as identified in this Part. Where unallowable costs have been claimed and reimbursed, they will be refunded to the program that reimbursed the unallowable cost using one of the following methods: (a) a cash refund, (b) offset to a subsequent claim, or (c) credits to the amounts charged to individual Federal awards. Cash refunds, offsets, and credits may include at the option of the cognizant agency for indirect cost, earned or imputed interest from the date of expenditure and delinquent debt interest, if applicable, chargeable in accordance with applicable cognizant agency for indirect cost claims collection regulations.

[78 FR 78608, Dec. 26, 2013, as amended at 85 FR 49581, Aug. 13, 2020]

Appendix VII to Part 200—States and Local Government and Indian Tribe Indirect Cost Proposals

Link to an amendment published at 89 FR 30207, Apr. 22, 2024.

A. General

1. Indirect costs are those that have been incurred for common or joint purposes. These costs benefit more than one cost objective and cannot be readily identified with a particular final cost objective without effort disproportionate to the results achieved. After direct costs have been determined and assigned directly to Federal awards and other activities as appropriate, indirect costs are those remaining to be allocated to benefitted cost objectives. A cost may not be allocated to a Federal award as an indirect cost if any other cost incurred for the same purpose, in like circumstances, has been assigned to a Federal award as a direct cost.

2. Indirect costs include
 - (a) the indirect costs originating in each department or agency of the governmental unit carrying out Federal awards and
 - (b) the costs of central governmental services distributed through the central service cost allocation plan (as described in Appendix V to this part) and not otherwise treated as direct costs.
3. Indirect costs are normally charged to Federal awards by the use of an indirect cost rate. A separate indirect cost rate(s) is usually necessary for each department or agency of the governmental unit claiming indirect costs under Federal awards. Guidelines and illustrations of indirect cost proposals are provided in a brochure published by the Department of Health and Human Services entitled "*A Guide for States and Local Government Agencies: Cost Principles and Procedures for Establishing Cost Allocation Plans and Indirect Cost Rates for Grants and Contracts with the Federal Government.*" A copy of this brochure may be obtained from HHS Cost Allocation Services or at their website.
4. Because of the diverse characteristics and accounting practices of governmental units, the types of costs which may be classified as indirect costs cannot be specified in all situations. However, typical examples of indirect costs may include certain state/local-wide central service costs, general administration of the non-Federal entity accounting and personnel services performed within the non-Federal entity, depreciation on buildings and equipment, the costs of operating and maintaining facilities.
5. This Appendix does not apply to state public assistance agencies. These agencies should refer instead to Appendix VI to this part.

B. Definitions

1. **Base** means the accumulated direct costs (normally either total direct salaries and wages or total direct costs exclusive of any extraordinary or distorting expenditures) used to distribute indirect costs to individual Federal awards. The direct cost base selected should result in each Federal award bearing a fair share of the indirect costs in reasonable relation to the benefits received from the costs.
2. **Base period** for the allocation of indirect costs is the period in which such costs are incurred and accumulated for allocation to activities performed in that period. The base period normally should coincide with the governmental unit's fiscal year, but in any event, must be so selected as to avoid inequities in the allocation of costs.
3. **Cognizant agency for indirect costs** means the Federal agency responsible for reviewing and approving the governmental unit's indirect cost rate(s) on the behalf of the Federal Government. The cognizant agency for indirect costs assignment is described in Appendix V, section F.
4. **Final rate** means an indirect cost rate applicable to a specified past period which is based on the actual allowable costs of the period. A final audited rate is not subject to adjustment.
5. **Fixed rate** means an indirect cost rate which has the same characteristics as a predetermined rate, except that the difference between the estimated costs and the actual, allowable costs of the period covered by the rate is carried forward as an adjustment to the rate computation of a subsequent period.

6. **Indirect cost pool** is the accumulated costs that jointly benefit two or more programs or other cost objectives.
7. **Indirect cost rate** is a device for determining in a reasonable manner the proportion of indirect costs each program should bear. It is the ratio (expressed as a percentage) of the indirect costs to a direct cost base.
8. **Indirect cost rate proposal** means the documentation prepared by a governmental unit or subdivision thereof to substantiate its request for the establishment of an indirect cost rate.
9. **Predetermined rate** means an indirect cost rate, applicable to a specified current or future period, usually the governmental unit's fiscal year. This rate is based on an estimate of the costs to be incurred during the period. Except under very unusual circumstances, a predetermined rate is not subject to adjustment. (Because of legal constraints, predetermined rates are not permitted for Federal contracts; they may, however, be used for grants or cooperative agreements.) Predetermined rates may not be used by governmental units that have not submitted and negotiated the rate with the cognizant agency for indirect costs. In view of the potential advantages offered by this procedure, negotiation of predetermined rates for indirect costs for a period of two to four years should be the norm in those situations where the cost experience and other pertinent facts available are deemed sufficient to enable the parties involved to reach an informed judgment as to the probable level of indirect costs during the ensuing accounting periods.
10. **Provisional rate** means a temporary indirect cost rate applicable to a specified period which is used for funding, interim reimbursement, and reporting indirect costs on Federal awards pending the establishment of a "final" rate for that period.

C. Allocation of Indirect Costs and Determination of Indirect Cost Rates

1. General

- a. Where a governmental unit's department or agency has only one major function, or where all its major functions benefit from the indirect costs to approximately the same degree, the allocation of indirect costs and the computation of an indirect cost rate may be accomplished through simplified allocation procedures as described in subsection 2.
- b. Where a governmental unit's department or agency has several major functions which benefit from its indirect costs in varying degrees, the allocation of indirect costs may require the accumulation of such costs into separate cost groupings which then are allocated individually to benefitted functions by means of a base which best measures the relative degree of benefit. The indirect costs allocated to each function are then distributed to individual Federal awards and other activities included in that function by means of an indirect cost rate(s).
- c. Specific methods for allocating indirect costs and computing indirect cost rates along with the conditions under which each method should be used are described in subsections 2, 3 and 4.

2. Simplified Method

- a. Where a non-Federal entity's major functions benefit from its indirect costs to approximately the same degree, the allocation of indirect costs may be accomplished by

- (1) classifying the non-Federal entity's total costs for the base period as either direct or indirect, and
 - (2) dividing the total allowable indirect costs (net of applicable credits) by an equitable distribution base. The result of this process is an indirect cost rate which is used to distribute indirect costs to individual Federal awards. The rate should be expressed as the percentage which the total amount of allowable indirect costs bears to the base selected. This method should also be used where a governmental unit's department or agency has only one major function encompassing a number of individual projects or activities, and may be used where the level of Federal awards to that department or agency is relatively small.
- b. Both the direct costs and the indirect costs must exclude capital expenditures and unallowable costs. However, unallowable costs must be included in the direct costs if they represent activities to which indirect costs are properly allocable.
- c. The distribution base may be
- (1) total direct costs (excluding capital expenditures and other distorting items, such as pass-through funds, subcontracts in excess of \$50,000, and participant support costs),
 - (2) direct salaries and wages, or
 - (3) another base which results in an equitable distribution.

3. Multiple Allocation Base Method

- a. Where a non-Federal entity's indirect costs benefit its major functions in varying degrees, such costs must be accumulated into separate cost groupings. Each grouping must then be allocated individually to benefitted functions by means of a base which best measures the relative benefits.
- b. The cost groupings should be established so as to permit the allocation of each grouping on the basis of benefits provided to the major functions. Each grouping should constitute a pool of expenses that are of like character in terms of the functions they benefit and in terms of the allocation base which best measures the relative benefits provided to each function. The number of separate groupings should be held within practical limits, taking into consideration the materiality of the amounts involved and the degree of precision needed.
- c. Actual conditions must be taken into account in selecting the base to be used in allocating the expenses in each grouping to benefitted functions. When an allocation can be made by assignment of a cost grouping directly to the function benefitted, the allocation must be made in that manner. When the expenses in a grouping are more general in nature, the allocation should be made through the use of a selected base which produces results that are equitable to both the Federal Government and the governmental unit. In general, any cost element or related factor associated with the governmental unit's activities is potentially adaptable for use as an allocation base provided that:
- (1) it can readily be expressed in terms of dollars or other quantitative measures (total direct costs, direct salaries and wages, staff hours applied, square feet used, hours of usage, number of documents processed, population served, and the like), and
 - (2) it is common to the benefitted functions during the base period.

- d. Except where a special indirect cost rate(s) is required in accordance with paragraph (C)(4) of this Appendix, the separate groupings of indirect costs allocated to each major function must be aggregated and treated as a common pool for that function. The costs in the common pool must then be distributed to individual Federal awards included in that function by use of a single indirect cost rate.
- e. The distribution base used in computing the indirect cost rate for each function may be
 - (1) total direct costs (excluding capital expenditures and other distorting items such as pass-through funds, subawards in excess of \$50,000, and participant support costs),
 - (2) direct salaries and wages, or
 - (3) another base which results in an equitable distribution. An indirect cost rate should be developed for each separate indirect cost pool developed. The rate in each case should be stated as the percentage relationship between the particular indirect cost pool and the distribution base identified with that pool.

4. Special Indirect Cost Rates

- a. In some instances, a single indirect cost rate for all activities of a non-Federal entity or for each major function of the agency may not be appropriate. It may not take into account those different factors which may substantially affect the indirect costs applicable to a particular program or group of programs. The factors may include the physical location of the work, the level of administrative support required, the nature of the facilities or other resources employed, the organizational arrangements used, or any combination thereof. When a particular Federal award is carried out in an environment which appears to generate a significantly different level of indirect costs, provisions should be made for a separate indirect cost pool applicable to that Federal award. The separate indirect cost pool should be developed during the course of the regular allocation process, and the separate indirect cost rate resulting therefrom should be used, provided that:
 - (1) The rate differs significantly from the rate which would have been developed under paragraphs (C)(2) and (C)(3) of this Appendix, and
 - (2) the Federal award to which the rate would apply is material in amount.
- b. Where Federal statutes restrict the reimbursement of certain indirect costs, it may be necessary to develop a special rate for the affected Federal award. Where a "restricted rate" is required, the same procedure for developing a non-restricted rate will be used except for the additional step of the elimination from the indirect cost pool those costs for which the law prohibits reimbursement.

D. Submission and Documentation of Proposals

1. Submission of Indirect Cost Rate Proposals

- a. All departments or agencies of the governmental unit desiring to claim indirect costs under Federal awards must prepare an indirect cost rate proposal and related documentation to support those costs. The proposal and related documentation must be retained for audit in accordance with the records retention requirements contained in § 200.334.

- b. A governmental department or agency (such as a state or local Department of Health, Department of Transportation, or Department of Housing) that receives more than \$35 million in direct Federal funding during its fiscal year must submit its indirect cost rate proposal to its cognizant agency for indirect costs.
- c. If a governmental department or agency (such as a state or local Department of Health, Department of Transportation, or Department of Housing) receives \$35 million or less in direct Federal funding during its fiscal year, it must develop an indirect cost proposal in accordance with the requirements of this part and maintain the proposal and related supporting documentation for audit. This established rate must be accepted by any Federal agency to which the governmental department or agency applies for funding. Federal agencies must not compel the governmental department or agency to accept the de minimis rate or some other rate established by the Federal agency. These governmental departments or agencies are not required to submit their proposals unless they are specifically requested to do so by an awarding Federal agency. The Federal agency's review should be limited to ensuring the proposal is consistent with the principles of this part. Where a non-Federal entity only receives funds as a subrecipient, the pass-through entity will be responsible for negotiating and/or monitoring the subrecipient's indirect costs.
- c. Each Indian tribal government desiring reimbursement of indirect costs must submit its indirect cost proposal to the Department of the Interior (its cognizant agency for indirect costs).
- d. Indirect cost proposals must be developed (and, when required, submitted) within six months after the close of the governmental unit's fiscal year, unless an exception is approved by the cognizant agency for indirect costs. If the proposed central service cost allocation plan for the same period has not been approved by that time, the indirect cost proposal may be prepared including an amount for central services that is based on the latest federally approved central service cost allocation plan. The difference between these central service amounts and the amounts ultimately approved will be compensated for by an adjustment in a subsequent period.

2. Documentation of Proposals

The following must be included with each indirect cost proposal:

- a. The rates proposed, including subsidiary work sheets and other relevant data, cross referenced and reconciled to the financial data noted in subsection b. Allocated central service costs will be supported by the summary table included in the approved central service cost allocation plan. This summary table is not required to be submitted with the indirect cost proposal if the central service cost allocation plan for the same fiscal year has been approved by the cognizant agency for indirect costs and is available to the funding agency.
- b. A copy of the financial data (financial statements, comprehensive annual financial report, executive budgets, accounting reports, etc.) upon which the rate is based. Adjustments resulting from the use of unaudited data will be recognized, where appropriate, by the Federal cognizant agency for indirect costs in a subsequent proposal.
- c. The approximate amount of direct base costs incurred under Federal awards. These costs should be broken out between salaries and wages and other direct costs.

- d. A chart showing the organizational structure of the agency during the period for which the proposal applies, along with a functional statement(s) noting the duties and/or responsibilities of all units that comprise the agency. (Once this is submitted, only revisions need be submitted with subsequent proposals.)

3. Required certification.

Each indirect cost rate proposal must be accompanied by a certification in the following form:

Certificate of Indirect Costs

This is to certify that I have reviewed the indirect cost rate proposal submitted herewith and to the best of my knowledge and belief:

- (1) All costs included in this proposal [identify date] to establish billing or final indirect costs rates for [identify period covered by rate] are allowable in accordance with the requirements of the Federal award(s) to which they apply and the provisions of this Part. Unallowable costs have been adjusted for in allocating costs as indicated in the indirect cost proposal
- (2) All costs included in this proposal are properly allocable to Federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the agreements to which they are allocated in accordance with applicable requirements. Further, the same costs that have been treated as indirect costs have not been claimed as direct costs. Similar types of costs have been accounted for consistently and the Federal Government will be notified of any accounting changes that would affect the predetermined rate.

I declare that the foregoing is true and correct.

Governmental Unit: _____

Signature: _____

Name of Official: _____

Title: _____

Date of Execution: _____

E. Negotiation and Approval of Rates

1. Indirect cost rates will be reviewed, negotiated, and approved by the cognizant agency on a timely basis. Once a rate has been agreed upon, it will be accepted and used by all Federal agencies unless prohibited or limited by statute. Where a Federal awarding agency has reason to believe that special operating factors affecting its Federal awards necessitate special indirect cost rates, the funding agency will, prior to the time the rates are negotiated, notify the cognizant agency for indirect costs.

2. The use of predetermined rates, if allowed, is encouraged where the cognizant agency for indirect costs has reasonable assurance based on past experience and reliable projection of the non-Federal entity's costs, that the rate is not likely to exceed a rate based on actual costs. Long-term agreements utilizing predetermined rates extending over two or more years are encouraged, where appropriate.
3. The results of each negotiation must be formalized in a written agreement between the cognizant agency for indirect costs and the governmental unit. This agreement will be subject to re-opening if the agreement is subsequently found to violate a statute, or the information upon which the plan was negotiated is later found to be materially incomplete or inaccurate. The agreed upon rates must be made available to all Federal agencies for their use.
4. Refunds must be made if proposals are later found to have included costs that
 - (a) are unallowable
 - (i) as specified by law or regulation,
 - (ii) as identified in § 200.420, or
 - (iii) by the terms and conditions of Federal awards, or
 - (b) are unallowable because they are clearly not allocable to Federal awards. These adjustments or refunds will be made regardless of the type of rate negotiated (predetermined, final, fixed, or provisional).

F. Other Policies

1. Fringe Benefit Rates

If overall fringe benefit rates are not approved for the governmental unit as part of the central service cost allocation plan, these rates will be reviewed, negotiated and approved for individual recipient agencies during the indirect cost negotiation process. In these cases, a proposed fringe benefit rate computation should accompany the indirect cost proposal. If fringe benefit rates are not used at the recipient agency level (i.e., the agency specifically identifies fringe benefit costs to individual employees), the governmental unit should so advise the cognizant agency for indirect costs.

2. Billed Services Provided by the Recipient Agency

In some cases, governmental departments or agencies (components of the governmental unit) provide and bill for services similar to those covered by central service cost allocation plans (e.g., computer centers). Where this occurs, the governmental departments or agencies (components of the governmental unit) should be guided by the requirements in Appendix V relating to the development of billing rates and documentation requirements, and should advise the cognizant agency for indirect costs of any billed services. Reviews of these types of services (including reviews of costing/billing methodology, profits or losses, etc.) will be made on a case-by-case basis as warranted by the circumstances involved.

3. Indirect Cost Allocations Not Using Rates

In certain situations, governmental departments or agencies (components of the governmental unit), because of the nature of their Federal awards, may be required to develop a cost allocation plan that distributes indirect (and, in some cases, direct) costs to the specific funding sources. In these cases, a narrative cost allocation methodology should be developed, documented, maintained for audit, or submitted, as appropriate, to the cognizant agency for indirect costs for review, negotiation, and approval.

4. Appeals

If a dispute arises in a negotiation of an indirect cost rate (or other rate) between the cognizant agency for indirect costs and the governmental unit, the dispute must be resolved in accordance with the appeals procedures of the cognizant agency for indirect costs.

5. Collection of Unallowable Costs and Erroneous Payments

Costs specifically identified as unallowable and charged to Federal awards either directly or indirectly will be refunded (including interest chargeable in accordance with applicable Federal cognizant agency for indirect costs regulations).

6. OMB Assistance

To the extent that problems are encountered among the Federal agencies or governmental units in connection with the negotiation and approval process, OMB will lend assistance, as required, to resolve such problems in a timely manner.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75889, Dec. 19, 2014; 85 FR 49581, Aug. 13, 2020; 89 FR 30207, Apr. 22, 2024]

Appendix VIII to Part 200—Nonprofit Organizations Exempted From Subpart E of Part 200

1. Advance Technology Institute (ATI), Charleston, South Carolina
2. Aerospace Corporation, El Segundo, California
3. American Institutes of Research (AIR), Washington, DC
4. Argonne National Laboratory, Chicago, Illinois
5. Atomic Casualty Commission, Washington, DC
6. Battelle Memorial Institute, Headquartered in Columbus, Ohio
7. Brookhaven National Laboratory, Upton, New York
8. Charles Stark Draper Laboratory, Incorporated, Cambridge, Massachusetts
9. CNA Corporation (CNAC), Alexandria, Virginia
10. Environmental Institute of Michigan, Ann Arbor, Michigan
11. Georgia Institute of Technology/Georgia Tech Applied Research Corporation/Georgia Tech Research Institute, Atlanta, Georgia
12. Hanford Environmental Health Foundation, Richland, Washington
13. IIT Research Institute, Chicago, Illinois
14. Institute of Gas Technology, Chicago, Illinois

15. Institute for Defense Analysis, Alexandria, Virginia
16. LMI, McLean, Virginia
17. Mitre Corporation, Bedford, Massachusetts
18. Noblis, Inc., Falls Church, Virginia
19. National Radiological Astronomy Observatory, Green Bank, West Virginia
20. National Renewable Energy Laboratory, Golden, Colorado
21. Oak Ridge Associated Universities, Oak Ridge, Tennessee
22. Rand Corporation, Santa Monica, California
23. Research Triangle Institute, Research Triangle Park, North Carolina
24. Riverside Research Institute, New York, New York
25. South Carolina Research Authority (SCRA), Charleston, South Carolina
26. Southern Research Institute, Birmingham, Alabama
27. Southwest Research Institute, San Antonio, Texas
28. SRI International, Menlo Park, California
29. Syracuse Research Corporation, Syracuse, New York
30. Universities Research Association, Incorporated (National Acceleration Lab), Argonne, Illinois
31. Urban Institute, Washington DC
32. Nonprofit insurance companies, such as Blue Cross and Blue Shield Organizations
33. Other nonprofit organizations as negotiated with Federal awarding agencies

[78 FR 78608, Dec. 26, 2013, as amended at 85 FR 49582, Aug. 13, 2020]

Appendix IX to Part 200—Hospital Cost Principles

Until such time as revised guidance is proposed and implemented for hospitals, the existing principles located at 45 CFR part 75 Appendix IX, entitled “Principles for Determining Cost Applicable to Research and Development Under Grants and Contracts with Hospitals,” remain in effect.

[86 FR 10440, Feb. 22, 2021]

Appendix X to Part 200—Data Collection Form

The data collection form is available as a series of workbooks on the Federal Audit Clearinghouse (FAC.gov). The form and submission instructions can be found at <https://www.fac.gov/>.

[89 FR 30207, Apr. 22, 2024]

Appendix XI to Part 200—Compliance Supplement

The compliance supplement is available on the OMB website.

[85 FR 49582, Aug. 13, 2020]

Appendix XII to Part 200—Award Term and Condition for Recipient Integrity and Performance Matters

I. Reporting of Matters Related to Recipient Integrity and Performance

(a) *General Reporting Requirement.*

- (1) If the total value of your active grants, cooperative agreements, and procurement contracts from all Federal agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then you as the recipient must ensure the information available in the responsibility/qualification records through the System for Award Management (*SAM.gov*), about civil, criminal, or administrative proceedings described in paragraph (b) of this award term is current and complete. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in responsibility/qualification records in *SAM.gov* on or after April 15, 2011 (except past performance reviews required for Federal procurement contracts) will be publicly available.

(b) *Proceedings About Which You Must Report.*

- (1) You must submit the required information about each proceeding that—
 - (i) Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;
 - (ii) Reached its final disposition during the most recent five-year period; and
 - (iii) Is one of the following—
 - (A) A criminal proceeding that resulted in a conviction;
 - (B) A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;
 - (C) An administrative proceeding that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
 - (D) Any other criminal, civil, or administrative proceeding if—
 - (1) It could have led to an outcome described in paragraph (b)(1)(iii)(A) through (C);
 - (2) It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - (3) The requirement in this award term to disclose information about the proceeding does not conflict with applicable laws and regulations.

- (c) *Reporting Procedures.* Enter the required information in *SAM.gov* for each proceeding described in paragraph (b) of this award term. You do not need to submit the information a second time under grants and cooperative agreements that you received if you already provided the information in *SAM.gov* because you were required to do so under Federal procurement contracts that you were awarded.

(d) **Reporting Frequency.** During any period of time when you are subject to the requirement in paragraph (a) of this award term, you must report proceedings information in *SAM.gov* for the most recent five-year period, either to report new information about a proceeding that you have not reported previously or affirm that there is no new information to report. If you have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than \$10,000,000, you must disclose semiannually any information about the criminal, civil, and administrative proceedings.

(e) **Definitions.** For purposes of this award term—

Administrative proceeding means a non-judicial process that is adjudicatory in nature to make a determination of fault or liability (for example, Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with the performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

Conviction means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of *nolo contendere*.

Total value of currently active grants, cooperative agreements, and procurement contracts includes the value of the Federal share already received plus any anticipated Federal share under those awards (such as continuation funding).

II. [Reserved]

[89 FR 30207, Apr. 22, 2024]

This content is from the eCFR and is authoritative but unofficial.

Title 2 — Grants and Agreements

Subtitle B — Federal Agency Regulations for Grants and Agreements

Chapter XII — Department of Transportation

Part 1200 Nonprocurement Suspension and Debarment

§ 1200.10 What does this part do?

§ 1200.20 Does this part apply to me?

§ 1200.30 What policies and procedures must I follow?

Subpart A General

§ 1200.137 Who in the Department of Transportation may grant an exception to let an excluded person participate in a covered transaction?

Subpart B Covered Transactions

§ 1200.220 What contracts and subcontracts, in addition to those listed in 2 CFR 180.220, are covered transactions?

Subpart C Responsibilities of Participants Regarding Transactions

§ 1200.332 What methods must I use to pass requirements down to participants at lower tiers with whom I intend to do business?

Subpart D Responsibilities of Federal Agency Officials Regarding Transactions

§ 1200.437 What method do I use to communicate to a participant the requirements described in the OMB guidance at 2 CFR 180.435?

Subparts E-J [Reserved]

PART 1200—NONPROCUREMENT SUSPENSION AND DEBARMENT

Authority: 49 U.S.C. 322; Sec. 2455, Public Law 103-355, 108 Stat. 3327 (31 U.S.C. 6101 note); E.O. 12549 (3 CFR, 1986 Comp., p. 189); E.O. 12689 (3 CFR, 1989 Comp., p. 235).

Source: 73 FR 24140, May 2, 2008, unless otherwise noted.

§ 1200.10 What does this part do?

This part adopts the Office of Management and Budget (OMB) guidance in subparts A through I of 2 CFR part 180, as supplemented by this part, as the Department of Transportation policies and procedures for nonprocurement suspension and debarment. It thereby gives regulatory effect for the Department of Transportation to the OMB guidance as supplemented by this part. This part satisfies the requirements in section 3 of Executive Order 12549, “Suspension and Debarment” (3 CFR 1986 Comp., p. 189), Executive Order 12689, “Suspension and Debarment” (3 CFR 1989 Comp., p. 235) and 31 U.S.C. 6101 note (Section 2455, Public Law 103-355, 108 Stat. 3327).

§ 1200.20 Does this part apply to me?

This part and, through this part, pertinent portions of the OMB guidance in subparts A through I of 2 CFR part 180 (see table at 2 CFR 180.100(b)) apply to you if you are a—

- (a) Participant or principal in a “covered transaction” (see subpart B of 2 CFR part 180 and the definition of “nonprocurement transaction” at 2 CFR 180.970;
- (b) Respondent in a Department of Transportation suspension or debarment action;
- (c) Department of Transportation debarment or suspension official;
- (d) Department of Transportation grants officer, agreements officer, or other official authorized to enter into any type of nonprocurement transaction that is a covered transaction.

§ 1200.30 What policies and procedures must I follow?

The Department of Transportation policies and procedures that you must follow are the policies and procedures specified in each applicable section of the OMB guidance in subparts A through I of 2 CFR part 180, as that section is supplemented by the section in this part with the same section number. The contracts that are covered transactions, for example, are specified by section 220 of the OMB guidance (i.e., 2 CFR 180.220), as supplemented by section 220 in this part (i.e., § 1200.220). For any section of OMB guidance in subparts A through I of 2 CFR 180 that has no corresponding section in this part, Department of Transportation policies and procedures are those in the OMB guidance.

Subpart A—General

§ 1200.137 Who in the Department of Transportation may grant an exception to let an excluded person participate in a covered transaction?

Within the Department of Transportation, Office of the Secretary, the Secretary or an official designated by the Secretary may grant an exception permitting an excluded person to participate in a particular covered transaction. Within an Operating Administration of the Department of Transportation, the head of the operating administration may grant an exception permitting an excluded person to participate in a particular covered transaction. The head of an operating administration may delegate this function and authorize successive delegations.

Subpart B—Covered Transactions

§ 1200.220 What contracts and subcontracts, in addition to those listed in 2 CFR 180.220, are covered transactions?

In addition to the contracts covered under 2 CFR 180.220(b) of the OMB guidance, this part applies to any contract, regardless of tier, that is awarded by a contractor, subcontractor, supplier, consultant, or its agent or representative in any transaction, if the contract is to be funded or provided by the Department of Transportation under a covered nonprocurement transaction and the amount of the contract is expected to equal or exceed \$25,000. This extends the coverage of the Department of Transportation nonprocurement suspension and debarment requirements to all lower tiers of subcontracts under covered nonprocurement transactions, as permitted under the OMB guidance at 2 CFR 180.220(c) (see optional lower-tier coverage in the figure in the appendix to 2 CFR part 180).

Subpart C—Responsibilities of Participants Regarding Transactions

§ 1200.332 What methods must I use to pass requirements down to participants at lower tiers with whom I intend to do business?

You as a participant must include a term or condition in lower-tier transactions requiring lower-tier participants to comply with subpart C of the OMB guidance in 2 CFR part 180, as supplemented by this subpart.

Subpart D—Responsibilities of Federal Agency Officials Regarding Transactions

§ 1200.437 What method do I use to communicate to a participant the requirements described in the OMB guidance at 2 CFR 180.435?

To communicate to a participant the requirements described in 2 CFR 180.435 of the OMB guidance, you must include a term or condition in the transaction that requires the participant's compliance with subpart C of 2 CFR part 180 and requires the participant to include a similar term or condition in lower-tier covered transactions.

Subparts E-J [Reserved]

Guidelines for States Participating in the Pipeline Safety Program

Appendix H

STATE PIPELINE SAFETY MENTORING PROGRAM

Mission:

Provide a process by which state programs shall be able to take advantage of providing or receiving mentoring from or to other state pipeline safety programs or PHMSA.

Goals:

To provide supplemental information beyond that currently available to state safety programs for the purpose of enhancing pipeline safety and to further the knowledge base of all state pipeline inspector(s) in the use of various inspection and investigation techniques, to exchange state training programs, to assist in promoting consistent of enforcement of federal regulations consistent with our federal partners at the state level, and to assist other state inspectors in their professional growth and improved knowledge of inspection techniquesObjectives:

Objectives:

- Review discuss, and utilize inspection techniques;
- Develop and nurture relationships between state programs and their staff in order to provide for more opportunities to expand mentoring programs between both state programs and with PHMSA;
- Increase state-to-state inspection and enforcement consistency as applicable to federal pipeline safety regulations;
- Enhance critical thinking processes that apply to inspections of various size operators;
- Broaden a state's knowledge of the diversity of gas pipeline facilities in other states;
- Develop/review varying processes for relevant data collection including, but not limited to, Damage Prevention, Integrity Management, and Incidents;
- Develop successful processes for conducting accident and incident investigations as well as a review of supporting reporting documentation requirements.

Program Guidelines:

- Mentoring application will be submitted to the PHMSA Director of State Programs for approval;
- Invitational Travel (based on availability) will be provided by PHMSA after application approval;
- Mentoring sessions will be no longer than five working days;
- States shall have the ability to arrange their own mentoring sessions with other states without invitational travel, but the state will still need an approved application in order for travel and personnel costs to be recovered through their State Pipeline Safety Base Grant;
- States that choose to arrange their own mentoring program without the approval of the PHMSA shall be responsible for all cost associated with the mentoring and shall not be allowed to recover those cost through their Grant;
- The state providing and the state receiving approved mentoring shall both provide to the PHMSA Director of State Programs a post-session Action Report identifying the advantages, lessons learned and other relevant information acquired as a result of the mentoring session. A copy of this report will also be provided to the NAPSAR Administrative Manager for posting on the private NAPSAR web page.

Contact Information:

- Zach Barrett – Director of State Programs, 1-405-834-8344 zach.barrett@dot.gov
- [Robert Clarillos – NAPSAR Administrative Manager, 480-263-2260 rclarillos@gmail.com](mailto:rclarillos@gmail.com)

Contact your PHMSA State Program liaison for further questions.

Instructions for Inspection Mentoring Applicants

August 6, 2014

- 1) Discuss inspection mentoring with Program Manager and obtain their approval.**
- 2) With Program Manager identify possible inspection mentoring opportunities (State or Federal) in accordance with the “Program Guidelines” in the “Pipeline Safety Inspector Mentoring Program Outline” document.**
- 3) Complete “Mentoring Application” Form and email to Don.Martin@dot.gov and copy Zach.Barrett@dot.gov**
- 4) Obtain an email approval from Don Martin, PHMSA State Coordinator or Zach Barrett, PHMSA Director of State Programs.**
- 5) Submit Invitational Travel Request through established Invitational Travel process**
- 6) Provide feedback for improving inspection mentoring process in accordance with the “Program Guidelines”.**

MENTORING APPLICATION

(Form to be completed by State Program Manager requesting mentoring)

Date of Request	DD/MM/YYYY
State Program (Requesting Mentoring)	Choose an item.
State Program (Providing Mentoring)	
Describe the Invitational Travel being requested Including dates, transportation, lodging, special needs, etc.	
Provide a brief synopsis of the goals / expectations of the mentoring to be received:	
Provide a brief summary identifying the qualifications of the person who will be providing the mentoring: should include all relevant experience:	
List all courses completed in PHMSA's Training and Qualification Division if applicable to the proposed mentoring objectives:	
• Has mentoring under this program been provided previously to the requesting state program? Circle One: Yes No • Do travel restrictions exist for State Program providing the mentoring? List any blackout dates – TQ conflict dates – other dates not available within this calendar year:	
Comments:	

Guidelines for States Participating in the Pipeline Safety Program

Appendix I

2025 Program Evaluation for CY2024 Activities

Pipeline Safety Gas State Program Evaluation

A – PROGRESS REPORT AND PROGRAM DOCUMENTATION REVIEW	NO POINTS
B – PROGRAM INSPECTION PROCEDURES	15
C – STATE QUALIFICATIONS	10
D – PROGRAM PERFORMANCE	50
E – FIELD INSPECTIONS	15
F – DAMAGE PREVENTION & ANNUAL REPORT ANALYSIS	10
G - INTERSTATE AGENT/AGREEMENT STATES	NO POINTS

TOTAL - 100

A – PROGRESS REPORT AND PROGRAM DOCUMENTATION REVIEW

1 Were the following Progress Report items accurate?

NO POINTS

- a. Stats On Operators Data – Progress Report Attachment 1
- b. State Inspection Activity Data – Progress Report Attachment 2
- c. List of Operators Data – Progress Report Attachment 3*
- d. Incidents/Accidents Data – Progress Report Attachment 4*
- e. Stats of Compliance Actions Data – Progress Report Attachment 5*
- f. List of Records Kept Data - Progress Report Attachment 6 *
- g. Staff and TQ Training Data – Progress Report Attachment 7
- h. Compliance with Federal Regulations Data – Progress Report Attachment 8
- i. Performance and Damage Prevention Question Data – Progress Report Attachment 10*

* Not scored on Progress Report

(No points - Issues addressed in Chair letters)

Comments:

TOTAL - NO POINTS

B – PROGRAM INSPECTION PROCEDURES

GENERAL

- 1 Do written procedures address pre-inspection, inspection and post inspection activities for each of the following inspection types: Chapter 5.1

5

- a. Standard Inspections, which include Drug/Alcohol, CRM and Public Awareness Effectiveness Inspections
 - b. TIMP and DIMP Inspections (reviewing largest operator(s) plans annually)
 - c. OQ Inspections
 - d. Damage Prevention Inspections
 - e. On-Site Operator Training
 - f. Construction Inspections (annual efforts)
 - g. LNG Inspections
- (Yes = 5 points, No= 0 Points, NI= 1-4 points)

Comments:

- 2 Do written procedures address inspection priorities of each operator, and if necessary each unit, based on the following elements and time frames established in its procedures? Chapter 5.1

4

- Length of time since last inspection
- Operating history of operator/unit and/or location (includes leakage, incident and compliance activities)
- Type of activity being undertaken by operators (i.e. construction)
- Locations of operator's inspection units being inspected - (HCA's, Geographic area, Population Centers, etc.)
- Process to identify high-risk inspection units that includes all threats - (Excavation Damage, Corrosion, Natural Forces, Outside Forces, Material and Welds, Equipment, Operators and any Other Factors)
- Are inspection units broken down appropriately?

(Yes = 4 points, No= 0 Points, NI= 1-3 points)

COMPLIANCE PROCEDURES

- 3 Does the state have written procedures to identify steps to be taken from the discovery to resolution of a probable violation? Chapter 5.1

3

- Procedures to notify an operator (company officer) when a noncompliance is identified
- Procedures to routinely review progress of compliance actions to prevent delays or breakdowns
- Procedures regarding closing outstanding probable violations

(Yes = 3 points, No= 0 Points, NI= 1-2 points)

Comments:

INCIDENT/ACCIDENT INVESTIGATION PROCEDURES

- 4 Does the state have written procedures to address state actions in the event of an incident/accident?

3

- Mechanism to receive, record, and respond to operator reports of incidents, including after-hours reports
- If onsite investigation was not made, do procedures require on-call staff to obtain sufficient information to determine the facts to support the decision not to go on-site.

(Yes = 3 points, No= 0 Points, NI= 1-2 points)

Comments:

TOTAL - 15

C – STATE QUALIFICATIONS

1

Has each inspector and program manager fulfilled training requirements? (See Guidelines Appendix C for requirements) Chapter 4.3

5

In addition -

- Completion of Required OQ Training before conducting inspection as lead
- Completion of Required DIMP/IMP Training before conducting inspection as lead
- Completion of Required LNG Training before conducting inspection as lead
- Root Cause Training by at least one inspector/program manager
- Note any outside training completed
- Verify inspector has obtained minimum qualifications to lead any applicable standard inspection as the lead inspector (Reference State Guidelines Section 4.3.1)

(Yes = 5 points, No= 0 Points, NI= 1-4 points)

Comments:

2

Did state records and discussions with state pipeline safety program manager indicate adequate knowledge of PHMSA program and regulations?

5

(Yes = 5 points, No= 0 Points, NI= 1-4 points)

Comments:

TOTAL -

10

D – PROGRAM PERFORMANCE

1 Did state inspect all types of operators and inspection units in accordance with time intervals established in written procedures? Chapter 5.1 **5**

- Standard (General Code Compliance)
- Public Awareness Effectiveness Reviews
- Drug and Alcohol
- Control Room Management
- Part 193 LNG Inspections
- Construction (did state achieve 20% of total inspection person-days?)
- OQ (see Question 3 for additional requirements)
- IMP/DIMP (see Question 4 for additional requirements)

(Yes= 5 points, No= 0 Points, NI= 1-4 points)

Comments:

2 Did inspection form(s) cover all applicable code requirements addressed on Federal Inspection form(s)? Did State complete all applicable portions of inspection forms? Chapter 5.1 **10**

Do inspection records indicate that adequate reviews of procedures, records and field activities, including notes and the appropriate level of inspection person-days for each inspection, were performed?

- Standard (General Code Compliance)
- Public Awareness Effectiveness Reviews
- Drug and Alcohol
- Control Room Management
- Part 193 LNG Inspections
- Construction
- OQ (see Question 3 for additional requirements)
- IMP/DIMP (see Question 4 for additional requirements)

(Yes= 10 points, No= 0 Points, NI= 1-9 points)

Comments:

3 Is state verifying monitoring (Protocol 9/Form 15) operators OQ programs? This should include verification of any plan updates and that persons performing covered tasks (including contractors) are properly qualified and requalified at intervals established in the operator's plan. **2**

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

4 Is state verifying operator's integrity management Programs (IMP and DIMP)? This should include a review of plans, along with monitoring progress. In addition, the review should take in to account program review and updates of operator's plan(s). 49 CFR 192 Subpart P **2**

- Are the implementation plans of the state's large/largest operator(s) being reviewed annually to ensure they are completing the full cycle of the DIMP/IMP process?
- Are states verifying with operators any plastic pipe and components that have shown a record of defects/leaks and mitigating those through DIMP plan?
- Are the states verifying operators are including low pressure distribution systems in their threat analysis?

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

- 5 Did the state review the following (these items are NTSB recommendations to PHMSA that have been deemed acceptable response based on PHMSA reviewing these items during the evaluation process): Chapter 5.1

2

- a. operator procedures for determining if exposed cast iron pipe was examined for evidence of graphitization and if necessary remedial action was taken;
- b. operator procedures for surveillance of cast iron pipelines, including appropriate action resulting from tracking circumferential cracking failures, study of leakage history, or other unusual operating maintenance condition? (Note: See GPTC Appendix G-18 for guidance);
- c. operator emergency response procedures for leaks caused by excavation damage near buildings and determine whether the procedures adequately address the possibility of multiple leaks and underground migration of gas into nearby buildings Refer to 4/12/01 letter from PHMSA in response to NTSB recommendation P-00-20 and P-00-21;
- d. operator records of previous accidents and failures including reported third-party damage and leak response to ensure appropriate operator response as required by 192.617; and
- e. directional drilling/boring procedures of each pipeline operator or its contractor to determine if they include actions to protect their facilities from the dangers posed by drilling and other trench less technologies;
- f. Operator procedures for considering low pressure distribution systems in threat analysis?
- g. Operator compliance with state and federal regulations for regulators located inside buildings?

(Yes= 2 points, No= 0 Points, NI= 1-2 points)

Comments:

- 6 Did the State verify Operators took appropriate action regarding advisory bulletins issued since last evaluation?

1

- (Advisory Bulletins Current Year)

(Yes= 1 point, No= 0 Points, NI= .5 point)

Comments:

COMPLIANCE ACTIVITIES

- 7 Did the state follow compliance procedures (from discovery to resolution) and adequately document all probable violations, including what resolution or further course of action is needed to gain compliance? Chapter 5.1

10

- Were compliance actions sent to company officer or manager/board member if municipal/government system?
- Were probable violations documented properly?
- Resolve probable violations
- Routinely review progress of probable violations
- Did state issue compliance actions for all probable violations discovered?
- Can state demonstrate fining authority for pipeline safety violations?
- Does Program Manager review, approve and monitor all compliance actions? (note:Program Manager or Senior Official should sign any NOPV or related enforcement action)
- Did state compliance actions give reasonable due process to all parties? Including "show cause" hearing, if necessary.
- Within 30 days, conduct a post-inspection briefing with the owner or operator outlining any concerns
- Within 90 days, to the extent practicable, provide the owner or operator with written preliminary findings of the inspection. (Incident investigations do not need to meet 30/90-day requirement)

(Yes= 10 points, No= 0 Points, NI= 1-9 points)

Comments:

INCIDENT INVESTIGATIONS	
8	Were all federally reportable incidents investigated, thoroughly documented, with conclusions and recommendations? - Does state have adequate mechanism to receive and respond to operator reports of incidents, including after-hours reports? - Did state keep adequate records of Incident/Accident notifications received? - If onsite investigation was not made, did the state obtain sufficient information from the operator and/or by means to determine the facts to support the decision not to go on site? - Were onsite observations documented? - Were contributing factors documented? - Were recommendations to prevent recurrences, where appropriate, documented? - Did state initiate compliance action for any violations found during any incident/accident investigation? - Did state assist Region Office or Accident Investigation Division (AID) by taking appropriate follow-up actions related to the operator incident reports to ensure accuracy and final report has been received by PHMSA? - Does state share any lessons learned from incidents/accidents? (Yes= 10 points, No= 0 Points, NI= 1-9 points) Comments:
9	Did state respond to Chairman's letter on previous evaluation within 60 days and correct or address any noted deficiencies? (If necessary) Chapter 8.1 (Yes= 1 points, No= 0 Points, NI= .5 point) Comments:
10	Did State conduct or participate in pipeline safety training session or seminar in Past 3 Years? Chapter 8.5 (Information only - No Points) Comments:
11	Has state confirmed transmission operators have submitted information into NPMS database along with changes made after original submission? (Information only - No Points) Comments:
12	Does the state have a mechanism for communicating with stakeholders - other than state pipeline safety seminar? (This should include making enforcement cases available to public). (Yes= 1 point, No= 0 Points, NI= .5 point) Comments:
13	Did state execute appropriate follow-up actions to Safety Related Condition (SRC) Reports? Chapter 6.7 (Yes= 1 points, No= 0 Points, NI= .5 point) Comments:
14	Was the State responsive to: a. Surveys or information requests from NAPS or PHMSA; b. PHMSA Work Management System tasks? (Yes= 1 point, No= 0 Points, NI= .5 point) Comments:

15	If the State has issued any waivers/special permits for any operator, has the state verified conditions of those waivers/special permits are being met? This should include having the operator amend procedures where appropriate. (Yes= 1 points, No= 0 Points, NI= .5 point) Comments:	1
16	Were pipeline program files well-organized and accessible? (Information only - No Points) Comments:	No Points
17	Discussion with State on accuracy of inspection day information submitted into State Inspection Day Calculation Tool (SICT). Has the state updated SICT data? (Yes= 3 points, No= 0 Points, NI= 1-2 points) Comments:	3
18	Discussion on State Program Performance Metrics found on Stakeholder Communication site. http://primis.phmsa.dot.gov/comm/states.htm?nocache=4805 Comments:	No Points
19	Did the state encourage and promote operator implementation of Pipeline Safety Management Systems (PSMS), or API RP 1173? This holistic approach to improving pipeline safety includes the identification, prevention and remediation of safety hazards. · https://pipelinesms.org/ · Reference AGA recommendation to members May 20, 2019 (Information only - No Points) Comments:	No Points
TOTAL -		50

E – FIELD INSPECTIONS

1 Operator, Inspector, Location, Date and PHMSA Representative

No Points

- What type of inspection(s) did the state inspector conduct during the field portion of the state evaluation? (i.e. Standard, Construction, IMP, etc)
- When was the unit inspected last?
- Was pipeline operator or representative present during inspection?
- Effort should be made to observe newest state inspector with least experience

(Information only - No Points)

Comments:

2 Did the inspector use an appropriate inspection form/checklist and was the form/checklist used as a guide for the inspection? (New regulations shall be incorporated)

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

3 Did the inspector adequately review the following during the inspection ?

10

- Procedures (were the inspector's questions of the operator adequate to determine compliance?)
- Records (did the inspector adequately review trends and ask in-depth questions?)
- Field Activities/Facilities (did inspector ensure that procedures were being followed, including ensuring that properly calibrated equipment was used and OQ's were acceptable?)
- Other (please comment)
- Was the inspection of adequate length to properly perform the inspection?

(Yes= 10 points, No= 0 Points, NI= 1-9 points)

Comments:

4 From your observation did the inspector had adequate knowledge of the pipeline safety program and regulations ? (Evaluator will document reasons if unacceptable)

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

5 Did the inspector conduct an exit interview, including identifying probable violations? (If

1

inspection is not totally completed the interview should be based on areas covered during time of field evaluation)

(Yes= 1 point, No= 0 Points, NI= .5 point)

Comments:

6 Was inspection performed in a safe, positive, and constructive manner ?

No Points

- No unsafe acts should be performed during inspection by the state inspector
- What did the inspector observe in the field? (Narrative description of field observations and how inspector performed)
- Best Practices to Share with Other States - (Field - could be from operator visited or state inspector practices)
- Other

(Information only - No Points)

General Comments:

TOTAL - 15

F – DAMAGE PREVENTION & ANNUAL REPORT ANALYSIS

1

Has the state reviewed Operator Annual reports, along with Incident/Accident reports, for accuracy and analyzed data for trends and operator issues?

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

2

Has the state verified that the operators analyze excavation damages for the purpose of determining root causes and minimizing the possibility of a recurrence? (§ 192.617)

2

- Has the state verified that the operators have appropriately identified excavators who have repeatedly violated one-call laws and damaged their facilities. Have the operators taken steps to mitigate that risks? (§ 192.1007)

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

3

Has the state reviewed the operator's annual report pertaining to Part D – Excavation Damage?

4

- Is the information complete and accurate with root cause numbers?
- Has the state evaluated the causes for the damages listed under "One-Call Notification Practices Not Sufficient" (Part D.1.a.)?
- Has the state evaluated the causes for the damages listed under "Locating Practices Not Sufficient" (Part D.1.b)? For each operator, does the state review the following?
 - Is the operator or its locating contractor(s) qualified and following written procedures for locating and marking facilities?
 - Is the operator appropriately requalifying locators to address performance deficiencies?
- What is the number of damages resulting from mismarks?
- What is the number of damages resulting from not locating within time requirements (no-shows)?
- Is the operator appropriately addressing discovered mapping errors resulting in excavation damages?
- Are mapping corrections timely and according to written procedures?
- Has the state evaluated the causes for the damages listed under "Excavation Practices Not Sufficient" (Part D.1.c.)?

Comments:

(Yes= 4 points, No= 0 Points, NI= 1-3 point)

4

Has the agency or another organization within the state collected data and evaluated trends on the number of pipeline damages per 1,000 locate requests?

2

- What stakeholder group is causing the highest number of damages to the pipelines?
Operator, contractor, locating company or public.
- Has the state verified the operator is appropriately focusing damage prevention education and training to stakeholders causing the most damages?
- Has the state evaluated which of the following best describes the reason for the excavation damages; i.e., operator or contractor not following written procedures, failure to maintain marks, failure to support exposed facilities, failure to use hand tools were required, failure to test-hole (pot hole), improper backfilling practices, failure to maintain clearance or insufficient excavation practices.
- Has the state verified the operator is appropriately focusing damage prevention education and training to address the causes of excavation damages?

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

TOTAL -

10

G - INTERSTATE AGENT/AGREEMENT STATES

1

Were all inspections of interstate pipelines conducted using the Inspection Assistant program for documenting inspections?

NO POINTS

(Information only - No Points)

Comments:

2

If inspections were conducted independent of a PHMSA team inspection was notice of all identified probable violations provided to PHMSA within 60 days?

NO POINTS

(Information only - No Points)

Comments:

3

If inspections were conducted independent of a PHMSA team inspection was PHMSA immediately notified of conditions which may pose an immediate safety hazard to the public or environment?

NO POINTS

(Information only - No Points)

Comments:

4

If inspections were conducted independent of a PHMSA team inspection did the state coordinate with PHMSA if inspections not were not included in the PHMSA Inspection Work Plan?

NO POINTS

(Information only - No Points)

Comments:

5

Did the state take direction from and cooperate with PHMSA for all incident investigations conducted on interstate pipelines?

NO POINTS

(Information only - No Points)

Comments:

Comments: No scoring for this section. Any unsatisfactory response will result in a discussion with the Region and State regarding continued Interstate Agent Status.

TOTAL - NO POINTS

Guidelines for States Participating in the Pipeline Safety Program

Appendix J

2025 Program Evaluation for CY2024 Activities

Pipeline Safety Hazardous Liquid State Program Evaluation

A – PROGRESS REPORT AND PROGRAM DOCUMENTATION REVIEW

B – PROGRAM INSPECTION PROCEDURES

C – STATE QUALIFICATIONS

D – PROGRAM PERFORMANCE

E – FIELD INSPECTIONS

F – DAMAGE PREVENTION & ANNUAL REPORT ANALYSIS

G - INTERSTATE AGENT/AGREEMENT STATES

NO POINTS
15
10
50
15
6
NO POINTS

TOTAL - 96

A – PROGRESS REPORT AND PROGRAM DOCUMENTATION REVIEW

1 Were the following Progress Report items accurate?

NO POINTS

- a. Stats On Operators Data – Progress Report Attachment 1
- b. State Inspection Activity Data – Progress Report Attachment 2
- c. List of Operators Data – Progress Report Attachment 3*
- d. Incidents/Accidents Data – Progress Report Attachment 4*
- e. Stats of Compliance Actions Data – Progress Report Attachment 5*
- f. List of Records Kept Data - Progress Report Attachment 6 *
- g. Staff and TQ Training Data – Progress Report Attachment 7
- h. Compliance with Federal Regulations Data – Progress Report Attachment 8
- i. Performance and Damage Prevention Question Data – Progress Report Attachment 10*

* Not scored on Progress Report

(No points - Issues addressed in Chair letters)

Comments:

TOTAL - NO POINTS

B – PROGRAM INSPECTION PROCEDURES

GENERAL

1

Do written procedures address pre-inspection, inspection and post inspection activities for each of the following inspection types: Chapter 5.1

5

- a. Standard Inspections, which include Drug/Alcohol, CRM and Public Awareness Effectiveness Inspections
 - b. IMP Inspections
 - c. OQ Inspections
 - d. Damage Prevention Inspections
 - e. On-Site Operator Training
 - f. Construction Inspections (annual efforts)
- (Yes = 5 points, No= 0 Points, NI= 1-4 points)

Comments:

2

Do written procedures address inspection priorities of each operator, and if necessary each unit, based on the following elements and time frames established in its procedures? Chapter 5.1

4

- Length of time since last inspection
- Operating history of operator/unit and/or location (includes leakage, incident and compliance activities)
- Type of activity being undertaken by operators (i.e. construction)
- Locations of operator's inspection units being inspected - (HCA's, Geographic area, Population Centers, etc.)
- Process to identify high-risk inspection units that includes all threats - (Excavation Damage, Corrosion, Natural Forces, Outside Forces, Material and Welds, Equipment, Operators and any Other Factors)
- Are inspection units broken down appropriately?

(Yes = 4 points, No= 0 Points, NI= 1-3 points)

COMPLIANCE PROCEDURES

3

Does the state have written procedures to identify steps to be taken from the discovery to resolution of a probable violation? Chapter 5.1

3

- Procedures to notify an operator (company officer) when a noncompliance is identified
- Procedures to routinely review progress of compliance actions to prevent delays or breakdowns
- Procedures regarding closing outstanding probable violations

(Yes = 3 points, No= 0 Points, NI= 1-2 points)

Comments:

INCIDENT/ACCIDENT INVESTIGATION PROCEDURES

4

Does the state have written procedures to address state actions in the event of an incident/accident?

3

- Mechanism to receive, record, and respond to operator reports of incidents, including after-hours reports
- If onsite investigation was not made, do procedures require on-call staff to obtain sufficient information to determine the facts to support the decision not to go on-site.

(Yes = 3 points, No= 0 Points, NI= 1-2 points)

Comments:

TOTAL - 15

C – STATE QUALIFICATIONS

1

Has each inspector and program manager fulfilled training requirements? (See Guidelines Appendix C for requirements) Chapter 4.3

5

In addition -

- Completion of Required OQ Training before conducting inspection as lead
- Completion of Required IMP Training before conducting inspection as lead
- Root Cause Training by at least one inspector/program manager
- Note any outside training completed
- Verify inspector has obtained minimum qualifications to lead any applicable standard inspection as the lead inspector (Reference State Guidelines Section 4.3.1)

(Yes = 5 points, No= 0 Points, NI= 1-4 points)

Comments:

2

Did state records and discussions with state pipeline safety program manager indicate adequate knowledge of PHMSA program and regulations?

5

(Yes = 5 points, No= 0 Points, NI= 1-4 points)

Comments:

TOTAL -

10

D – PROGRAM PERFORMANCE

- 1 **Did state inspect all types of operators and inspection units in accordance with time intervals established in written procedures?** Chapter 5.1

5

- Standard (General Code Compliance)
- Public Awareness Effectiveness Reviews
- Drug and Alcohol
- Control Room Management
- Construction (did state achieve 20% of total inspection person-days?)
- OQ (see Question 3 for additional requirements)
- IMP (see Question 4 for additional requirements)

(Yes= 5 points, No= 0 Points, NI= 1-4 points)

Comments:

- 2 **Did inspection form(s) cover all applicable code requirements addressed on Federal Inspection form(s)? Did State complete all applicable portions of inspection forms?** Chapter 5.1

10

Do inspection records indicate that adequate reviews of procedures, records and field activities, including notes and the appropriate level of inspection person-days for each inspection, were performed?

- Standard (General Code Compliance)
- Public Awareness Effectiveness Reviews
- Drug and Alcohol
- Control Room Management
- Construction
- OQ (see Question 3 for additional requirements)
- IMP (see Question 4 for additional requirements)

(Yes= 10 points, No= 0 Points, NI= 1-9 points)

Comments:

- 3 **Is state verifying monitoring (Protocol 9/Form 15) operators OQ programs? This should include verification of any plan updates and that persons performing covered tasks (including contractors) are properly qualified and requalified at intervals established in the operator's plan.** 49 CFR Part 195 Subpart G

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

- 4 **Is state verifying operator's integrity management Programs (IMP)? This should include a review of plans, along with monitoring progress. In addition, the review should take in to account program review and updates of operator's plan(s).** 49 CFR 195 Subpart F

2

- Are the implementation plans of the state's large/largest operator(s) being reviewed annually to ensure they are completing the full cycle of the IMP process?

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

5 Did the state review the following (these items are NTSB recommendations to PHMSA that have been deemed acceptable response based on PHMSA reviewing these items during the evaluation process): Chapter 5.1	2

- a. operator records of previous accidents and failures including reported third-party damage and leak response to ensure appropriate operator response as required by 195.402; and

- b. directional drilling/boring procedures of each pipeline operator or its contractor to determine if they include actions to protect their facilities from the dangers posed by drilling and other trench less technologies;

(Yes= 2 points, No= 0 Points, NI= 1-2 points)

Comments:

6 Did the State verify Operators took appropriate action regarding advisory bulletins issued since last evaluation?	1

- *(Advisory Bulletins Current Year)*

(Yes= 1 point, No= 0 Points, NI= .5 point)

Comments:

COMPLIANCE ACTIVITIES

7 Did the state follow compliance procedures (from discovery to resolution) and adequately document all probable violations, including what resolution or further course of action is needed to gain compliance? Chapter 5.1	10

- Were compliance actions sent to company officer or manager/board member if municipal/government system?
- Were probable violations documented properly?
- Resolve probable violations
- Routinely review progress of probable violations
- Did state issue compliance actions for all probable violations discovered?
- Can state demonstrate fining authority for pipeline safety violations?
- Does Program Manager review, approve and monitor all compliance actions? (note:Program Manager or Senior Official should sign any NOPV or related enforcement action)
- Did state compliance actions give reasonable due process to all parties? Including "show cause" hearing, if necessary.
- Within 30 days, conduct a post-inspection briefing with the owner or operator outlining any concerns
- Within 90 days, to the extent practicable, provide the owner or operator with written preliminary findings of the inspection. (Incident investigations do not need to meet 30/90-day requirement)

(Yes= 10 points, No= 0 Points, NI= 1-9 points)

Comments:

ACCIDENT INVESTIGATIONS		
8	Were all federally reportable incidents investigated, thoroughly documented, with conclusions and recommendations? • Does state have adequate mechanism to receive and respond to operator reports of incidents, including after-hours reports? • Did state keep adequate records of Incident/Accident notifications received? • If onsite investigation was not made, did the state obtain sufficient information from the operator and/or by means to determine the facts to support the decision not to go on site? • Were onsite observations documented? • Were contributing factors documented? • Were recommendations to prevent recurrences, where appropriate, documented? • Did state initiate compliance action for any violations found during any incident/accident investigation? • Did state assist Region Office or Accident Investigation Division (AID) by taking appropriate follow-up actions related to the operator incident reports to ensure accuracy and final report has been received by PHMSA? • Does state share any lessons learned from incidents/accidents? (Yes= 10 points, No= 0 Points, NI= 1-9 points) Comments:	10
9	Did state respond to Chairman's letter on previous evaluation within 60 days and correct or address any noted deficiencies? (If necessary) Chapter 8.1 (Yes= 1 points, No= 0 Points, NI= .5 point) Comments:	1
10	Did State conduct or participate in pipeline safety training session or seminar in Past 3 Years? Chapter 8.5 (Information only - No Points) Comments:	No Points
11	Has state confirmed transmission operators have submitted information into NPMS database along with changes made after original submission? (Information only - No Points) Comments:	No Points
12	Does the state have a mechanism for communicating with stakeholders - other than state pipeline safety seminar? (This should include making enforcement cases available to public). (Yes= 1 point, No= 0 Points, NI= .5 point) Comments:	1
13	Did state execute appropriate follow-up actions to Safety Related Condition (SRC) Reports? Chapter 6.7 (Yes= 1 points, No= 0 Points, NI= .5 point) Comments:	1
14	Was the State responsive to: a. Surveys or information requests from NAPS or PHMSA; b. PHMSA Work Management System tasks? (Yes= 1 point, No= 0 Points, NI= .5 point) Comments:	1

15	If the State has issued any waivers/special permits for any operator, has the state verified conditions of those waivers/special permits are being met? This should include having the operator amend procedures where appropriate. (Yes= 1 points, No= 0 Points, NI= .5 point) Comments:	1
16	Were pipeline program files well-organized and accessible? (Information only - No Points) Comments:	No Points
17	Discussion with State on accuracy of inspection day information submitted into State Inspection Day Calculation Tool (SICT). Has the state updated SICT data? (Yes= 3 points, No= 0 Points, NI= 1-2 points) Comments:	3
18	Discussion on State Program Performance Metrics found on Stakeholder Communication site. http://primis.phmsa.dot.gov/comm/states.htm?nocache=4805 Comments:	No Points
19	Did the state encourage and promote operator implementation of Pipeline Safety Management Systems (PSMS), or API RP 1173? This holistic approach to improving pipeline safety includes the identification, prevention and remediation of safety hazards. · https://pipelinesms.org/ · Reference AGA recommendation to members May 20, 2019 (Information only - No Points) Comments:	No Points
TOTAL -		50

E – FIELD INSPECTIONS

1 Operator, Inspector, Location, Date and PHMSA Representative

No Points

- What type of inspection(s) did the state inspector conduct during the field portion of the state evaluation? (i.e. Standard, Construction, IMP, etc)
- When was the unit inspected last?
- Was pipeline operator or representative present during inspection?
- Effort should be made to observe newest state inspector with least experience

(Information only - No Points)

Comments:

2 Did the inspector use an appropriate inspection form/checklist and was the form/checklist used as a guide for the inspection? (New regulations shall be incorporated)

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

3 Did the inspector adequately review the following during the inspection ?

10

- Procedures (were the inspector's questions of the operator adequate to determine compliance?)
- Records (did the inspector adequately review trends and ask in-depth questions?)
- Field Activities/Facilities (did inspector ensure that procedures were being followed, including ensuring that properly calibrated equipment was used and OQ's were acceptable?)
- Other (please comment)
- Was the inspection of adequate length to properly perform the inspection?

(Yes= 10 points, No= 0 Points, NI= 1-9 points)

Comments:

4 From your observation did the inspector had adequate knowledge of the pipeline safety program and regulations ? (Evaluator will document reasons if unacceptable)

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

5 Did the inspector conduct an exit interview, including identifying probable violations? (if inspection is not totally completed the interview should be based on areas covered during time of field evaluation)

1

(Yes= 1 point, No= 0 Points, NI= .5 point)

Comments:

6 Was inspection performed in a safe, positive, and constructive manner ?

No Points

- No unsafe acts should be performed during inspection by the state inspector
- What did the inspector observe in the field? (Narrative description of field observations and how inspector performed)
- Best Practices to Share with Other States - (Field - could be from operator visited or state inspector practices)
- Other

(Information only - No Points)

General Comments:

TOTAL - 15

F – DAMAGE PREVENTION & ANNUAL REPORT ANALYSIS

1

Has the state reviewed Operator Annual reports, along with Incident/Accident reports, for accuracy and analyzed data for trends and operator issues?

2

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

2

Has the state verified that the operators analyze excavation damages for the purpose of determining root causes and minimizing the possibility of a recurrence? (§ 192.617)

2

- Has the state verified that the operators have appropriately identified excavators who have repeatedly violated one-call laws and damaged their facilities. Have the operators taken steps to mitigate that risks? (§ 192.1007)

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

3

Has the state reviewed the operator's annual report pertaining to Part D – Excavation Damage?

NO POINTS

- Is the information complete and accurate with root cause numbers?
- Has the state evaluated the causes for the damages listed under "One-Call Notification Practices Not Sufficient" (Part D.1.a.)?
- Has the state evaluated the causes for the damages listed under "Locating Practices Not Sufficient" (Part D.1.b)? For each operator, does the state review the following?
 - Is the operator or its locating contractor(s) qualified and following written procedures for locating and marking facilities?
 - Is the operator appropriately requalifying locators to address performance deficiencies?
- What is the number of damages resulting from mismarks?
- What is the number of damages resulting from not locating within time requirements (no-shows)?
- Is the operator appropriately addressing discovered mapping errors resulting in excavation damages?
- Are mapping corrections timely and according to written procedures?
- Has the state evaluated the causes for the damages listed under "Excavation Practices Not Sufficient" (Part D.1.c.)?

Comments:

NO SCORE HAZARDOUS LIQUID PROGRAMS

4

Has the agency or another organization within the state collected data and evaluated trends on the number of pipeline damages per 1,000 locate requests?

2

- What stakeholder group is causing the highest number of damages to the pipelines?
Operator, contractor, locating company or public.
- Has the state verified the operator is appropriately focusing damage prevention education and training to stakeholders causing the most damages?
- Has the state evaluated which of the following best describes the reason for the excavation damages; i.e., operator or contractor not following written procedures, failure to maintain marks, failure to support exposed facilities, failure to use hand tools were required, failure to test-hole (pot hole), improper backfilling practices, failure to maintain clearance or insufficient excavation practices.
- Has the state verified the operator is appropriately focusing damage prevention education and training to address the causes of excavation damages?

(Yes= 2 points, No= 0 Points, NI= 1 point)

Comments:

TOTAL -

6

G - INTERSTATE AGENT/AGREEMENT STATES

1	Were all inspections of interstate pipelines conducted using the Inspection Assistant program for documenting inspections? (Information only - No Points) Comments:	NO POINTS
2	If inspections were conducted independent of a PHMSA team inspection was notice of all identified probable violations provided to PHMSA within 60 days? (Information only - No Points) Comments:	NO POINTS
3	If inspections were conducted independent of a PHMSA team inspection was PHMSA immediately notified of conditions which may pose an immediate safety hazard to the public or environment? (Information only - No Points) Comments:	NO POINTS
4	If inspections were conducted independent of a PHMSA team inspection did the state coordinate with PHMSA if inspections not were not included in the PHMSA Inspection Work Plan? (Information only - No Points) Comments:	NO POINTS
5	Did the state take direction from and cooperate with PHMSA for all incident investigations conducted on interstate pipelines? (Information only - No Points) Comments:	NO POINTS

Comments: No scoring for this section. Any unsatisfactory response will result in a discussion with the Region and State regarding continued Interstate Agent Status.

TOTAL - NO POINTS

Guidelines for States Participating in the Pipeline Safety Program

Appendix K

OFFICE OF PIPELINE SAFETY

STANDARDS LIBRARY POLICY

POLICY NUMBER: PHP-1320.2A

EFFECTIVE DATE: July 27, 2018



**U.S. Department
of Transportation**

**Pipeline and
Hazardous Materials
Safety Administration**

LINDA

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Linda Daugherty

Deputy Associate Administrator for Field Operations,

Office of Pipeline Safety, PHMSA

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1. INTRODUCTION

1.1. PURPOSE

This policy describes the PHMSA Standards Library (PSL) for PHMSA and the National Association of Pipeline State Representatives (NAPSR) employees to satisfy a wide range number of tasks and knowledge. Over the last decade, costs for furnishing standards and their usage has widely varied by year and month. In the past, PHMSA was in a forecasting mode. PHMSA will be borrowing a model from the manufacturing industry: a Just-In-Time (JIT) model is a more reactive model that strives to furnish the right part (in this case, book) at the right time or just in time. It strives for cost and availability efficiency. This policy will be built around this model.

1.2. SCOPE

This policy applies to all PHMSA and NAPSR employees. PHMSA Training and Qualifications (T&Q) will play a special role with the PSL operating the physical copies of the PSL. The Standards Manager will oversee the procurement and maintenance of contracts associated with the PSL. Customer support will consist of two PSL Librarians from PHMSA. They will split the jurisdiction of the support between NAPSR and PHMSA employees.

1.3. AUTHORITIES

1.3.1. Not Applicable.

1.4. DEFINITIONS

- 1.4.1.** *PHMSA Standards Library* refers to a paper based and electronic library that houses pipeline standards.
- 1.4.2.** *Physical PSL (PPSL)* refers to the paper based component of the PSL. This physical library will house and maintain any paper based copies.
- 1.4.3.** *Check Out* refers to the means of checking out a paper based copy of a standard from the PPSL
- 1.4.4.** *Check In* refers to the return of a checked-out paper base copy of a standard to the PPSL.
- 1.4.5.** *PSL Portal* refers to the web-based portion of the PSL. The portal will be access either through anonymous access or a username and password.

- 1.4.6. *PSL Standards* refers to the format of the standards within the Electronic Portal. The technical format of PDF or portal document format can be opened from many readers.
- 1.4.7. *Anonymous Access* refers to a means of accessing the PSL Portal. With anonymous access enabled a username and password is not needed.
- 1.4.8. *Incorporated by Reference (IBR)* refers to standards that are incorporated in PHMSA's regulations by reference.
- 1.4.9. *Section 24* refers to statutory language as written in Pipeline Safety, Regulatory Certainty, and Job Creation Action of 2011 (P.L. 112-90). Section 24
- 1.4.10. *Vendor* refers to the standard reseller that PHMSA has contracted with.
- 1.4.11. *PHMSA PSL Librarians* refers to two PHMSA employees who are tasks with fulfilling standard requests.
- 1.4.12. *PPSL Librarian* refers to a PHMSA employee that is tasked with the physical fulfillment of a paper standard and the management of paper copies at the PPSL.

2. POLICY

2.1. PRINCIPLES OF THE PHMSA STANDARDS LIBRARY

The PSL's purpose is to furnish standards information. There are two priorities for the library. The primary priority goes to standards which are currently IBR'ed into PHMSA's regulations. The secondary priority are standards which are related to specific needs to PHMSA or NAPSRS which are not part of the IBR set. The needs arise from standard committee work, historical use and evaluations, accident/incident analysis, training, etc.

Another use of the PSL is to satisfy the requirement in Section 24 of the Pipeline Safety, Regulatory Certainty, and Job Creation Action of 2011 (P.L. 112-90). This requirement states that any IBR revised or newly incorporated after 1/1/2013 must be freely available to the public.

2.2. PHMSA STANDARDS LIBRARY PORTAL

The PSL Portal is an online website that houses electronic (PDF) copies of standards which PHMSA subscribes to on a rental basis. The electronic standards are not copy protected and have usage rights as outline in Section 1.4.6 of this policy. The scope of the PSL Portal is for PHMSA and NAPSRS employees only, at no time will any other

person or entity be allowed access to this site. The maintenance and operations of the portal will be handled by the Vendor.

2.3. PHYSICAL PHMSA STANDARD LIBRARY

The PPSL will be maintained by PHMSA T&Q. T&Q will maintain the permanent paper copies of the PSL. A listing of any paper copy will be maintained on the T&Q Sharepoint site which will show a listing of available standards and their status as to whether they are checked-out or available. The listing shall also show the checked-out date, and the person the standard is checked out to. A calculated column of the current date minus the checked-out date will be shown. The checked-out time for any standard shall not exceed 30 days without a request for renewal.

If a checked-out standard is overdue the PPSL shall notify the individual who has the paper copy and his/her Director or State Program Manager. A response to the inquiry is expected within 5 business days. Upon a response, the necessary action or return or replacement shall take place.

If the checked-out standard is deemed lost the PPSL Librarian shall notify the individual's Director or State Program Manager for their information about the employee's behavior.

If the checked-out standard is deemed damaged beyond repair the PPSL shall notify the Standards Manager for replacement of the standard.

2.4. EMPLOYEE REQUESTS

All requests for standards must be submitted through email. All requests must have a Director or a State Program Manager's preapproval. Written evidence of such approval can be in a forwarded email or attached to the request. The email address to submit an approval will be listed within the PSL Portal.

All requests must contain the following data elements for approval. No request will be approved without this data.

- Standard Organization
- Standards ID (designator)
- Version (year)
- Number of copies
- Applicability to other NAPS and PHMSA employees

- Reason for the request: such as a special inspection; the standard is incorporated by reference; or that it is to be used in a research project.

Once the request has gone through final approval the approver will email the requestor back with notification of how to obtain the requested standard.

2.5. SECTION 24 REQUESTS

Any request in accordance with Section 24 will be handled directly by a PHMSA PSL Librarian. Requests shall be received via email or telephone. Once the requestor has contacted the representative contact information shall be collected and verified. The requestor shall be a resident within the United States or its territories in which PHMSA has jurisdiction over. The information collected from the requestor shall be the following:

- Name
- Physical Address
- Email Address
- Telephone Contact Number

Verification shall consist of verifying the name and physical address using a web search. Upon verification, the requestor shall be contacted via email or telephone with the further information how and when the request information will be available.

A process of elimination will determine the fulfillment of the standard to the requestor, below are the sequential steps taken.

1. The PHMSA PSL Librarian managing the request shall first check to see if an SDO has the IBR standard available through its website or library.
2. The PSL Librarian shall contact a PHMSA Community Liaison to see if the Community Liaison can fulfill the information request.
3. The requestor shall be asked if he/she could visit a PHMSA or NAPSRL location where they would be able to view the standard.
4. The request can be fulfilled as outlined in Section 2.6.2 of this policy.

2.6. STANDARDS CHECK-IN & CHECK-OUT PROCEDURES

2.6.1. Internal Outgoing Check-Out

The internal outgoing check-out procedure is meant for PHMSA and NAPSRL employees that have requested a standard which is available in the PPSL and

not in the PSL Portal. There will be times when a standard has limited usage. For these standards, an electronic PDF version of the standard will not be placed in the PSL Portal due to the higher cost of alternatively buying a few paper copies and housing them in the PPSL.

After an official standards request has been accomplished in accordance with 2.4.1 and it has been deemed to be fulfilled from the PPSL. The Standards Manager or Standard Librarians will instruct the PPSL Librarian to issue the paper copy to the requestor via a shipment. The shipment will include the standard as well as an information sheet on how, when and where to return the paper standard back to the PPSL. Upon fulfillment of the request the PPSL Librarian shall update the Sharepoint Library Catalog with the status of the check-out.

2.6.2. External Outgoing Check-Out

The external check-out procedure is similar to the internal check-out procedure. The difference is that if a standard does not exist in the PPSL then the Standards Manager shall procure a copy directly from the Vendor which will be stored at the PPSL. Once the PPSL receives the paper copy and is in receipt of the request as outline is 2.5.1 the PPSL Librarian shall ship the standard with instructions for its return in 30 days. The shipment shall also have prepaid envelope for its return to the PPSL.

3. RESPONSIBILITIES

3.1. STANDARDS MANAGER

Assist the PPSL and PSL librarians as well as act as the COR for the yearly standards procurement and all other procurement and Vendor management.

3.2. PPSL LIBRARIAN

The PPSL Librarian is a PHMSA employee who is responsible for the duties set out in the policy for the PPSL.

3.3. PSL LIBRARIAN

The PSL Librarian is a PHMSA employee who is responsible for the duties set out in the policy for the PSL.

Guidelines for States Participating in the Pipeline Safety Program

Appendix L

Section 192.18 Notification Process – State Agency and PHMSA

1.1 Notifications from Operators for 49 CFR § 192.18

Section 192.18 allows operators to notify PHMSA and the States of proposed alternative approaches to complying with the minimum Federal pipeline safety regulations in several different regulatory sections. The notification procedures for these alternative actions are comparable to the previous notification requirements in subpart O for the gas integrity management regulations. Because PHMSA has expanded the use of notifications to pipeline segments for which subpart O does not apply (i.e., to non-HCA pipeline segments), PHMSA added a new § 192.18 in subpart A that contains the requirements for submitting such notifications for any gas pipeline segment.

1.1.2 Operator Notifications

Operator notifications are submitted either electronically or by mail through the PHMSA “**Information Resources Manager**”, see § 192.18(a). Both PHMSA and the State will get the operator notification through the **Work Management System (WMS)**, see **Appendix L - Guidelines for States Participating in the Pipeline Safety Program**.

Section 192.18(b) requires an operator to notify the appropriate State or local pipeline safety authority when an applicable pipeline segment is located in a State where PHMSA OPS has an interstate agent agreement, or an intrastate applicable pipeline segment is regulated by that State.

1.1.3 Notification Requirements

Operator notifications are for alternative approaches to complying with the minimum Federal pipeline safety regulations for part 192 sections identified in § 192.18(c).

1.1.4 Notification Response to the Operator – Timing and Response

Section 192.18(c) requires PHMSA to reply to the operator within 90 days of receipt of the notification. In practice, this means that prior to the end of the 90-day interval PHMSA must respond to the request by one of the following means:

- (1) requesting more information from the operator - which will stop the 90-day reply deadline,
- (2) objecting to the request – which will require compliance with the regulation as written,

Section 192.18 Notification Process – State Agency and PHMSA

- (3) not objecting to the request (either in writing or by not responding) – which will allow the new approach as requested by the operator, or
- (4) informing the operator their request requires either a State or Federal waiver/special permit – which will require the operator to apply to either the State or PHMSA for a waiver/special permit – § 190.341.

1.1.4.1 Operator notifications for intrastate pipelines

Where the State has a 60105 Certification with PHMSA and the State has safety authority for the intrastate pipeline¹, the State Agency must notify PHMSA if they object to the § 192.18 request by the operator and the State Agency must follow the waiver/special permit process as described in **Section 3.3 - Waiver of Federal Regulations** if the operator requests a State waiver.

1.1.4.2 Timing of State Agency and PHMSA decisions

- (1) PHMSA (PHP-80) will e-mail notify the State Agency of the WMS request within 3 weeks (21 days) of receipt of the operator request and its proposed path on the operator request.
- (2) The State Agency will notify PHMSA (PHP-80) of any State Agency needs within 6 weeks (42 days) of the WMS request of any State concerns with the operator notification and whether the State Agency suggests asking for more information, “objecting” or “not objecting”, or requiring a waiver/special permit.
 - a) It is important to note the operator is required to notify PHMSA and the State. PHMSA will evaluate the notification and consult with the State for facilities under State safety authority. PHMSA will then issue a letter of “objection” or “no objection” to the operator.
- (3) PHMSA (PHP-80) must send a final § 192.18 notification decision to the operator within 90 days of the notification. If an “objection” letter is sent to the operator by PHMSA, the operator still has the option of requesting a waiver/special permit through the State Agency or PHMSA, as appropriate.

¹ 49 CFR 192.18(b) applies to an applicable pipeline segment that is located in a State where OPS has an interstate agent agreement, or an intrastate applicable pipeline segment is regulated by that State.

Section 192.18 Notification Process – State Agency and PHMSA

1.1.5 Interstate Pipelines

Section 192.18 notifications concerning interstate facilities may be considered only by PHMSA. PHMSA will consult with the State Interstate Agent when an interstate operator requests a § 192.18 alternative approach for complying with the minimum Federal pipeline safety regulations.

1.1.6 Intrastate Pipelines

Upon WMS posting or receipt of a § 192.18 notification from an operator, a State Agency may consider a State waiver of the pipeline safety requirements subject to PHMSA concurrence – See **Section 3.3 – Waiver of Federal Regulations**. The State Agency must inform PHMSA (PHP-80) that they will require the operator to obtain a waiver, or they plan to “not object” or “object” to the operator §192.18 request. The State Agency must inform PHMSA (PHP-80) of their decision within 6 weeks (42 days) of the WMS posting. PHMSA (PHP-80) must notify the operator prior to the end of the 90-day notification decision interval of the operator § 192.18 request.

For all § 192.18 notifications that are approved and in effect, for pipelines under the state safety authority, State Agencies are required to verify that the notification procedures are being met. This includes having the operator amend their 49 CFR Part 192 procedures. Where appropriate, PHMSA, in consultation with the appropriate State Agencies may terminate approved alternative compliance action(s) pursuant to a no objection letter in response to a § 192.18 notification if it is no longer valid. For all § 192.18 notifications that are no longer in effect (e.g., project is completed, time frame has expired, PHMSA/State Agency termination, or code change), State Agencies must notify PHMSAOPSSStateWaivers@dot.gov that the § 192.18 notification is no longer in effect. PHMSA (PHP-80) must notify the operator that the § 192.18 request has been terminated.

OFFICE OF PIPELINE SAFETY

NOTIFICATIONS POLICY AND PROCEDURE

POLICY NUMBER: PHP-5340.1H

EFFECTIVE DATE: May 24, 2023



**U.S. Department
of Transportation**

**Pipeline and
Hazardous Materials
Safety Administration**

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1. INTRODUCTION

1.1. PURPOSE

This policy describes how the following are processed by PHMSA's Office of Pipeline Safety (OPS):

- *Integrity Assurance Notifications* required by 49 C.F.R. §192 and §195.
- *Operator Qualifications (OQ) Notifications* required by 49 C.F.R. §192 and §195.
- *Alternative Maximum Allowable Operating Pressure (MAOP) Notifications* required by 49 C.F.R. §192.
- *Biofuel Notifications* requested in PHMSA Advisory Bulletin (ADB-08-05) Notice to Hazardous Liquid Pipeline Operators of Request for Voluntary Advance Notification of Intent To Transport Biofuels, 73 Fed. Reg. 123 (June 25, 2008).
- *National Registry Notifications* required by 49 C.F.R. §191 and §195.
- *Operator ID Assignment Requests* required by 49 C.F.R. §191 and §195.
- *Abandonment Reports* required by 49 C.F.R. §192 and §195.

1.2. SCOPE

This policy applies to all OPS employees and contractors involved in processing notifications, requests, and reports. PHP staff designated to receive emails and PHP-6 data owner staff are listed in the Notifications Data Management Procedures (DMP). Additional details about how PHP-6 and the IRM implement this policy are also in the DMP Notification document in [SharePoint](#).

1.3. AUTHORITIES

1.3.1. Statutory

1.3.1.1. 49 U.S.C. – Transportation.

1.3.1.1.1. Subtitle III – General and intermodal programs. Chapter 51– Transportation of hazardous material.

- 49 U.S.C. §5103 – General regulatory authority.
- 49 U.S.C. §5121 – Administrative.

1.3.1.1.2. Subtitle VIII – Pipelines. Chapter 61– Safety.

- §60102 – Purpose and general authority.
- §60103 – Standards for liquefied natural gas pipeline facilities.
- §60104 – Requirements and limitations.
- §60108 – Inspection and maintenance.
- §60109 – High-density population areas and environmentally sensitive areas.

- §60110 – Excess flow valves.
- §60113 – Customer-owned natural gas service lines.
- §60116 – Public education programs.
- §60117 – Administrative.
- §60118 – Compliance and waivers.
- §60124 – Biennial reports.
- §60132 – National pipeline mapping system.
- §60137 – Pipeline control room management.

1.3.1.2. 49 C.F.R. §1.97 – Delegations to the Pipeline and Hazardous Materials Safety Administrator.

1.4. DEFINITIONS

1.4.1. *Additional Regulator* means an OPS Division or State Agency supporting investigations in a WMS activity.

1.4.2. *Alternative Maximum Allowable Operating Pressure (Alternative MAOP)* refers to the requirements in the *Alternative MAOP* Rule promulgated by PHMSA that allows certain gas transmission pipelines to operate at higher pressures and pipeline stress levels than regulations previously allowed if certain conditions are met that ensure an adequate margin of safety (73 Fed. Reg. 202 (October 17, 2008)).

1.4.3. *Information Resources Manager (IRM)* is a federal role in PHMSA headquarters providing oversight and guidance to contractor staff involved in data analysis and data collection support services for OPS. Contact the IRM at InformationResourcesManager@dot.gov

1.4.4. *Integrity Assurance* refers to requirements for operators of hazardous liquid, gas transmission, and gas gathering pipelines to develop and implement comprehensive procedures that have four basic objectives:

- To perform integrity assessments of gas transmission and hazardous liquid pipelines in locations where a pipeline failure could have significant adverse consequences. These locations include High Consequence Areas (HCA), Moderate Consequence Areas (MCA), Class 3 location, and Class 4 location.
- MAOP reconfirmation and material verification of gas transmission pipelines.
- Implementation of safety regulations on Type C gas gathering pipelines
- Install valves to improve safety

Some Integrity Assurance notification types have been required since PHMSA established Integrity Management (IM) regulations in the early 2000s. Notifications under these regulations were previously classified as IM

Notifications within OPS. The old IM Notifications and the newer types are collectively referred to as Integrity Assurance Notifications.

- 1.4.5.** *Interstate gas pipeline facility* means a gas pipeline facility used to transport gas and subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act (15 U.S.C. §717 et seq.).
- 1.4.6.** *Interstate hazardous liquid and carbon dioxide pipeline facility* means a pipeline or that part of a pipeline that is used in the transportation of hazardous liquids or carbon dioxide in interstate or foreign commerce (49 C.F.R. §195.2).
- 1.4.7.** *Intrastate gas pipeline facility* means a gas pipeline facility and transportation of gas within a State not subject to the jurisdiction of FERC under the Natural Gas Act (15 U.S.C. 717 et seq.).
- 1.4.8.** *Lead* means the individual with responsibility for a WMS activity.
- 1.4.9.** *Lead Regulator* means the OPS Division or State Agency with overall responsibility for a WMS activity.
- 1.4.10.** *Operator Qualification (OQ)* requires pipeline operators to document that certain employees have been adequately trained to recognize and react to abnormal operating conditions that may occur while performing specific tasks (49 C.F.R. §192 Subpart N; 49 C.F.R. §195 Subpart G).

2. POLICY

2.1. INTEGRITY ASSURANCE: GG, GT, AND HL

2.1.1. Receipt

Gas Transmission (GT), Hazardous Liquid (HL), and Gas Gathering (GG) Integrity Assurance notifications are received by the Information Resources Manager (IRM) either by e-mail or regular mail.

2.1.2. Validation

The IRM reviews the information provided by the operator and, if necessary, requests additional information from the operator. If the content of the notification does not align with one of the reporting requirements, the IRM will send an email to the operator informing them that a notification will not be created. The relevant Region Director(s) and State Program Manager(s) will be copied on the email for informational purposes. Valid Integrity Assurance notification types are shown on the following pages. If the content of the notification does align with one of the reporting requirements, the IRM will create an activity in the WMS. The “Lead Regulator” and “90-Day Action” columns are explained later in this policy.

Gas Gathering (GG) Integrity Assurance Notifications

GG Type and Regulation	Short Description	Lead Regulator	90-Day Action
MAOP Determination Type C §192.619(c)(2)	...operators not able to determine the actual operating pressure of GG Type C for the five years preceding May 16, 2023 submit proposed MAOP determination method...	PHP-80	Yes
Start/End Point Delay Onshore §192.8(b)(2)	...operators unable to complete a determination of gathering start and end points by November 16, 2022 must submit the notification no later than 90 days before November 16, 2022...	PHP-80	Yes
Compliance Delay Type C §192.9(g)(4)(ii)	...operators not able to comply with GG Type C safety requirements by May 16, 2023 must submit no later than 90 days before May 16, 2023...	PHP-80	Yes
Composite Materials Type C §192.9(h)	...operators using composite materials not otherwise authorized for use in GG Type C must submit at least 90 days prior to installing composite materials...	PHP-80	Yes

Gas Transmission (GT) Integrity Assurance Notifications - listed ascending by code cite

GT Type and Regulation	Short Description	Lead Regulator	90-Day Action
Management of Change Extension §192.13(d)	...extension of time for management of change process...	PHP-80	Yes
New RMV Alternative Technology §192.179(e) and (g)	...alternative equivalent technology instead of RMV for new onshore segments with diameter 6 inches or more...	PHP-80	Yes
RMV Installation Delay New §192.179(e)	...request extension of RMV installation deadline for new onshore segments...	Fed/State	Yes
RMV Installation Delay Replaced §192.179(f)	...request extension of RMV installation deadline for replaced onshore segments...	Fed/State	Yes
Replaced RMV Alternative Technology §192.179(f) and (g)	...alternative equivalent technology instead of RMV for replaced onshore segments with diameter 6 inches or more...	PHP-80	Yes
Coating Damage Technology New Pipe §192.319(e)	...technology other than current voltage gradient to assess coating damage on newly installed pipelines...	PHP-80	Yes
Coating Damage Technology Existing Pipe §192.461(g)	...technology other than current voltage gradient to assess coating damage on existing pipelines...	PHP-80	Yes
Other Spike Pressure Test §192.506(b)	...when using other technology or another process supported by a documented engineering analysis for establishing a spike hydrostatic pressure test or equivalent to the spike hydrotest requirements in §192.506(a)...	PHP-80	Yes

GT Type and Regulation	Short Description	Lead Regulator	90-Day Action
Expanded Pipe Sampling §192.607(e)(4)	...when using an expanded pipe sampling approach to identify line pipe with properties that are not consistent with available information, or existing expectations, or assumed properties...	PHP-80	Yes
Alternative Pipe Sampling §192.607(e)(5)	...when using an alternative pipe sampling approach that differs from §192.607(e)(2)...	PHP-80	Yes
MAOP Reconfirmation Time Extension §192.624(b)(3)	...when operational or environmental constraints limit ability to meet MAOP reconfirmation deadlines and an operator submits a petition for an extension of the completion deadlines...	Fed/State	No
MAOP Reconfirmation Method 2 Factor/Period §192.624(c)(2)(iii)	...when using Method 2 and using a less conservative pressure reduction factor or longer look-back period than prescribed by §192.624(c)(2)...	PHP-80	Yes
MAOP Reconfirmation Method 6 §192.624(c)(6)	...when using an alternative technical evaluation process to provide a documented engineering analysis for establishing MAOP...	PHP-80	Yes
MAOP Reconfirmation Other ECA Technology §192.632(b)(3)	...when using “other technology” in the Engineering Critical Assessment (ECA) validated by a subject matter expert to produce an equivalent understanding of the pipe equal to or greater than pressure testing or an inline inspection program...	PHP-80	Yes
RMV Operational Delay §192.634(a)	...RMV not operational within 14 days of new or replaced pipeline going into service...	Fed/State	Yes
Lateral RMV Alternative Technology §192.634(b)(3)	...check valve instead of RMV for lateral...	PHP-80	Yes

GT Type and Regulation	Short Description	Lead Regulator	90-Day Action
Crossover RMV Alternative Technology §192.634(b)(4)	...manual valve instead of RMV for crossover...	PHP-80	Yes
RMV Open Over 30 Minutes §192.636(c)	...leave RMV open for more than 30 minutes after rupture identification...	PHP-80	Yes
Technology Outside HCA §192.710(c)(7)	...when using “other technology” for assessments outside of HCAs...	PHP-80	Yes
Metal Loss Less Conservative §192.712(b)(1)	...corrosion metal loss remaining strength calculation less conservative than ASME/ANSI B31G or R-STRENG...	PHP-80	Yes
ECA Mechanical Damage Evaluation §192.712(c)(11)	...propose engineering critical assessment to evaluate, instead of repairing, dents and other mechanical damage...	PHP-80	Yes
Assumed Toughness §192.712(d)(3)(iv) and (e)(2)(i)(E)	...when using an assumed Charpy v-notch toughness value for analysis of crack-related conditions...	PHP-80	Yes
Repair Outside HCA §192.714(e)(2)	...if the operator cannot meet the schedule for evaluation and remediation required under 192.714 and cannot provide safety through temporary reduction in operating pressure or through another action...	Fed/State	No
Pressure Outside HCA §192.714(e)(3)	...when a pressure reduction exceeds 365 days on a pipeline outside of an HCA, the operator must notify PHMSA and explain the reasons for the remediation delay...	Fed/State	No

GT Type and Regulation	Short Description	Lead Regulator	90-Day Action
RMV Repair Replace Delay §192.745(e)(1)	...extend replacement of ineffective RMV beyond 12 months...	Fed/State	Yes
Program §192.909(b)	...any change to the program that may substantially affect the program's implementation or may significantly modify the program or schedule for carrying out the program elements...	Fed/State	No
Data Integration Extension §192.917(b)	...extend data integration deadline for HCA segments beyond February 26, 2024...	PHP-80	Yes
Risk Assessment Extension §192.917(c)(5)	...extend risk assessment deadline for HCA segments beyond February 26, 2024...	PHP-80	Yes
Technology §192.921(a)(7) and §192.937(c)(7)	...other technology that an operator demonstrates can provide an understanding equivalent to assessment methods prescribed in the regulations of the condition of the line pipe for each threat to which a pipeline in an HCA is susceptible...	PHP-80	Yes
ICDA With Electrolytes §192.927(b)	...ICDA plan for HCA segment with electrolytes present...	PHP-80	Yes
Repair §192.933(a)(1)	...if the operator cannot meet the schedule for evaluation and remediation required under paragraph (c) of this section <u>within an HCA</u> and cannot provide safety through temporary reduction in operating pressure or through another action...	Fed/State	No
Pressure §192.933(a)(2)	...when a pressure reduction exceeds 365 days <u>within an HCA</u> , the operator must notify PHMSA and explain the reasons for the remediation delay...	Fed/State	No

GT Type and Regulation	Short Description	Lead Regulator	90-Day Action
ILI Results Extension §192.933(b)	...extend deadline for receipt of ILI assessment results beyond 180 days after the ILI run...	Fed/State	No
Reassessment Interval Above 30% SMYS §192.939(a)	...when requesting 6-month extension of the 7-calendar-year reassessment interval for pipelines operating at or above 30% SMYS...	Fed/State	No
Reassessment Interval Below 30% SMYS §192.939(b)	...when requesting 6-month extension of the 7-calendar-year reassessment interval for pipelines operating below 30% SMYS...	Fed/State	No

Hazardous Liquid (HL) Integrity Assurance Notifications – listed ascending by code cite

HL Type and Regulation	Short Description	Lead Regulator	90-Day Action
Non-Steel Liquid Pipe §195.8	...intent to install non-steel pipe for hazardous liquid or carbon dioxide transport...	PHP-80	Yes
New RMV Alternative Technology §195.258(c) and (e)	...alternative equivalent technology instead of RMV for new onshore segments with diameter 6 inches or more...	PHP-80	Yes
RMV Installation Delay New §195.258(c) and 260(h)	...request extension of RMV installation deadline for new onshore segments...	Fed/State	Yes
Replaced RMV Alternative Technology §195.258(d) and (e)	...alternative equivalent technology instead of RMV for replaced onshore segments with diameter 6 inches or more...	PHP-80	Yes
RMV Installation Delay Replaced §195.258(d) and 260(h)	...request extension of RMV installation deadline for replaced onshore segments...	Fed/State	Yes

HL Type and Regulation	Short Description	Lead Regulator	90-Day Action
RMV Maximum Spacing §195.260(g)(1) and 418(b)(2)(ii)	...request alternative RMV spacing for HVL in populated areas...	PHP-80	Yes
RMV Installation Exemption §195.260(h)	...request exemption from RMV installation requirements of 195.260(c), (e), or (f)...	PHP-80	Yes
Technology Outside HCA §195.416(d)	...when using “other technology” for assessments outside of could affect HCA	PHP-80	Yes
Discovery Beyond 180 Days Outside HCA §195.416(f)	...when impracticable to make a determination about a condition within 180 days of the assessment outside could affect HCA...	Fed/State	No
RMV Operational Delay §195.418(a)	...RMV not operational within 14 days of new or replaced pipeline going into service	Fed/State	Yes
Lateral RMV Alternative Technology §195.418(b)(3)	...check valve instead of RMV on lateral...	PHP-80	Yes
Crossover RMV Alternative Technology §195.418(b)(4)	...manual valve instead of RMV on crossover...	PHP-80	Yes
non-HCA RMV Operation Exemption §195.419(g)	...request exemption from RMV operation requirements in 195.419(b) for non-HCA segments...	PHP-80	Yes
RMV Repair Replace Delay §195.420(f)(1)	...extend replacement of ineffective RMV beyond 12 months...	Fed/State	Yes
Technology §195.452(c)(1)(i)(D)	...an operator choosing “other technology” for use in an HCA must notify OPS 90 days before conducting the assessment...	PHP-80	Yes

HL Type and Regulation	Short Description	Lead Regulator	90-Day Action
Repair §195.452(h)(1)(i)	...if the operator cannot meet the schedule for evaluation and remediation required under paragraph (h)(3) of this section and cannot provide safety through a temporary reduction in operating pressure...	Fed/State	No
Pressure §195.452(h)(1)(ii)	...when a pressure reduction exceeds 365 days, the operator must notify PHMSA explain the reasons for the delay...	Fed/State	No
Discovery Beyond 180 Days HCA §195.452(h)(2)	...when impracticable to make a determination about a condition within 180 days of the assessment in could affect HCA...	Fed/State	No
EFRD Installation Delay §195.452(i)(4)(iii)	...request extension of EFRD installation deadline for new or replaced segments...	Fed/State	Yes
Interval §195.452(j)(4)(i) and (ii)	...notify OPS of the justification for a longer interval, and propose an alternative interval...	Fed/State	No

2.1.3. Creating Notification Activity

IRM staff with the Activity Creator role for PHF-30 perform data entry into WMS from the submittals sent to Headquarters by operators. IRM staff will target creating the Integrity Assurance Notification in WMS within five business days of when the report is received..

On the top row of WMS tabs, select Activities, then Create Activity. After selecting Investigation and Integrity Assurance Notification, select Go.

Lead Regulator – Assign Regulator values based on the notification type and combinations of system type, inter/intra, and State values. In section 2.1.2, each type with PHP-80 in the Lead Regulator column, set the Lead Regulator value to PHP-80.

For all other types, determine the Lead Regulator by using the Fed/State .xls in [SharePoint](#). Start with the sheet named EXCEPTIONS by looking for the OpID, Inter/Intra, System Type, and State. When State is null, the exception applies in all States. If you find an applicable record, use the Exception Lead Regulator as the Lead Regulator for the IM Notification. If you do not find an applicable record on the EXCEPTIONS sheet, use the JURISDICTION sheet to find the Lead Regulator based on System Type, Inter/Intra, and State.

If the Fed/State process above yields more than one Region or State Agency, assign the Region or State Agency with pipeline systems most heavily impacted by the Integrity Assurance Notification as the Lead Regulator.

Additional Regulators - determine Additional Regulators for all notification types by using the [Fed/State xls](#).

Activity Description - enter a short version of the Operator Name, System Type abbreviation, Notification Type, and State Abbreviations. i.e. Eagle Eye HL Pressure TX, NM.

Summary of Incoming Documents – summarize the details of the notification from the documents provided by the operator submitting the notification.

Notification Type – select the Notification type from the dropdown.

Date Received – enter the date you received the notification. The target for creating the WMS activity is within five business days of receipt.

Submitter Email – Enter the Operator’s e-mail into the field. They will get an alert e-mail that the notification has been created.

Notification Status – Always select Under Review from the dropdown menu.

Inter States/Intra States – Select the Inter/Intra State values from the dropdown menu. You may select multiple values.

Select the Create command button and the new IM Notification will open.

Who, What, Where Tab

If the Lead Regulator is a Region, add the Unit(s) in the Assets section. If the Lead Regulator is a State Agency, check the WMS for Unit(s) and add them if found. If not, add the OpID and System Type to the Assets section. Select Save.

Documents Tab

Upload all documents included with the Operator's submittal, including a pdf of the e-mail.

Investigation Tab

Recheck all information entered during activity creation. If you make any changes, select Save. Enter all available information into the Additional Information section. Under Operator Information, select the Unit ID or Operator ID most heavily impacted from the drop-down. Select Save.

Select Release Lock on the right side of the blue banner and the window will close.

If an operator sends an update to PHF-30, update the notification in the WMS.

To find notification activities, select Search on the top row of WMS tabs. Click the Activity Search tab on the second row. Adjust prompts and click the Search command button. In the Search Results table, click on the Activity ID to open notification activities.

Attach the new documents to the notification on the Documents tab and update other data fields as needed. Check the Who, What, Where tab to determine the Lead. Send an e-mail to the Lead letting them know how you have changed the notification activity.

Select Release Lock on the right side of the blue banner and the window will close.

2.1.4. Assigning Lead and Supervisor(s)

[Assign Lead/Supervisor YouTube Video](#)

Upon creation of the Integrity Assurance Notification, staff with the Investigation Receive role for the Lead Regulator will receive an alert e-mail and an Assign Lead/Supervisor task in their Investigation worklist.

Open the notification activity from the Investigation worklist. On the Who, What, Where tab, review the Summary of Incoming Documents field. In the Activity Staff table, add Supervisor(s) and a Lead. Click Save. Select the Tasks tab and open the Assign Lead/Supervisor task. Select Save - comments are optional.

For Additional Regulators, Region staff with the Investigation Receive role will own an Investigation task. Select the Tasks tab and open the Investigation task for your Regulator. Modify the task by changing the Task Owner to an investigator in your Regulator.

Select Release Lock on the right side of the blue banner and the window will close.

2.1.5. Investigation and Follow-Up

[Investigation YouTube Video](#) **[Create New Task YouTube Video](#)**

The Lead and staff for each Additional Regulator will receive an alert e-mail and an Investigation task in the Investigation worklist. The Lead is responsible for ensuring that all Additional Regulators concur with any Status Change for the notification.

Open the notification activity from the Investigation worklist and review all activity tabs. Some of the fields are editable only by Activity creators. If there are errors in these fields, send an email to InformationResourcesManager@dot.gov and describe the errors.

If appropriate, contact the operator to get additional information about the notification.

On the Who, What, Where tab, check the Unit(s) or OpID(s)/System Type(s) and correct them if necessary.

On the Notes tab, create notes describing actions taken by Regions, States, PHP-80, or the operator. The first note documenting the first follow-up is expected within 30 days of the created date. When new information is obtained, add additional Notes. Set the due date of your Investigation task to match the date you expect the next update.

On the Investigation tab, verify or populate the Operator Information and Location sections. On the Who,What,Where tab, multiple Unit ID or OpID can be entered. In the Operator Information section of the Investigation tab, select the Unit or OpID most heavily impacted. If the notification is for a single location, add the information in the Location section.

Select Release Lock on the right side of the blue banner and the window will close.

2.1.6. 90-Day Deadline Notifications and WMS Alert Email

In section 2.1.2, each type with Yes in the 90-Day Action column requires PHMSA action within 90 days of the date the operator submitted the notification.

When one of the notification types listed above has Status = Under Review and 55 days have passed since the operator submitted the notification, the WMS sends an alert email to all staff on the Staff table of the activity. The email includes the activity ID, notification type, and operator name(s).

2.1.7. Status Changes

The WMS does not notify operators of status changes. The Lead is responsible for communicating with the operator about the notification.

All staff with Investigation tasks must add notes on the Notes tab indicating whether the regulator supports a status change. The Lead Regulator is responsible for obtaining concurrence from all Additional Regulators before changing the status for the notification. If disagreement exists between affected Region(s)/State(s) and PHP-80, OPS management will resolve the disagreement before the status is changed.

The initial status for all notifications is “Under Review.” If Regulators determine that the operator’s notification is incomplete or inadequate, the Lead Regulator sets the status to “Objections Noted” and communicates the inadequacy to the operator.

When no further action by the operator is expected, change the Status to “Resolved” or “Objections Resolved” as appropriate. Regulators are encouraged to upload approval emails and procedures the operator has agreed to use on the Documents tab.

The status of a notification in the WMS is changed on the Investigation tab and the date of the change is required.

2.1.8. Closing an Integrity Assurance Notification

[Closing YouTube Video](#)

The WMS does not communicate status changes to the operator. The Lead is responsible for informing the operator that the notification is closed and uploading documents to the WMS activity.

Integrity Assurance Notification activities may be closed after all regulators have added notes supporting a status of “Resolved” or “Objections Resolved.” On the

Who,What,Where tab, in the Summary of Corrective Actions field, summarize the operator's corrective actions. Check the Activity Staff table and ensure the person you will ask to approve closure is in the table as a Supervisor.

On the Investigation tab, enter the Date Resolved or Objections Resolved.

On the Tasks tab, select the Investigation task for the Lead. Select the Complete Task radio button, then Save – comments are optional. If there is more than one Supervisor on the Who,What,Where tab, select the Supervisor to receive the Closure Requested task.

Select Release Lock on the right side of the blue banner and the window will close.

The Supervisor selected will receive an alert e-mail and a Closure Requested task in their Investigation worklist. Open the activity from the worklist and review all tabs, especially the Notes tab to ensure adequate operator actions have been documented and all regulators support the status. On the Tasks tab, open the Closure Requested task and select the Complete Task radio button.

If the Notes tab documents adequate Operator actions and regulator concurrence, select Approve. If all required fields have data, the activity status will change to Closed and the window will close. If not, error messages will explain data inadequacies. Fix the data and open the Closure Requested task again.

If the Notes tab does not document adequate Operator actions and regulator concurrence, select Disapprove. In the Comment field for the task, explain what more is needed. The Lead will get an alert e-mail and an Investigation task in the Investigation worklist. Select Release Lock on the right side of the blue banner and the window will close.

2.1.9. Access

All notifications, including documents, for an OpID, Inspection System, and Unit are available in the PHMSA Data Mart-Pipeline (PDM-P). Notifications can be viewed at the National, Region, and State levels on the Notifications dashboard. The public has access to notification data, but documents associated with a notification are not available to the public.

2.2. OPERATOR QUALIFICATIONS

2.2.1. Receipt

OQ notifications are received by the IRM either by e-mail or regular mail.

2.2.2. Headquarters Processing

The IRM reviews the information provided by the operator and, if necessary, requests additional information from the operator. The IRM will upload the documents into [SharePoint](#). The IRM will e-mail the notification to the appropriate PHMSA Staff Contact(s) at each Region with an active Unit and copy the applicable Region Director(s).

2.2.3. Access

All notifications, including documents, for an OpID, Inspection System, and Unit are available in the PHMSA Data Mart-Pipeline (PDM-P). All notifications can be viewed in SharePoint.

2.3. ALTERNATIVE MAXIMUM ALLOWABLE OPERATING PRESSURE

2.3.1. Receipt

Alternative MAOP notifications are sent by the operator to Region Offices. The Region forwards the notifications to the IRM.

2.3.2. Headquarters Processing

The IRM reviews the information provided by the operator and, if necessary, requests additional information from the operator. The IRM will enter the documents submitted into [SharePoint](#). Region contacts are available to assist with determining the correct Unit(s).

2.3.3. Access

All notifications, including documents, for an OpID, Inspection System, and Unit are available in the PHMSA Data Mart-Pipeline (PDM-P). All notifications can be viewed in SharePoint.

2.4. BIOFUEL NOTIFICATIONS

2.4.1. Receipt

Biofuel notifications are received by the Information Resources Manager (IRM) either by e-mail or regular mail.

2.4.2. Headquarters Processing

The IRM reviews the information provided by the operator and, if necessary, requests additional information from the operator. The IRM will enter the notification into [SharePoint](#). The IRM will e-mail the document to the appropriate Region Director or State Program Manager.

2.4.3. Updates

Notifications typically describe an upcoming biofuel transport test run. Based on the specific content of the notification, the IRM may request the Region/State Partner to contact the operator for an update on their plans for biofuel transport.

2.4.4. Access

All notifications, including documents, for an OpID are available in the PHMSA Data Mart-Pipeline (PDM-P) on the Operator dashboard. All notifications can be viewed in SharePoint.

2.5. NATIONAL REGISTRY NOTIFICATION

2.5.1. Receipt

Operators are required to submit National Registry Notifications by 49 C.F.R. §191.22(c) and 195.64(c) for the following actions:

- Type A – Operator Name Change
- Type B – Change in Entity Operating (Ceasing or Assuming)
- Type C – Shared Safety Program Change
- Type D – Acquire or Divest for Gas or Liquid
- Type F – Construction or Rehabilitation of Gas or Liquid Facilities
- Type I – Acquire or Divest for LNG
- Type J – Construction or Rehabilitation for LNG

The notifications are submitted by operators in the PHMSA Portal.

2.5.2. Validation

Upon submittal by an operator, some notifications are reviewed in the WMS before being released to Regions and State Agencies as system generated tasks:

- Type A – reviewed by the Information Resources Manager (IRM) to ensure the notification was not submitted in error. The IRM can void a Type A and have the operator start over if errors are discovered during the review process.
- Type B, D, F, I, and J – if the notification fails either of the items below, a Review Notification task is fired for the WMS Review Notification role before becoming a Manage Unit task. The Review Notification group can rescind the notification or re-open the notification for editing and resubmittal by the operator.

EITHER

- The divesting or constructing OpID has not submitted a congruent annual report matching the system types, Inter/Intra, subtypes and State(s) covered by the notification.

OR

- Both OpIDs involved in a Type B, D, or I are not entered in the notification. It may be necessary to expedite an OpID Request so that both OpIDs can be entered.
- Type C – HQ staff in the WMS SPR Name Change role receive a SPR Name Change task. HQ staff review the notification to ensure the Primary OpID, System Types, and Effective Dates in the notification are consistent with existing data. Additionally, HQ staff ensure all required SPR Types (see table below) have been updated. HQ staff can rescind a Type C and have the operator start over.

Safety Program	GD	GG	GT	HL	LNG	UNGS
Integrity Management (IM)	Yes	No	Yes	Yes	No	Yes
Operations Maintenance Emergency (OME)	Yes	Yes	Yes	Yes	Yes	Yes
Control Room Management	Yes*	Yes*	Yes*	Yes*	No	Optional
Public Awareness (PA)	Yes	Yes	Yes	Yes	No	No
Damage Prevention (DP)	Yes	Yes	Yes	Yes	No	No
Operator Qualification (OQ)	Yes	Yes	Yes	Yes	No	No
Oil Pollution Act Facility Response Plan (OPA)	No	No	No	Yes**	No	No
Drug & Alcohol Testing (D&A)	Yes	Yes	Yes	Yes	Yes	Yes

* If the pipeline has a Control Room or SCADA

** The OPA SPR is not required for HL pipelines transporting HVL FLAMM TOXIC or CO2. It is required for CRUDE OIL, REFINED PP, and BIOFUEL

2.5.3. Regulator Review

After any necessary validations are completed, the notification flows through the WMS to Regions and State Agencies:

- Type A – Regions and State Agencies with an active Unit in the WMS receive an Operator Name Change alert email. The email is sent to staff in the Acknowledge Operator Name Change role in the WMS.
- Type B, D, F, I, and J – a specified group of staff in Regions and State Agencies receive Manage Unit tasks. After the Region or State Agency has adequately adjusted Unit data in response to the notification, the task is completed. Manage Unit tasks are distributed based on the system types, sub-types and States in the notification. In certain instances, a Regulator receiving the notification may not own the applicable Units. If a Regulator receives a notification that should be acted upon by another Regulator, reassign the Manage Unit task to the appropriate Regulator.
- Type C – a specific group of staff in each Region with an active Unit receive a SPR Change Task. The Region decides if changes to Inspection Systems are warranted based on the new Safety Program data in the notification. After making this decision, complete the SPR Change task.
The Type C notification will not appear in the PHMSA Data Mart-Pipeline (PDM-P) until all related SPR Change tasks are completed.

2.6. OPERATOR IDENTIFICATION ASSIGNMENT REQUEST

An Operator Identification Number (OpID) is an internal DOT number that identifies and tracks operator activities over time and across PHMSA databases. Operators of regulated gas facilities (49 C.F.R. §§192 and 193) and hazardous liquid and carbon dioxide systems (49 C.F.R. §195) are required to have an OpID.

2.6.1. Receipt

Pipeline operators submit OpID requests via the PHMSA Portal. Once the operator submits their OpID request, a task is generated in the WMS for the IRM to review.

2.6.2. Validation

The IRM can reject the request, reopen the request for editing, or submit the request to Regions and State Partners. Rejecting the request typically occurs if the company already has an OpID or intended to submit a National Registry Notification. The IRM may reopen a request if errors or inconsistent data is discovered during the initial review. If no issues are uncovered during the initial review, the IRM submits the OpID request to the applicable PHMSA Region(s) and State Partner(s) for their review.

2.6.3. Regulator OPID Review Task

Regions and State Partners review the request to ensure the pipelines are regulated and are NOT being reported by an existing OpID. If all regulators approve the request, an OPID is generated by the WMS and all parties involved receive an e-mail confirming the creation of the OpID. If all regulators do not approve, the IRM decides on the appropriate action. If the request included plans for new construction, each member of the WMS role named “Receive Email Alert: Construction OpID” receives an email when the OpID is created.

The IRM and PHP-6 follow up with Regions and State Partners that do not complete Regulator OPID Review Tasks promptly.

2.7. EXTREME WEATHER INSPECTION DELAY

§195.414 requires operators to inspect pipeline facilities after certain extreme weather events. If an operator is unable to commence the inspection within 72 hours after the cessation of the event, the operator must notify the appropriate PHMSA Region Director as soon as practicable. For each of the operator’s units requiring notification, Region staff will attach documentation of the notification using the unit attachment category of Extreme Weather Inspection Delay.

2.8. ABANDONMENT OF UNDERWATER FACILITIES REPORTS

Pursuant to [§192.727\(g\)](#) and [§195.59\(a\)](#), for each abandoned offshore pipeline facility or each abandoned onshore pipeline facility that crosses over, under or through a commercially navigable waterway (CNW), the last operator of that facility must file a report upon abandonment of that facility.

CNW are determined by the US Army Corps of Engineers' National Waterway Network (NWN) database, excluding all non-commercial routes designated as no-traffic, non-navigable, and/or for special vessels such as fishing, power, and recreational watercraft. NPMS web-based mapping applications include a CNW layer named "Commercially Navigable Waterways" and data is available for download from [CNW Data \(dot.gov\)](#).

2.8.1. Receipt

GT and HL

PHMSA's preferred method for operators to submit abandonment reports for gas transmission or hazardous liquid pipelines is to include them with their NPMS submission using the template available at https://www.npms.phmsa.dot.gov/Documents/Abandonment_Certification_Template.doc. Operators can also submit their abandonment reports prior to their NPMS submission due date by email to NPMS@dot.gov.

GD and GG

PHMSA's preferred method for operators to submit abandonment reports for gas distribution and gas gathering lines (not mapped in the NPMS) is by email to InformationResourcesManager@dot.gov.

2.8.2. Validation

While processing the operator's annual NPMS submission, the NPMS team will verify that a complete abandonment report accompanies each abandoned pipeline that crosses a CNW or runs offshore. If an abandonment report is missing, is not signed, the data is incomplete, or the data does not match the abandoned line in the NPMS submission, NPMS staff will put the NPMS submission on hold and request corrected information from the pipeline operator. If the operator does not comply within two weeks the NPMS will continue processing the submission without an abandonment report on file.

2.8.3. [SharePoint](#) List

All reports received during CY 2016 or later are loaded to [SharePoint](#), including a .pdf of the report, OpID, Report Date, and Unit ID(s). PHMSA staff have access to the SharePoint list. Future enhancements of the PDM-P may include showing the reports on the asset dashboards.

2.8.4. Region/State Notification

If the report includes facilities with a federal Unit ID(s), PHP-6 will email the report and federal Unit ID(s) to each Region with a Unit. If the report includes

facilities regulated by State(s), PHP-6 will email the report to the appropriate State Program Manager(s).

3. RESPONSIBILITIES

3.1. INFORMATION RESOURCES MANAGER

3.1.1. Receive gas gathering, gas transmission and hazardous liquid *Integrity Assurance* notifications, *OQ* notifications, biofuel notifications, and abandonment reports. Perform review and validation, data entry, and status management of *Integrity Assurance* notifications, *OQ* notifications, Alternative *MAOP* notifications, and biofuel notifications. Perform review, validation, and manage updates of national registry notifications.

3.1.2. Review and validate Operator Assignment requests.

3.2. PHP OFFICES AND STATE AGENCIES

3.2.1. Communicate with pipeline operators, PHP-6, and the Information Resources Manager to implement responsibilities listed throughout this policy. Conduct inspections and initiate enforcement as appropriate.

OFFICE OF PIPELINE SAFETY

RELATED CONDITION REPORT IN WMS POLICY

POLICY NUMBER: PHP-5340.2D2

EFFECTIVE DATE: January 8, 2020



**U.S. Department
of Transportation**

**Pipeline and
Hazardous Materials
Safety Administration**

Linda Daugherty Deputy Associate Administrator for Field Operations,

Office of Pipeline Safety, PHMSA

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1. INTRODUCTION

1.1. PURPOSE

This policy describes how Safety Related Condition Reports (SRCR) are processed by PHMSA's Office of Pipeline Safety (OPS). PHMSA regulations require operators of gas distribution (GD), gas gathering (GG), gas transmission (GT), hazardous liquid (HL), liquefied natural gas (LNG) facilities, and underground natural gas storage (UNGS) facilities to submit reports when they learn of certain potentially hazardous conditions. The Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 (Pub. L. 112-90) requires operators of gas transmission pipelines to report excessively high operating pressures. These reports are collected as SRCR Condition #10. For this Policy, both speed and accuracy are crucial to ensuring OPS adequately responds to these reports. This Policy covers data entry, contact with operators and State Partners, criteria for closing reports, and data management.

1.2. SCOPE

This policy applies to all OPS employees and State Agency staff involved in processing SRCRs.

1.3. AUTHORITIES

1.3.1. Statutory

1.3.1.1. 49 C.F.R. §191.23 – Reporting safety-related conditions.

1.3.1.2. 49 C.F.R. §195.55 – Reporting safety-related conditions.

1.4. DEFINITIONS

1.4.1. *Safety Related Condition Report* means a report that pipeline operators, LNG facility operators, and UNGS facility operators must submit if certain kinds of conditions are discovered on a pipeline facility. A few examples include:

- General corrosion that has reduced wall thickness beyond acceptable tolerances;
- Unintended movement or abnormal loading by environmental causes such as a landslide or earthquake;
- A material defect that impairs the structural integrity or reliability of a LNG facility; or any safety-related condition that could cause an imminent hazard.

A full list of the conditions can be found in Part 191.23 and Part 195.55. The operator is required to submit the information to PHMSA if the company has not resolved the condition within five business days of determining the condition exists. This reporting requirement applies only to conditions that might impact a building intended for human occupancy, outdoor place of

assembly, public road or railroad. When PHMSA receives a Safety Related Condition Report, it will generally contact the company within 24 hours to monitor the actions taken to address the condition. Safety Related Condition Reports allow PHMSA to assure companies are appropriately acting to assure pipelines do not become a hazard to the public or the environment.

- 1.4.2.** *Interstate gas pipeline facility* means a gas pipeline facility used to transport gas and subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act (15 U.S.C. §717 et seq.).
- 1.4.3.** *Intrastate gas pipeline facility* means a gas pipeline facility and transportation of gas within a State not subject to the jurisdiction of FERC under the Natural Gas Act (15 U.S.C. 717 et seq.).
- 1.4.4.** *Interstate hazardous liquid and carbon dioxide pipeline facility* means a pipeline or that part of a pipeline that is used in the transportation of hazardous liquids or carbon dioxide in interstate or foreign commerce (49 C.F.R. §195.2).
- 1.4.5.** *Intrastate hazardous liquid and carbon dioxide pipeline facility* means a pipeline or that part of a pipeline to which Part 195 applies that is not an interstate pipeline (49 C.F.R. §195.2).

2. POLICY

2.1. DATA ENTRY BY CHIEF INFORMATION OFFICER (PHF-30)

[Create and Edit SRCR YouTube Video](#)

Staff with the Activity Creator role for PHF-30 perform data entry into WMS from the submittals sent to Headquarters by operators. PHF-30 will target creating the SRCR in WMS within one business day of when the report is received by PHF-30.

2.1.1. OpID, System Type, State(s), and Interstate/Intrastate

Generally, the submittal includes the OpID. If not, use the Operator Name to find the OpID. You must also know the System Type – GD, GG, GT, HL, LNG, or UNGS. The State(s) and Interstate/Intrastate status of the facilities are needed to assign the SRCR to the correct Lead Regulator. Assume GD is Intrastate unless the submittal says Interstate. If you are not able to determine any four of these items from the submittal, call the submitter to ask for the correct values.

2.1.2. SRCR Activity Creation

On the top row of WMS tabs, select Activities, then Create Activity. After selecting Investigation and SRCR, select Go.

Determine the Lead Regulator for the SRCR by using the [Fed/State xls in SharePoint](#). Start with the sheet named EXCEPTIONS by looking for the OpID, Inter/Intra, System Type, and State. When State is null, the exception applies in all States. If you find an applicable record, use the Exception Lead Regulator as the Regulator for the SRCR. If you do not find an applicable record on the EXCEPTIONS sheet, use the JURISDICTION sheet to find the Regulator based on System Type, Inter/Intra, and State.

If the process above yields more than one Regulator, assign the Regulator with pipeline systems most heavily impacted by the SRCR as the Lead Regulator and select the remaining Regulators in the Additional Regulators drop-down. **DO NOT create the SRCR activity with Lead Regulator equal to PHF-30.**

In Activity Description, enter a short version of the operator name, system type abbreviation, condition abbreviation(s) and number(s), and State most heavily impacted. In Summary of Incoming Documents, summarize the information about the SRCR in the operator's submittal.

Enter the email address of the submitter along with the dates, conditions, and inter/intra States from the operator's submittal, then select Create. The WMS will send a confirmation email to the submitter.

Who, What, Where Tab

Enter the Unit ID(s) or OpID(s) for the SRCR. Select Save.

Documents Tab

Upload all documents included with the Operator's submittal, including a pdf of the e-mail.

Investigation Tab

Recheck all of the dates and conditions entered during activity creation. Enter all available information into the Additional Information section. Under Operator Information, select the Unit ID or Operator ID most heavily impacted from the drop-down. Select Save.

Select Release Lock on the right side of the blue banner and the window will close.

2.1.3. Updates from Operators

If an operator sends an update or supplemental SRCR to PHF-30, update the SRCR in the WMS.

To find SRCR activities, select Search on the top row of WMS tabs. Click the Activity Search tab on the second row. Adjust prompts and click the Search command button. In the Search Results table, click on the Activity ID to open the SRCR.

Attach the new documents to the SRCR record on the Documents tab and update other data fields as needed. Check the Who,What,Where tab to determine the Lead Person. Send an e-mail to the Lead Person letting them know how you have changed the SRCR activity.

Select Release Lock on the right side of the blue banner and the window will close.

2.2. Data Management by Regulators

2.2.1. Business Rules

- Regulator staff receive new SRCR alert e-mails from the WMS and will review SRCR the same business day to identify reports that warrant immediate investigation.
- The Regulator should make contact with the operator and create the first Note within 10 business days of the SRCR being created.
- When the report is for a pipeline included in a Unit, PHF-30 staff will enter the applicable Unit ID(s) on the Who,What,Where tab. If the Unit ID(s) are incorrect, **Regulators must correct them.**
- On the Investigation tab, select the Unit or OpID most heavily impacted by the SRCR.

2.2.2. Assigning SRCR to Inspector

[YouTube Video](#)

Upon creation of the SRCR, Regulator staff with the Investigation Receive role for the activity Lead Regulator will receive an alert e-mail and an Assign Lead/Supervisor task in the Investigation worklist. In rare cases, more than one Regulator provides oversight of the pipeline facilities covered by a SRCR. When this occurs, Regulator staff with the Investigation Receive role for an additional Regulator will receive an Investigation task.

Open the SRCR activity from the Investigation worklist. On the Who What Where tab, review the Summary of Incoming Documents field.

For the Lead Regulator, add Supervisor(s) and a Lead Person in the Activity Staff table. Select the Tasks tab and open the Assign Lead/Supervisor task. Select Save - comments are optional.

For additional Regulators, select the Tasks tab and open the Investigation

task for your Regulator. Modify the task by changing the Task Owner to an investigator in your Regulator.

Select Release Lock on the right side of the blue banner and the window will close.

2.2.3. Lead Person Data Review and Follow-Up

[YouTube Video](#)

The Lead Person will receive an alert e-mail and an Investigation task in the Investigation worklist. For each additional Regulator involved in the SRCR, there will be an additional Investigation task.

Open the SRCR activity from the SRCR worklist and review all of the activity tabs. Some of the fields are editable only by SRCR creators. If there are error in these fields, send an email to InformationResourcesManager@dot.gov and describe the errors.

Contact the operator to get an update on the corrective actions planned. Also, verify the OpID on the Who,What,Where tab is accurate. If the pipeline system has Units(s) in the WMS, verify the Unit ID(s) on the Who,What,Where tab.

The first Note should be created within 10 business days of the SRCR being sent to the Regulator and include the actions taken by both the Regulator and the Operator. The Lead Person will assess whether the actions are appropriate and timely. If not, the Lead Person should recommend enforcement action to Regulator management. When new information is received from the Operator, add additional Notes. Set the due date of your Investigation task to match the date you expect the next update from the Operator.

On the Investigation tab, verify all of the relevant data fields in the Additional Information section, except Remedial Action Completed Date. In the Location section, add the information for the single location most heavily impacted by the SRCR.

Select Release Lock on the right side of the blue banner and the window will close.

2.2.4. Assigning SRCR to Single Unit or OpID

On the Who,What,Where tab, multiple Unit ID or OpID can be entered. In the Operator Information section of the Investigation tab, verify that the Unit or OpID most heavily impacted has been selected.

Select Release Lock on the right side of the blue banner and the window will close.

2.2.5. Closing SRCR

[Request Closure YouTube Video](#)

Reports may be closed when Regulator staff is satisfied that the condition has been corrected. If enforcement is initiated, the CPF number or State- enforcement-identifier must be included in a Note.

On the Who,What,Where tab, in the Summary of Corrective Actions field, enter a summary. Check the Activity Staff table and ensure the person you will ask to approve closure is in the table as a Supervisor.

On the Investigation tab, enter the Remedial Action Completed Date.

On the Tasks tab, select the Investigation task for the Lead Person. Select the Complete Task radio button, then OK – comments are optional. If there is more than one Supervisor on the Who,What,Where tab, select the Supervisor to receive the Closure Requested task. When the Lead Person's Investigation task is completed, all other Investigation tasks will also be completed.

Select Release Lock on the right side of the blue banner and the window will close.

[Closure YouTube Video](#)

The Supervisor selected will receive an alert e-mail and a Closure Requested task in the Investigation worklist. Open the activity from the worklist and review all tabs, especially the Notes tab to ensure adequate operator actions have been documented. On the Tasks tab, open the Closure Requested task and select the Complete Task radio button.

If the Notes tab documents adequate Operator actions, select Approve. If all required fields have data, the activity status will change to Closed and the window will close. If not, error messages will explain data inadequacies. Fix the data and open the Closure Requested task again.

If the Notes tab does not document adequate Operator actions, select Disapprove. In the Comment field for the task, explain what more is needed. The Lead Person will get an alert e-mail and an Investigation task in the Investigation worklist. Select Release Lock on the right side of the blue banner and the window will close.

2.3. Policy Change History

Date	Summary
1/?/2020	Implementing improved method of determining Lead Regulator. More data fields available to SRCR creators. Lead Regulator can be a Region or a State Agency.
4/1/2019	Policy rewritten to reflect use of WMS instead of SMART for new SRCR.
10-26-2018	System Type – GD, GG, GT, HL, LNG, or UNGS – required to be entered upon SRCR creation. Changed PHA-50 to PHF-30 to reflect recent reorganization.
3-10-2015	PHA-50, not PHP-20, creates reports in SMART. PHA-50 staff determine OpID, System Type, State, and Interstate/Intrastate for submittals. PHA-50 staff determine Unit ID(s) and Inspection System Lead Region. SRCR assigned based on Inspection System Lead Region. MAOP PLUS BUILDUP EXCEEDED, GAS TRANSMISSION (CONDITION 10) added in 2012 based on requirement in pipeline safety law.
7-15-2011	Added requirements to assign SRCR to Unit(s) when applicable. Added criteria for closing report to section C5
12-14-2010	Reflect 5-2010 PHMSA Reorganization and reformat
4-14-2009	First Edition

3. RESPONSIBILITIES

3.1. INFORMATION RESOURCES DIVISION AND CHIEF INFORMATION OFFICER (PHF-30)

- 3.1.1.** Staff with the Activity Creator role for PHF-30 perform data entry into W M S from the submittals sent to Headquarters by operators.
- 3.1.2.** PHF-30 will target creation of the SRCR in WMS within one business day of when the report is received by PHF-30.

OFFICE OF PIPELINE SAFETY PIPELINE ASSET

MANAGEMENT POLICY POLICY NUMBER: PHP-5340.8E

EFFECTIVE DATE: August 17, 2021



**U.S. Department
of Transportation**

**Pipeline and
Hazardous Materials
Safety Administration**

**LINDA GAIL
DAUGHERTY**

Digitally signed by LINDA GAIL
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1. INTRODUCTION

1.1. PURPOSE

This policy provides instructions for Office of Pipeline Safety (OPS) Region staff with data management responsibilities to:

1. Maintain the accuracy of Unit and Inspection System (IS) data in the Work Management System (WMS).
2. Communicate changes or corrections to gas transmission and hazardous liquid Unit maps to the NPMS using the WMS and the Inspection Unit Modification Tool (IU Mod Tool).
3. Update operator contacts in the PHMSA Portal
4. Obtain asset data for excavators.

1.2. SCOPE

This policy applies to OPS Region and HQ staff with data management responsibilities.

1.3. AUTHORITIES

- 1.3.1.** 49 C.F.R. §190.203 – Inspections and investigations.

1.4. DEFINITIONS

- 1.4.1.** *60105 Agreement* – a State agency plans inspections, conducts inspections, and conducts enforcement on intrastate facilities. Units for these intrastate facilities have Regulator value equal to the State agency.
- 1.4.2.** *60106 Agreement* – a State agency plans inspections and conducts inspections, but OPS Region conducts enforcement on intrastate facilities. Units for these intrastate facilities have Regulator value equal to the State agency.
- 1.4.3.** *Excavator* – a company or individual engaged in digging or demolition work and being investigated by OPS for non-compliance with Subpart B of 49 CFR 196.
- 1.4.4.** *Inspection System (IS)* – a grouping of gas gathering and gas transmission Units or a grouping of hazardous liquid Units for conducting an Integrated Inspection. Gas and liquid units cannot be combined into an inspection system.
- 1.4.5.** *IS ID* – a four to six-digit number assigned by OPS to an IS.
- 1.4.6.** *Interstate Agent* – a State agency conducts inspection on interstate facilities. OPS Region responsible for planning inspections, conducting enforcement, and maintaining Unit data. Units for these interstate facilities have Regulator value equal to OPS Region.
- 1.4.7.** *IU Mod Tool* – software used to geospatially describe changes to Unit NPMS Maps. Available in the PHMSA Portal or at <https://www.npms.phmsa.dot.gov/IUModTool/>.

- 1.4.8.** *Operator* – definition varies slightly among Part 190, 191, 192, 193, 194, 195, and 199. Generally, a company responsible for the construction or operation & maintenance of a pipeline system.
- 1.4.9.** *OpID* – a one to five-digit number assigned by OPS to an operator.
- 1.4.10.** *Unit* – a portion of an Operator’s pipeline system pre-defined for inspection purposes.
- 1.4.11.** *Unit ID* – a two to six-digit number assigned by OPS to a Unit.
- 1.4.12.** *Work Management System (WMS)* – software used to generate tasks to create and update data. Available in the PHMSA Portal.

2. POLICY

2.1. ACCESSING THE WORK MANAGEMENT SYSTEM (WMS)

2.1.1. URL

WMS is accessed through the PHMSA Portal – On-Network at <http://portal.phmsa.dot.gov/PHMSAPortal2/faces/UIShellPortalHome> or Off- Network at <https://portal.phmsa.dot.gov/PHMSAPortal2>. When using the Off- Network option, you must enter your Network UserName and Password.

2.1.2. Roles

Your ability to modify and create data in the WMS and PHMSA Portal is controlled by your membership in Roles. The Role names and abilities relevant to this policy are:

- *WMS Role - Manage Unit_SPR_IS*: move Unit from one OpID to another. Deactivate, Activate, Split, Merge, and Create Units. Change Regulator and Plan Required value. Move Units among Inspection Systems (IS), create new and deactivate IS, approve or reject IS changes requested by other Regulators.
- *Portal Role - OpID Contact Management*: update operator contact information in the PHMSA Portal.
- *WMS Role - Update Unit*: change any of the data associated with Unit, except the OpID, Inspection System, Regulator, Plan Required, and Status (Active/Inactive). Add or remove pipeline miles and components if no impact to a second unit.
- *WMS Role - Unit Mapping*: process NPMS Change tasks to communicate Unit boundary changes to the NPMS and submit correction sessions to improve the accuracy of Unit boundary mapping in NPMS data.

2.2. UNIT DATA OVERVIEW

Notice - All WMS Unit data, including text fields, could become public information.

2.2.1. Primary tab

Unit ID Automatically assigned by the WMS upon Creation – see sections 2.3.1 and 2.3.2

Unit Name Assigned by Regulator and editable

Operator Can be changed by Moving the Unit – see section 2.3.2

Status Options are Inactive and Active. Inactive means all of the pipeline facilities in the Unit have been abandoned by the operator. The status for all other facilities, including “idle” facilities, is Active. Can be changed by Activating or Deactivating the Unit – see section 2.3.2. Units that have been Merged and Deactivated are no longer available for use and are not findable in the WMS. These Units have a status of Merged in the PDM.

Activation Date The most recent date the Unit was Activated. Editable only in Manage Unit – see section 2.3.2.

Deactivation Date The most recent date the Unit was Deactivated. Editable only in Manage Unit – see section 2.3.2.

Regulator The OPS Region or State Agency responsible for inspection planning. Units inspected by Interstate Agents have a Regulator value equal to one of the OPS Regions. Since GRR HL operators have reporting requirements only and no inspections are performed, PHP-6 is the Regulator. Editable only in Manage Unit – see section 2.3.

State Unit ID Only appears for Unit with Regulator value equal to a State Agency. Unique identifier from the State Agency data system.

Inspection Plan Field is not currently used and value is irrelevant. Options available reflect how Regions used to plan inspections. Central Region and Eastern Region had a single plan option. Southern Region had two plan options; Florida LPG and all others. Southwest Region had an Onshore plan and an Offshore plan. Western Region had a Continental US (CONUS) plan and an Alaska plan.

Jurisdiction If the Unit is inspected by an Interstate Agent, select Interstate Agent. If the Region has authority over the Unit based on an MOU with another agency, pick the appropriate MOU option. If a State agency is temporarily empowered to inspect the Unit, select Temporary Agent. Otherwise, pick Federal. Never pick 60105 Agreement or 60106 Agreement for a Unit with Regulator equal to an OPS Region.

Pipeline Type
Single select indicating the System Type and Interstate/Intrastate status of the pipeline facilities.
System Types – Gas Distribution, Gas Gathering, Gas

Transmission, Hazardous Liquid, Liquefied Natural Gas Underground Natural Gas Storage, and Gravity and Reporting-Regulated-Only Hazardous Liquid cannot be combined in a single Unit. Interstate and Intrastate facilities of the same System Type cannot be combined in the same Unit.

Interstate has nothing to do with crossing State lines. For gas pipeline facilities, interstate is defined in statute as a gas pipeline facility used to transport gas and subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act (15 U.S.C. 717 et seq.). For hazardous liquid and carbon dioxide pipeline facilities, interstate is defined in Part 195.2 as a pipeline facility used in the transportation of hazardous liquids or carbon dioxide in interstate or foreign commerce. Appendix A to Part 195 contains PHMSA's Statement of Policy and Interpretation on the delineation between interstate/intrastate and provides additional guidance.

Any pipeline facility that is not interstate is intrastate.

Distribution LPG - Large vs Small – For distribution LPG systems serving 100 or more customers from a single source, select large. This aligns with the gas distribution annual report exemption in Part 191.11(b).

Date of Operational Change

When a Unit is Updated (see section 2.4) or Managed (see section 2.3), you must enter a date for the Unit History. If the Update/Manage is based on operational changes by the operator, enter the date of the changes. If the Update/Manage is just data clean-up and not based on operational changes by the operator, enter the current date.

Change comments for Unit History

When a Unit is Updated (see section 2.4) or Managed (see section 2.3), enter text for the Unit History describing the reason for the Update/Manage action.

Plan Required

If all facilities within a Unit are still under construction and not in service, select No and the WMS will set Total Pipeline Miles to zero. If Pipeline Type is Distribution Small LPG or Distribution Master Meter and the Region has no knowledge of an elevated risk, select No. Since no inspections are performed on GRR HL Units, Plan Required is always No. In all other situations, select Yes.

IS Change Required?

If the Unit needs to be moved to a different Inspection System, select Yes and pick the new Inspection System from the drop-down.

Inspection System

All OPS Region active gas gathering, gas transmission, and hazardous liquid Units with Plan Required = Yes must be placed in an Inspection System. Units for State Agencies and other System Types are not allowed to be placed in Inspection Systems.

Update Unit Options

If you want to create an Update Unit Task for someone, select "Assign to Inspector" and find the inspector by typing the inspector's username.

NPMS Unit Map already includes mileage changes made in this Update? If the NPMS Unit Map includes all of the miles changed in this Update, select Yes. Otherwise, select No and see section 2.4.1. Do not add new construction miles to Total Pipeline Miles until the miles go into service. The icon named “Unit NPMS Map” to the right of this question opens the Pipeline Data Mart (PDM) Unit Dashboard on the Unit Map tab.

Pipeline Description Follow Region policy regarding the contents of this text field. Typically, current construction projects are included in either Pipeline Description or Unit Comments.

Unit Comments Follow Region policy regarding the contents of this text field. Typically, current construction projects are included in either Unit Comments or Pipeline Description.

Control Center Location Where the Unit’s control center(s) are located.

Record Location Where the operator keeps records for the Unit.

Unit Address Physical address(es) of operator staff responsible for the Unit.

2.2.2. Contacts tab At least one “Emergency 24 hour Phone Number” and at least one “Control Room Number” are required. Contacts specific to the Unit can be edited, added, or deleted.

2.2.3. Inspection tab Contains read-only data for SMART inspections where the Unit was assigned and an active link to WMS inspections including the Unit.

2.2.4. States/Counties tab State/County combinations must be entered on this tab before the State/County can be selected on the Components tab. State/County cannot be removed if a Component has the State/County value. For Louisiana, Parishes are available for selection in the County list. When States have cities that are not within a County, these cities are available for selection in the County list. In most States, “Not Known” is available in the County list, but efforts should be made to identify the actual County.

2.2.5. Commodity tab The commodity(ies) transported in the Unit

2.2.6. Components tab

The Components available are based on the *System Type* for the Unit.

State/County must be entered on the States/Counties tab before it can be selected for a facility.

If **RRIM** appears in the description below, the Component is a threat factor in the Risk Ranking Index Model (RRIM). Gas Distribution, Liquefied Natural Gas, and Underground Natural Gas Storage Units are excluded from RRIM. Gas Gathering, Gas Transmission, and Hazardous Liquid Units with Plan Required = No are excluded from RRIM.

Total Pipeline Miles **RRIM if no miles in NPMS** *All except Liquefied Natural Gas and Underground Natural Gas Storage* The total number of in- service miles. Miles under construction are excluded until the miles are placed in service.

Total Right of Way Miles *All except Liquefied Natural Gas and Underground Natural Gas Storage* Not required for all Regions. The number of miles of right of way containing the Total Pipeline Miles.

Non-Rural Right of Way Miles *Only for Hazardous Liquid* Not required for all Regions. Part 195 definition: *Rural area* means outside the limits of any incorporated or unincorporated city, town, village, or any other designated residential or commercial area such as a subdivision, a business or shopping center, or community development. Enter the non-rural value.

Miles of Bare Pipe (installed w/o coating) **RRIM** *All except Liquefied Natural Gas and Underground Natural Gas Storage* The number of steel miles without an external coating.

Ineffectively Coated Pipe? **RRIM** *All except Liquefied Natural Gas and Underground Natural Gas Storage* If the Unit includes steel pipe with an external coating, but the coating does not meet the requirements of Part 192 or 195, enter Yes. Otherwise, enter No.

Class 1 Miles *Only for Gas Distribution, Gas Gathering, and Gas Transmission*
Not required for all Regions. Defined in Part 192.

Class 2 Miles *Only for Gas Distribution, Gas Gathering, and Gas Transmission*
Not required for all Regions. Defined in Part 192.

Class 3 Miles *Only for Gas Distribution, Gas Gathering, and Gas Transmission*
Defined in Part 192.

Class 4 Miles *Only for Gas Distribution, Gas Gathering, and Gas Transmission*
Defined in Part 192.

Pipeline Miles SMART Pigged *All except Liquefied Natural Gas and Underground Natural Gas Storage* Number of Unit miles inspected with an inline inspection tool.

PRE70 ERW Pipe **RRIM** *All except Liquefied Natural Gas and Underground Natural Gas Storage* Number of Unit miles of steel pipe with a weld seam created using a low frequency electric resistance weld process and manufactured before 1970.

Any HCA Miles? *All System Types* Enter Yes if any of the Unit miles are in an HCA as defined by Part 192 or 195. Otherwise, enter No.

Number of HCA Miles *RRIM if no miles in NPMS All System Types* Enter the number of Unit miles in an HCA as defined by Part 192 or 195.

Special Permits (Waivers)? *All System Types* Enter Yes if the operator has a non-expired PHMSA waiver or special permit applicable to pipeline facilities in the Unit.

Tribal Land? *All System Types* Enter Yes if any portion of the Unit resides on a Tribal Land. The PHMSA definition of Tribal Lands is located in the Policy for Inspections and Investigations on Tribal Lands – (PHMSA 5301.1A)

Breakout Tanks *Only for Hazardous Liquid* Create a record for each tank facility within the Unit. Enter the quantity of tanks, not the storage capacity of the tanks.

Pump Stations *Only for Hazardous Liquid* Create a record for each pump station within the Unit.

Compressor Stations *Only for Gas Distribution, Gas Gathering, and Gas Transmission* Create a record for each compressor station within the Unit.

Storage Fields *For all except Liquefied Natural Gas* Create a record for each underground storage field within the Unit.

Platforms *Only for Gas Gathering, Gas Transmission, and Hazardous Liquid* Create a record for each offshore platform within the Unit.

Navigable Crossings *Only for Gas Gathering, Gas Transmission, and Hazardous Liquid* Create a record for each time a pipeline within the Unit crosses a navigable waterway. If a waterway does not appear in the drop-down, it is not navigable.

LNG Tanks *Only for Liquefied Natural Gas* Create a record for each facility within the Unit. Record the total number of tanks and the combined storage capacity of the tanks in barrels.

2.2.7. History tab Read-only data about past changes to the Unit

2.2.8. Attachments tab Six categories of attachments can be loaded to the Unit: Extreme Weather Inspection Delay, Map, Operator Correspondence, Other, Special Permit, and Stay of Enforcement.

2.3. UNIT DATA MANAGEMENT

2.3.1. Creation – Manage Unit_SPR_IS Role

Traditionally, Units have been between 300 and 500 miles of pipe. All pipelines subject to inspection and enforcement by Regions shall be placed in a Unit. All

pipelines inspected by Interstate Agents with enforcement by PHMSA shall be placed in a Unit with the Regulator value set to an OPS Region.

Use the Manage Unit task in the WMS to create a new Unit for pipelines that are not already in a different Unit. Populate all of the Unit data you know at the time. These fields are required in the WMS before a Unit can be created:

Unit Name Regulator Jurisdiction Pipeline

Type Plan Required

Inspection System ID – depending on Pipeline Type and Plan Required values – see section 2.6.1

Pipeline Description Unit Comments

Total Pipeline Miles – zero is acceptable if Plan Required is No PRE70 ERW Pipe

Special Permits (Waivers)

These additional fields are required upon the first update of the Unit: Emergency 24 hour Phone Number

Control Room Number Date of Operational Change

Change Comments for Unit History

Does NPMS Unit Map already include mileage changes made in this Update?

If all the facilities within the Unit are under construction and not yet in service, ensure Plan Required is set to No and the WMS sets Total Pipeline Miles to zero. Future changes to the Unit's Pipeline Type are restricted, so ensure you pick the correct value. For example, Interstate Gas Transmission can be changed to Intrastate Gas Transmission, but cannot be changed to any flavor of hazardous liquid, gas distribution, or LNG.

For Gas Transmission and Hazardous Liquid Units with Plan Required = "Yes", you must select "Year NPMS Submittal Accommodates Change" and communicate the correct boundaries for the new Unit in the IU Mod Tool. "Year NPMS Submittal Accommodates Change" is based on when the miles within the Unit appear in the operator's NPMS submittal. Choices are IMMEDIATE, <This Year>, and <Next Year>. If the pipeline miles in the new Unit are already in the operator's NPMS submittal, select IMMEDIATE. If the miles are not in the operator's NPMS submittal but were in service before the end of the previous calendar year, the operator's NPMS submittal for the current year should include the miles – select <This Year>. If the miles were placed in service during the current calendar year, they will not appear in an NPMS submittal until next year – select <Next Year>. Region staff in the Unit Mapping role will receive a task in the WMS to complete an IU Mod Tool session within a few weeks of creating the new Unit. After the session is available, log-in to the IU Mod Tool with your

PIMMA username and password, select the IU Mod Tool task type, search for the Create New task, and report the correct unit boundary locations on the map.

Contact leigha.gooding@dot.gov if you need to expedite the task or have any questions. NPMS staff will use the modification notes entered in the IU Mod Tool and the Year NPMS Submittal Accommodates to either complete or schedule the Unit mapping change. As well, NPMS staff will not accept a submission from the operator unless it includes the pipelines for the scheduled map change.

2.3.2. Move, Split, Merge, Deactivate, and Activate – *Manage Unit_SPR_IS* Role

Using the Manage Unit task, Units can be Moved to a different OpID, Split, Merged, Deactivated, and Reactivated in the WMS. If only part of a Unit is being Moved to a different OpID, Merged, or Deactivated, you must Split the Unit first. When pipes are removed from one Unit and added to another, for any reason, and only a few Units are affected, Split the Unit losing pipe and immediately Merge the New Split Unit(s) into the Unit gaining pipe. Text fields, State/Countries, and Component data can be efficiently managed within the Split and Merge functions.

For each Gas Transmission and Hazardous Liquid Unit Split or Reactivated with Plan Required = Yes, you must communicate the correct split location(s) or boundaries in the IU Mod Tool. Select “Year NPMS Submittal Accommodates Change” and communicate the correct boundaries for the Unit in the IU Mod Tool. “Year NPMS Submittal Accommodates Change” is based on when the split or reactivated miles within the Unit appear in the operator’s NPMS submittal.

Choices are IMMEDIATE, <This Year>, and <Next Year>. If the miles are already in the operator’s NPMS submittal, select IMMEDIATE. If the miles are not in the operator’s NPMS submittal but were in service before the end of the previous calendar year, the operator’s NPMS submittal for the current year should include the miles – select <This Year>. If the operator split or reactivated the miles during the current calendar year, they will not appear in an NPMS submittal until next year – select <Next Year>. Region staff in the Unit Mapping role will receive a task in the WMS to complete an IU Mod Tool session within a few weeks of Splitting or Reactivating. After the session is available, log-in to the IU Mod Tool with your PIMMA username and password, select the IU Mod Tool task type, search for the Split or Activate task, and report the correct split or unit boundary locations on the map. Contact leigha.gooding@dot.gov if you need to expedite the task or have any questions. NPMS staff will use the modification notes entered in the IU Mod Tool and Year NPMS Submittal Accommodates to either complete or schedule the Unit mapping change. As well, NPMS staff will not accept a submission from the operator unless it includes the pipelines for the scheduled map change.

Bulk Unit Redraw

When many Units need to be adjusted at multiple end points, the Split and Merge functions become numerous and onerous. As well, there may be a reason to perform multiple Updates rather than Deactivating and Creating new Units. In these situations, contact the Director of the Operations Systems Division. The

Director will work with the Region(s) and NPMS Staff to develop an IU Mod Tool plan to efficiently communicate new Unit boundaries.

2.4. UNIT DATA UPDATES – *Manage Unit_SPR_IS* and *Update Unit Roles*

During every inspection, check the accuracy of the Unit data in the WMS and make corrections if needed. Data can be corrected using an Update Unit task or the “pencil” in the Unit Search results table. In addition, someone else may assign an Update Unit task to you. You can Update a Unit to add pipelines not already in a different Unit, such as new construction placed in service or a pipeline not previously regulated by a Region. Only staff with the Manage Unit role can shift miles from one Unit to another using the Split and Merge functions.

2.4.1. Primary tab

Before you can save changes in the Modify/Update Unit task, you must enter an Operational Change Date, Comments for the Unit history, and, for Gas Transmission and Hazardous Liquid pipeline types, state whether the “NPMS Unit Map already includes mileage changes made in this update.” If, for example, you are adding newly constructed, just-placed-in-service pipelines to the Unit or adding miles not previously regulated by a Region, select “No” for the NPMS Unit Map question, select “Year NPMS Submittal Accommodates Change”, and enter text for the Unit history. “Year NPMS Submittal Accommodates Change” is based on when the miles will appear in the operator’s NPMS submittal.

Choices are IMMEDIATE, <This Year>, and <Next Year>. If the pipeline miles are already in the operator’s NPMS submittal, select IMMEDIATE. If the miles are not in the operator’s NPMS submittal but were in service before the end of the previous calendar year, the operator’s NPMS submittal for the current year should include the miles – select <This Year>. If the miles were placed in service during the current calendar year, they will not appear in an NPMS submittal until next year – select <Next Year>. The WMS will create an NPMS Mileage Change history record and the mapping changes will be communicated in the IU Mod Tool. Within a few weeks a session will be available for Region staff in the Unit Mapping role, log-in to the IU Mod Tool with your PIMMA username and password, select the IU Mod Tool task type, search for the NPMS Mileage Change task, and report the unit boundary changes. Contact leigha.gooding@dot.gov if you need to expedite the task or have any questions.

NPMS staff will use the modification notes entered in the IU Mod Tool and the Year NPMS Submittal Accommodates to complete or schedule the Unit mapping change. As well, NPMS staff will not accept a submission from the operator unless it includes the pipelines for the scheduled map change.

These fields are read-only in the Update task, but active in the Modify task: Plan Required?, IS Change Required?, and Regulator.

2.4.2. Contacts tab

Check the accuracy of existing phone numbers and contacts specific to the Unit. Add or correct as needed.

2.4.3. States/Counties tab

Check the accuracy of State and County/Parish/City-not-in-County information. For offshore Units, check the accuracy of the OCS Portion/Area data. Add or correct as needed. If a State/County is included in Component data, the State/County cannot be removed from the States/Counties tab.

2.4.4. Commodity tab

Verify the commodity value(s). Add or correct as needed.

2.4.5. Components tab

- 2.4.6.** Accurate Component data is essential for risk ranking and responding to stakeholder inquiries. Ensure all of the component data is complete and accurate. When newly constructed pipelines are placed in service, add the miles to Total Pipeline Miles. Refer to the Primary tab above for mapping instructions. Components cannot be assigned a State/County value until the State/County value is added to the State/Counties tab. **Attachments tab**

Maps provided by operators are often useful during inspections. The NPMS map for the Unit is readily available in the PDM or PIMMA Plus. If the Unit has an active Special Permit, Stay of Enforcement, or Extreme Weather Inspection Delay the conditions and status reports should be loaded to the Unit. Additional Operator Correspondence should be attached to the Unit to ensure legacy information is available for future inspections. The Other category should be assigned for any remaining useful Unit thment information. When uploading attachments, select the category and enter a text description for the file. For the Special Permit, Stay of Enforcement, and Extreme Weather Inspection Delay attachment categories Begin Date is required.

2.5. IU MOD TOOL AND NPMS MAPPING

This section applies only to Gas Transmission and Hazardous Liquid Units when Plan Required is Yes. The NPMS segments for pipe in the Unit are assigned the Unit ID value. The Unit value for NPMS segments not assigned to a Unit is -1.

2.5.1. Unit NPMS Map Correction Sessions

If Unit data in the WMS is correct, but the Unit NPMS Map is wrong, such as it includes segments that should have a Unit value of -1 or is missing segments, initiate an NPMS Change task in the WMS and create a Correction session in the IU Mod Tool. In the session, create modification notes to describe the correct unit boundaries or what needs to change. The NPMS will use the information from the IU Mod Tool to correct the map before the next

PIMMA plus and PDM Map update (every 2 months). The WMS will track the NPMS Change task throughout the implementation process.

2.5.2. Manage Unit and NPMS Mileage Change Sessions

If you Move, Merge, or Deactivate a Unit, you need to enter the Operational Change Date and select “Year NPMS Submittal Accommodates Change”.

Your selection is based on when the miles will appear in the operator’s NPMS submittal. Choices are IMMEDIATE, <This Year>, and <Next Year>. If the pipeline miles are already in the operator’s NPMS submittal, select IMMEDIATE. If the miles are not in the operator’s NPMS submittal but were in service before the end of the previous calendar year, the operator’s NPMS submittal for the current year should include the miles – select <This Year>.

If the miles were placed in service during the current calendar year, they will not appear in an NPMS submittal until next year – select <Next Year>.

If you Create, Split, or Activate a Unit, you need to enter the Operational Change Date, select “Year NPMS Submittal Accommodates Change”, and use the IU Mod Tool. NPMS staff will use the modification notes entered in the IU Mod Tool and the Year NPMS Submittal Accommodates to either complete or schedule the Unit mapping change. As well, NPMS staff will not accept a submission from the operator unless it includes the pipelines for the scheduled map change. Each time you click Save in a Modify/Update Unit task, you must select Yes or No for the Unit NPMS Map question. For example, if you are correcting State/County data or adding a pump station for a Unit and the Unit NPMS Map is not impacted, select “Yes” for the NPMS question. You do not need to use the IU Mod Tool. When adding newly constructed just-placed-in-service pipelines to a Unit, select No for the Unit NPMS Map question. After selecting No, select the Year NPMS Submittal Accommodates Change and enter text for the Unit history. Use the IU Mod Tool to communicate the new Unit boundary locations.

2.6. INSPECTION SYSTEM (IS) DATA

2.6.1. Plan Required and Pipeline Types

Each Unit with one of the Pipeline Types listed below and Plan Required? = Yes must be assigned to an IS:

- Interstate liquid
- Intrastate liquid
- Jurisdictional liquid gathering
- Offshore liquid
- Offshore liquid (intra)
- Interstate gas transmission
- Intrastate gas transmission
- Offshore gas trans inter
- Offshore gas trans inter high H2s

- Offshore gas trans intra
- Offshore gas trans intra high H2s
- Offshore gas gather inter
- Offshore gas gather inter high H2s
- Offshore gas gather intra
- Offshore gas gather intra high H2s
- Jurisdictional gas gathering

2.6.2. “New” Units

When a new Unit is created with Plan Required? = Yes and one of the Pipeline Types above, the Unit must be assigned to an IS in the WMS.

When a Unit has Plan Required? changed from No to Yes and the Unit has one of the Pipeline Types above, the Unit must be assigned to an IS in the WMS.

2.6.3. IS Changes – *Manage Unit_SPR_IS* Role

The Unit-to-IS relationship, IS Name, and Lead Regulator are editable in the WMS.

Units sharing safety programs and having similar risk are grouped into IS of a size amenable to conducting an Integrated Inspection. If a Unit is moved to a different OpID, the Unit will likely also need to be moved to a different IS.

Before you can change the Lead Regulator value for an IS, you must change the Regulator value of each Unit within the IS.

2.7. OPERATOR CONTACTS

PHMSA and operators share permission to create, update, and remove operator contacts in the PHMSA Portal. For PHMSA staff, the OPID Contact Management role gives this permission. Under Pipeline Home in the Portal, click “OPID Contact Mgmt Access” to see all staff with permission. If more people need added to the role, send an email to the PHP-6 Operations Systems Division director.

To change operator contacts, staff in the OPID Contact Management role must first select an operator in the upper right portion of the Portal. After selecting an operator, click OMS Functions on the left side menu, then OpID Contact Management. Use the Create/Add New, Update, and Remove radio buttons as needed to update operator contacts for Compliance Officers, Compliance Assistants, Inspections, Emergency Situations, Senior Executive Official, President/CEO, NPMS Submissions, Drug & Alcohol, and User Fee.

2.8. EXCAVATOR ASSETS

When OPS leadership has approved sending an enforcement action to an excavator, send an email to the PHP-6 Operations Systems Division director and

request an excavator OpID and excavator Unit ID. After the Region provides information about the excavator, PHMSA IT will create the IDs in the Portal. Excavator IDs cannot be found in the Portal or WMS, except when adding Units to a WMS Failure Investigation activity.

2.9. CHANGE HISTORY

Revision Date	Summary of Changes
8-??-2021	Added GRR HL Units, Tribal Lands Unit component data, Operator Contacts in the PHMSA Portal, and Excavator assets
12-21-2020	Updated list of Unit attachment categories. Unit Inspection tab shows SMART and WMS inspections. Removed references to Inspection Scoping Form (ISF) since it has been removed from the IA. Updated IU Mod Tool terminology.
4-15-2020	Jurisdiction now required for all Units.
3-29-2018	Pulled Pipeline Asset Management out of the SMART Inspection, Unit, and Inspection System Policy. Added guidance on Interstate/Intrastate. Added guidance on “Year NPMS Submittal Accommodates Change.” Explained in detail all Unit data fields on all tabs. Started using WMS NPMS Change Activities and Tasks in conjunction with IU Mod Tool, but two systems are not yet integrated.
12-5-2017	Pipeline Asset Management Policy split from SMART Inspection Policy. New policy #, but no content changes.
4-5-2017	Updated list of Pipeline Types to reflect separation of Offshore Gas into Offshore Gas Trans and Offshore Gas Gather.
1-18-2017	Regulator value for a Unit can be changed in the WMS.
7-27-2016	Defined new software - IU Mod Tool and WMS. New construction miles not added to Unit Total Pipeline Miles until placed in service. Unit Details in SMART switched to read-only. Unit management and data updates done in the WMS. Unit NPMS Map changes communicated geospatially in the IU Mod Tool.
1-19-2016	Added Unit and Inspection System to name of policy. Added sections on Accessing WMS and Inspection System Data. Noted that Unit Data Management will transition from SMART to the WMS in winter/spring 2016. Added Change History section. Added Key Term for Inspection System. Added tagging NPMS segments with Unit ID for GT, Offshore Gas, and HL.

Revision Date	Summary of Changes
2009	Combined portions of the OPS Enforcement Manual and SMART User Guides to create this policy.

3. RESPONSIBILITIES

3.1. OPS REGION AND HEADQUARTERS (HQ) STAFF WITH DATA MANAGEMENT RESPONSIBILITIES

OPS region and HQ staff with data management responsibilities shall maintain the accuracy of Unit and Inspection System (IS) data in the Work Management System and communicate Unit boundary changes or corrections in the IU Mod Tool to maintain the accuracy of gas transmission and hazardous liquid Unit mapping in the

Guidelines for States Participating in the Pipeline Safety Program

Appendix M

PIPELINE SAFETY/UNGS GRANT MONITORING CHECKLIST

ASSISTANCE LISTING 20.700/20.725

Date(s) of Review	From: 4/22/2021	To: 4/22/2021
State Program	Choose an item.	
State Representative(s)		
PHMSA Representatives	Choose a name	Choose an item.
General Notes:		
Program costs shall clearly relate to and comply with the program budget submitted with the grant application. Program costs shall also be consistent with the following program and codified guidance: 2 CFR Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards - Guidelines for States Participating in the Pipeline Safety Program - Pipeline Safety Grant Monitoring Procedures - All Terms and Conditions listed in Notice of Grant Award § 200.317 Procurements by states. When procuring property and services under a Federal award, a state must follow the same policies and procedures it uses for procurements from its non-Federal funds. The state will comply with § 200.322 Procurement of recovered materials and ensure that every purchase order or other contract includes any clauses required by section § 200.326 Contract provisions. All other non-Federal entities, including sub recipients of a state, will follow §§ 200.318 General procurement standards through 200.327 Contract provisions.		

COMPENSATION FOR PERSONNEL - SALARY AND FRINGE BENEFITS

§ 200.430 Compensation—personal services (Salaries). • Program Managers, Supervisors, Inspectors, Technical, Administrative, etc. • Review Program Organization Chart • Match personnel with information on Attachment 7 of Progress Report			
	YES	NO	N/A
1. Are personnel listed directly involved in program?	☐	☐	☐
2. If personnel are devoted to less than 100% pipeline safety activities is time and effort adequately documented?	☐	☐	☐
3. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES: 			

§ 200.431 Compensation—fringe benefits • Statewide service allocations should not be included (i.e. per employee payroll or IT costs, etc.) • Typically included are employee insurance, FICA, pensions, unemployment and other items established by state policy. • Retirement rates should be tracked back to documentation – usually on state retirement website. Document the rate applied.			
	YES	NO	N/A
1. Are fringe benefit costs standard among all agency employees?	☐	☐	☐
2. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES: 			

PIPELINE SAFETY PROGRAM ACTIVITY COSTS

Communication and Transportation Costs • Communication has been deleted from “selected” items of cost and is subject to guidance in Subtitle II “Basic Considerations” in Subpart E – Cost Principles. • 200.471 Telecommunications - this category would be for all telephone and cell phone services, data plans, air-cards, postage and shipping • 200.474 Transportation costs – this would include any freight, postage, etc. • Allocated costs from statewide or agency billings should only be collected as indirect costs	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES:			

§ 200.452 Maintenance and repair costs. • Costs incurred for utilities, insurance, necessary maintenance, repair or upkeep of building and equipment • Any “allocated” or “pro-rated” costs are typically indirect and should not be included • Direct costs in this category are rare for any utilities, maintenance etc.	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES:			

§ 200.454 Memberships, subscriptions, and professional activity costs. • Costs of memberships in business, technical, and professional organizations • Subscriptions to business, professional, and technical periodicals • Costs of membership in any civic or community organization are allowable with prior approval from PHMSA • Costs of membership in organization whose primary purpose is lobbying are unallowable • Agency memberships in NARUC or other national and regional regulatory or industry associations are not allowed as a direct cost	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES:			

§ 200.459 Professional service costs. - Costs of professional and consultant services, contractual studies, etc. - There should be documented pre-approval of any contractual service agreements in either separate correspondence with PHMSA or detail outline in grant application for applicable year. Review SharePoint files.	YES	NO	N/A
1. Have any costs in this category been preapproved?	☐	☐	☐
2. Do costs applied in this category meet scope and intent of contract?	☐	☐	☐
NOTES:			

§ 200.461 Publication and printing costs. - Publication costs for electronic and print media. - Generally, there are not large amounts charged in this category.	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES:			

§ 200.465 Rental costs of real property and equipment. - Rental costs of building and equipment - Calculation of rental costs should be examined and should include a determination of reasonableness of square footage charged to grant. - There will typically be a property lease available that outlines costs per square foot or other document from state which outlines agency cost for building rental. - Lease costs cannot be included in any indirect cost plan if collected as a direct cost.	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
2. Did program provide a detailed calculation on how costs were determined?	☐	☐	☐
NOTES:			

§ 200.473 Training and education costs. • These are costs for training and education provided for employee development. • This would be costs for tuition, registration fees, training materials, etc. • Travel costs for training should not be included in this category. • § 200.432 Conference Costs would be included in this category – costs related to putting on TQ conferences. Registration or other fees collected should be deducted.	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES:			

§ 200.475 Travel costs. • Travel costs are expenses for transportation, lodging, subsistence, and related items incurred by employees who are in travel status on office business of pipeline program. • Costs may be charged on an actual basis, on a per diem or mileage basis in lieu of actual costs or a combination of the two provided the method used is applied to entire trip and not just selected days of the trip. • These are charges for travel including automobile expenses, auto leasing, costs billed per automobile by state central service offices. • Review travel vouchers, airline receipts, mileage statements. • Verify that costs were not reimbursed by another entity, such as PHMSA invitational travel.	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
2. If program automobiles are shared with any other part of agency are charges separated and appropriately billed?	☐	☐	☐
NOTES:			

MATERIAL, SUPPLIES AND EQUIPMENT COSTS

§ 200.453 Materials and supplies costs, including costs of computing devices. • Also see § 200.314 Supplies. • Costs incurred for materials and supplies necessary to carry out Federal award • Any withdrawals from central storerooms or stockrooms should be charged at actual net costs – allocated costs of agency wide supplies would be collected under indirect costs. • These include things such as office supplies, safety clothing and any other general supplies used by program. • Office and Testing Equipment will likely fall under guidance of §§ 200.453 or 200.314 but review of various expenditures will not differ. • Pro-rated supplies based on general agency headcount are indirect.	YES	NO	N/A
1. Are costs for Materials and Supplies included in this category reasonable and directly assignable to the pipeline program? • This category should include the following normal costs ○ Office Equipment – individual value less than \$5000 ○ Testing Equipment ○ Office Supplies ○ Safety Clothing	☐	☐	☐
NOTES:			

§ 200.439 Equipment and other capital expenditures. • Also see 200.1 – Definitions for Equipment, etc. • Capital expenditures with a unit cost of \$5000 or more must have prior approval of PHMSA. This information should be outlined on approved grant application or under separate correspondence typically found in SharePoint. • Individual invoices should be reviewed and inventory of previous purchased equipment over \$5000 should be appropriately accounted for. • All items should be listed on inventory sheets on Year-End reimbursement, this includes items purchased in previous years.	YES	NO	N/A
1. Are costs for MOTOR VEHICLES included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
2. Are costs for Other Capital Equipment included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☐
NOTES:			

OTHER COSTS

§ 200.xxx Various. - Any costs applied in this category should be tied back to some part of 2 CFR Part 200 and should be listed in notes. - State program should be advised if cost listed could be applied to any of the sections above and asked to submit accordingly on future submissions.	YES	NO	N/A
1. Are costs included in this category reasonable and directly assignable to the pipeline program?	☐	☐	☒
NOTES: N/A			

INDIRECT COSTS

§ 200.414 Indirect Costs. - Indirect costs are those: (a) incurred for a common or joint purpose benefiting more than one cost objective, and (b) not readily assignable to the cost objectives specifically benefited, without effort disproportionate to the results achieved. - Also see various other sections of 2 CFR 200, including §§ 200.415, 200.416. - State should have updated negotiated indirect rate on file with PHMSA and will likely be found in SharePoint folders. Advise program to submit current document if not. - Rate and dollar amount calculation should be verified. - Cost basis of calculation should be noted. - State agency may use a de minimis rate of 10% of Modified Total Direct Costs (MTDC)	YES	NO	N/A
1. Are costs calculated in the category correct in accordance with either negotiated rate basis or use of de minimis rate?	☐	☐	☐
2. Is current rate documentation on file?	☐	☐	☐
NOTES: Indirect rates are on file. No issues.			

Guidelines for States Participating in the Pipeline Safety Program

Appendix N

**A GUIDE FOR
STATE, LOCAL AND INDIAN TRIBAL
GOVERNMENTS**

**COST PRINCIPLES AND PROCEDURES FOR
DEVELOPING COST ALLOCATION PLANS AND
INDIRECT COST RATES FOR AGREEMENTS
WITH THE FEDERAL GOVERNMENT**

**IMPLEMENTATION GUIDE FOR
OFFICE OF MANAGEMENT AND BUDGET
CIRCULAR A-87**

ASMB C-10

**Cost Principles and Procedures for
Establishing Cost Allocation Plans and Indirect Cost Rates
for Agreements with the Federal Government**

A GUIDE FOR STATE, LOCAL AND INDIAN TRIBAL GOVERNMENTS

This guide is intended to assist state, local, and Indian tribal governments in applying Office of Management and Budget Circular A-87, which provides principles and standards for determining costs applicable to Federal grants and contracts performed by state, local, and Indian tribal governments.

The procedures in this guide are applicable to grants and contracts awarded by all Federal agencies and have been developed in coordination with the Office of Management and Budget.

**This document replaces "A Guide for State and Local Government Agencies" (OASC-10),
published December 1976**

8 April 1997

U.S. Department of Health and Human Services

This document can be ordered from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328, 202-512-1800.

April 8, 1997

**TO USERS OF OMB CIRCULAR A-87 - COST PRINCIPLES FOR STATE,
LOCAL AND INDIAN TRIBAL GOVERNMENTS**

Dear Colleague:

The Office of Management and Budget, in Circular A-87, mandates that the Department of Health and Human Services issue implementing material for that document on behalf of the Federal Government. The accompanying *Cost Principles and Procedures for Establishing Cost Allocation Plans and Indirect Cost Rates for Agreements with the Federal Government* reflects our efforts to satisfy that mandate. This brochure, last issued in 1976 under the reference OASC-10, is being assigned the new reference number ASMB C-10.

I want to acknowledge the efforts of the Office of Audit Resolution and Cost Policy, in the Office of Grants and Acquisition Management, who had the responsibility for developing this brochure. I also wish to thank the HHS staff, those of other Federal agencies, and OMB who provided much appreciated assistance on this project. Lastly, I would like to acknowledge Management Concepts, Inc., of Vienna, Virginia, who provided advice, layout, and editorial support.

As will be noted, the C-10 is issued in loose-leaf form. Users are encouraged to maintain a subscription with the Government Printing Office in order that they can receive up-dates and changes in the future. This document can also be accessed on HHS's GrantsNet: <http://www.os.dhhs.gov/progorg/GrantsNet/index.html>. This document may be reproduced without permission.

We welcome your comments and inquiries. Please address them to:

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Sincerely,

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PREFACE

This guide contains, by reference, Office of Management and Budget (OMB) Circular A-87, *Cost Principles for State, Local and Indian Tribal Governments*, and guidance for its interpretation and implementation. Circular A-87 provides both Federal agencies and Federal award recipients with a uniform approach to determining costs of Federally funded programs. This guide also presents information about the preparation, submission, review, and audit of cost allocation plans and indirect cost rate proposals by governmental units. Procedures in this guide are applicable to cost-based awards made by all Federal agencies unless specifically provided otherwise. This guide has been developed in coordination with OMB.

This guide provides clarification and procedural guidance to implement the Circular. It is intended to be consistent with the Circular and all other applicable policies. Circular A-87 is incorporated into this document as Appendix 1.

This guide consists of several parts, appendices, and a reference section. Each part of this guide focuses on a specific component of the Circular, e.g., Part 1 provides basic information about the Circular as well as details on information in the Circular, Part 2 focuses on Attachment A to the Circular, General Principles for Determining Allowable Costs, Part 3 deals with Attachment B, Selected Items of Cost, etc. The text discussion in each part is supplemented by a section on Highlights of Changes, as well as a Questions and Answers (Q&As) section intended to clarify issues relating to the respective component of the Circular. Each question is numbered and followed by a bracketed citation to the relevant section of the Circular, where applicable. On occasion, one Q&A may reference another by number.

The reference section provides a list of related publications and how to obtain them. The appendices include a copy of the May 4, 1995 revision of OMB Circular A-87 (to be provided by users), a list of cognizant agencies, and a sample indirect cost rate agreement. (At the time of this publication, OMB was in the process of revising the cognizant listing based on new criteria. When issued, it will be provided in the C-10 as Appendix 2.)

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- 1 OMB Circular A-87, Cost Principles for State, Local and Indian Tribal Governments
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PART 1

Basic Information

1.1 Background

1.1.1 The Cost Principles

Federal cost principles are policies used to determine which costs of an activity/project/program should be borne by the Federal Government. Over the years, various sets of governmentwide cost principles have been developed for reimbursing costs for different classes of recipients. These policy documents ensure the consistent treatment of costs, regardless of whether reimbursement is received directly from the Federal Government or through another recipient of Federal funds.

1.1.2 Purpose and Significance of OMB Circular A-87

Office of Management and Budget (OMB) Circular A-87 is one of several circulars intended to achieve more efficient and uniform administration of Federal awards, and to foster better relationships between the Federal Government and states, local governments, and Federally recognized Indian tribal governments. It provides the foundation for greater uniformity in the costing procedures of nonfederal governments and in the reimbursement practices of Federal agencies. It should be used in conjunction with other applicable laws to provide comprehensive direction and accountability in Federal fund management.

Circular A-87 provides principles and standards for determining both direct and indirect costs applicable to Federal cost-based awards to governmental units. Parties using the A-87 cost principles include budget preparers, recipient personnel responsible for tracking costs charged against Federal awards, independent auditors, Federal awarding agency personnel reviewing budget requests and charges to the award, and cognizant agency and recipient personnel negotiating indirect cost rates and cost allocation plans.

1.1.3 Brief History of Circular A-87

1968 Circular A-87 issued by OMB

1974 Circular A-87 reissued as FMC 74-4

1981 Circular reissued as A-87, coverage extended to Indian tribal governments

- 1987 Interagency task force began review of Circular A-87
- 1988 First proposed revisions published
- 1993 Second proposed revisions published
- 1995 OMB issued significantly revised Circular A-87

1.1.4 Effective Date of the Revised Circular A-87

For indirect costs and costs covered by cost allocation plans described in Attachments C, D, and E of the Circular, the revision of Circular A-87 issued on May 4, 1995 must be applied to cost allocation plans and indirect cost rate proposals submitted or prepared for a governmental unit's fiscal year beginning on or after September 1, 1995. Therefore, for those governments with a fiscal year beginning October 1, 1995 - January 1, 1996, the revised version of Circular A-87 applies to the Central Service Plan for 1996. For all other governments, the revised Circular A-87 applies to the 1997 plan. Effectively, two plans may be required for several years, i.e., those that would close out fiscal years 1994, 1995, or 1996 (as applicable), and another plan recognizing the new principles for the year that reflects the implementation of the revised Circular A-87.

For costs other than indirect costs and costs covered by the cost allocation plans described in Attachments C, D, and E of the Circular, the revised Circular A-87 applies to all awards and amendments, including continuation and renewal awards, made on or after September 1, 1995.

1.2 Role of the Office of Management and Budget

OMB is responsible for policy direction for Circular A-87 and for providing interpretations and assistance to assure effective implementation by Federal agencies and award recipients. OMB is also responsible for assigning Federal agencies to serve as cognizant for purposes of review and approval of cost allocation plans and indirect cost rates of states and certain local and Indian tribal governments. Except as provided by statute, any exceptions to the Circular are subject to OMB approval. The Office of Federal Financial Management is the responsible unit within OMB. In the interest of uniformity, exceptions are made only where adequate justification is presented.

1.3 Relationship of Circular A-87 to Other Cost Principles

Determining which cost principles apply to a particular recipient entity is governed by the type of recipient. The chart below illustrates the cost principles and their applicability, by recipient type.

For the Costs of a —	Use the Cost Principles in —
State, local, or Indian tribal government	OMB Circular A-87
Private nonprofit organization other than (1) institution of higher education, (2) hospital, or (3) organization named in OMB Circular A-122 as not subject to that Circular	OMB Circular A-122
Educational institution	OMB Circular A-21
For-profit organization other than a hospital or an organization named in OMB Circular A-122 as not subject to that Circular	48 CFR Part 31, Contract Cost Principles and Procedures, or uniform cost accounting standards that comply with cost principles acceptable to the Federal agency
Hospital	45 CFR Part 74, Subpart E, or other cost principles acceptable to the Federal agency, e.g. HIM-15

The applicability of the cost principles flows through to the subrecipient.

EXAMPLE: The State of Macedonia receives a Federal award: A-87 applies Macedonia subawards funds to Meerkat County: A-87 applies Meerkat County subawards funds to ProYouth, a nonprofit: A-122 applies

In other words, the type of recipient or subrecipient determines the applicable cost principles, regardless of whether funds are received directly from the Federal Government or through a subaward from a primary recipient. The exception to the above is where statutory or regulatory provisions applicable to the prime recipient are more restrictive than the cost or administrative principles applicable to the subrecipient. For example, many awards to nonprofits permit the nonfederal share to be met through in-kind matching rather than matching actual expenditures. Where the matching of actual expenditures is required of the prime recipient, then subrecipients must also match in this same manner.

1.4 Relationship of Circular A-87 to Agency Regulations and Federal Statutes

OMB Circular A-87 is a directive to the heads of Federal executive departments and agencies instructing them concerning the cost principles to be applied in cost-based awards to state, local, and Indian tribal governments. The Circular directs agencies to issue implementing regulations. In general, agencies have done so by adopting Circular A-87 by reference in Section __.22 of the Common Rule accompanying OMB Circular A-102, *Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments*.

Unless specifically required by statute or an exception granted by OMB, the Circular applies to awards to states, localities, and Indian tribal governments. Once implemented or otherwise adopted within Federal agency regulations, it has the force and effect of law. However, if a statute passed by Congress prescribes policies or procedures that differ from those in the Circular, the provisions of the statute govern. For example, it is not uncommon for Congress to enact legislation that restricts certain items of costs (i.e., limitations on indirect or administrative costs). When such a restriction exists, it is binding. Note: Statutes may differ as to how they define certain elements of cost and may further differ with definitions contained in Circular A-87. For example, the terms "indirect" and "administrative" are not necessarily synonymous. Accordingly, Federal agencies and recipients should exercise care in applying Circular A-87 definitions when making judgments about the effect of statutory limitations.

1.5 Governmentwide Guidance on Implementing the Cost Principles

Each type of organization performing under agreements with the Federal Government follows one of the sets of governmentwide cost principles. Various Federal agencies have developed implementation guidance for the different cost principles. These principles and guidance apply to awards received directly from the Federal Government, as well as to Federal funds passed through or awarded to the performing organization by another Federal fund recipient. The chart below summarizes the applicable cost principles and available governmentwide guidance by type of organization. The agency that developed the guidance is noted parenthetically.

Organization Type	Federal Cost Principle	Governmentwide Guidance
State, local, or Indian tribal governments	OMB Circular A-87	ASMB C-10 (HHS)
Nonprofit organizations	OMB Circular A-122	Various Funding Agency Guidelines
Colleges or universities	OMB Circular A-21	OASC-1 (HHS)
Commercial organizations and nonprofit organizations listed in Attachment C of A-122	Federal Acquisition Regulation, 48 CFR Part 31	none
Hospitals	45 CFR 74, Subpart E	OASC-3 (HHS)

1.6 Questions and Answers

1-1 What is Federal Management Circular 74-4 and does it have any relevance to current Federal cost policies?

Federal Management Circular (FMC) 74-4 was the designation for the Cost Principles for State and Local Governments during a period of the 1970s when the Circular was incorporated into the General Services Administration manual structure. There is no

substantive difference between FMC 74-4 and OMB Circular A-87. FMC 74-4 was superseded in 1981 when OMB reissued the cost principles as Circular A-87, and is no longer applicable. However, some grant agreements and policy documents that contain references to FMC 74-4 may not have been edited to reflect the applicability of Circular A-87 and its most recent revision issued in May 1995.

1-2 What is OASC-10? Is it relevant to current Federal cost policies?

In 1976, the Department of Health, Education and Welfare issued "A Guide for State and Local Government Agencies – Cost Principles and Procedures for Establishing Cost Allocation Plans and Indirect Cost Rates for Grants and Contracts with the Federal Government (OASC-10)." OASC-10 is superseded and replaced by this guide, ASMB C-10, which reflects the policies in the revised Circular A-87. The guide is mandated by OMB in Circular A-87 and is a governmentwide document.

1-3 Have any Federal awarding agencies issued agency-specific implementations of Circular A-87?

Most agencies adopted Circular A-87 by reference in their applicable agency grants administration regulation. Generally, this reference appears in Section __.22 of agency regulations implementing the Common Rule issued pursuant to OMB Circular A-102 and in Section __.27 of agency regulations implementing OMB Circular A-110. However, a few Federal agencies have issued specific *Federal Register* notices concerning their implementation of the revised Circular A-87, to clarify issues such as effective dates or to codify the entire Circular into their regulations.

1-4 Circular A-87, prior to its revision on May 17, 1995, stated that "no provision for profit or increment above allowable cost is intended." The revised Circular changed this language to read: "Provision for profit or other increment above cost is outside the scope of this Circular." Has the policy changed?

No. Profit continues to be unallowable. In the Preamble to the Circular, OMB explains that the language was changed to be consistent with the wording in other Circulars. However, no change in policy was intended. [Circular, ¶ 5]

1-5 In the case of state-supervised, county-administered programs, which fiscal period controls the effective date for adoption of the revised A-87? [Circular, ¶ 11]

It must be the fiscal period of the specific unit of government. Therefore, if a state has a different fiscal period than a local government it supervises, each governmental unit would adopt the Circular in accordance with its individual fiscal period.

- 1-6 If predetermined indirect cost rates have already been approved that extend beyond the effective date for adoption of the revised Circular A-87 by a specific governmental component, does this change the effective date for that component? [Circular, ¶ 11]**

For a governmental component that already has established predetermined cost rates beyond September 1, 1995, the effective date of the revised A-87 is the start of the first accounting period for which an indirect cost rate has not been established.

- 1-7 When are interest payments on equipment allowable for an internal service fund? Would the interest be allowable after September 1, 1995 or with the first fiscal year beginning after September 1, 1995? [Circular, ¶ 11]**

Internal service funds are covered by Attachment C of A-87. The transmittal letter from OMB dated May 4, 1995 states that for costs charged indirectly or otherwise covered by the guidelines for cost allocation plans contained in Attachments C, D, and E, the effective date is the first fiscal year beginning after September 1, 1995.

PART 2

Attachment A — General Principles for Determining Allowable Costs

2.1 Objectives of the Circular

Office of Management and Budget (OMB) Circular A-87 establishes principles for determining the allowable costs incurred by state, local, and Federally recognized Indian tribal governments (hereinafter referred to as governmental units) under grants, cost-reimbursement contracts, and other agreements with Federal agencies (hereinafter referred to as Federal awards). The principles are for the purpose of cost determination only and are not intended to dictate the extent of Federal or governmental unit participation in the financing of a particular program or project. Accordingly, they describe what may be reimbursed or recovered under a covered Federal award. They are designed to provide that the Federal Government bear its fair share of costs recognized, except where restricted or prohibited by law. Profit or other increment above cost in any Federal award is outside the scope of the Circular.

2.2 Governmental Unit Responsibilities

The Circular recognizes the responsibility and sovereignty of governmental units that receive and administer Federal awards. It reinforces the expectation contained in the law and in award agreements that these organizations will administer Federal funds properly and in a manner consistent with the sound management practices that they apply to their own revenues. Standards provided in the Common Rule issued pursuant to OMB Circular A-102, *Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments*, reinforce this recipient responsibility for financial management, procurement, property management, and record retention.

2.3 Alternative Methods of Cost Recovery

The Circular permits Federal agencies to work with governmental units that wish to test alternative methods for cost recovery in all or a portion of a Federal award. Such methods include, where permitted, fixed-amount awards, fee-for-service arrangements, and predetermined indirect cost rates. Alternative methods must comply with the A-87 "benefits received" concept.

2.4 Applicability

2.4.1 What Types of Organizations Are Affected by Circular A-87?

Circular A-87 applies to governmental units generally, but definitions within the Circular further establish the entities that fall within that broad category. Under the Circular, the following entities are considered to be a *state government*:

- any of the 50 states;
- District of Columbia;

- Commonwealth of Puerto Rico;
- any territory or possession of the United States; and
- any agency or instrumentality of a state, exclusive of local governments.

Circular A-87's definition of local government encompasses all general and special purpose governmental units. It defines the following entities as **local governments**:

- county;
- municipality;
- city;
- town;
- township;
- local public authority;
- school district;
- special district;
- intrastate district;
- council of governments, regardless of incorporation status as a nonprofit corporation under state law;
- any other regional or interstate, nonfederal government entity; and
- any agency or instrumentality of a local government.

The Circular defines a **Federally recognized Indian tribal government** as the governing body or a governmental agency of any Indian tribe, band, nation, or other organized group, including Alaskan native villages certified by the Secretary of the Interior as eligible for the special programs and services provided through the Bureau of Indian Affairs. Components are agencies or divisions within a governmental unit.

2.4.2 What Types of Organizations Are Not Affected by Circular A-87?

For purposes of cost determination, Circular A-87 does not apply to public institutions of higher education. Those organizations are subject to OMB Circular A-21, *Cost Principles for Educational Institutions*. Circular A-87 also does not apply to public hospitals. They are subject to the requirements developed by their Federal sponsoring agencies, such as the Health Care Financing Administration (HCFA). Generally, they follow cost principles issued by the Department of Health and Human Services at 45 CFR Part 74, Subpart E.

Note: Circular A-87 does affect public hospitals and institutions of higher education in one

respect. All central service or departmental costs of a covered governmental unit that are allocated or billed to those institutions are subject to the A-87 requirements. In addition, indirect cost rates and cost allocation plans approved by a cognizant agency for the government component are to be accepted by all awarding agencies. Agency cost principles apply only to those costs not covered by these agreements.

2.4.3 Determining Whether Circular A-87 Applies to an Award

Circular A-87 applies uniformly to all cost-based awards made directly or indirectly to governmental units. **Cost-based** refers to those awards where the costs charged to the award form the basis for the amount reimbursed under the award. Therefore, the types of awards subject to the principles in Circular A-87 include:

- cost-reimbursement contracts;
- grants and cooperative agreements, which are cost-reimbursement type agreements, whether or not funds are provided in advance of expenditure; and
- subgrants and cost-reimbursement subcontracts awarded to governmental units under grants awarded to any type of Federal recipient.

Circular A-87 does not apply to fixed-price arrangements, unless projected costs are used in determining the amount to be awarded.

OMB occasionally elects to specifically exclude certain programs from mandatory coverage of the Circular. For example, in 1981, OMB instructed Federal agencies administering the nine block grants enacted under the Omnibus Budget Reconciliation Act of 1981 that they were not required to use the Circular as a policy governing awards under those programs. Instead, the agencies were to permit states to use “equivalent procedures of their own” to administer such programs.

2.5 Terms Used in Circular A-87

Because A-87 is a policy directive affecting what costs are allowable charges to Federal programs, what costs are not allowable, and how costs must be documented, it is important that users of the Circular and this guide become familiar with definitions of key terms and how they are used. Terms may have broader, narrower, or more precise meaning than ones that are in customary or colloquial use by financial or programmatic personnel who must rely on the Circular. In addition, such terms may not be defined in other authoritative literature on which readers might normally rely.

Definitions can be found in Section B of Attachment A to the Circular. The Circular is located in Appendix 1 of this guide.

2.6 The Cost Reimbursement Process

In the context of Circular A-87, the term "cost reimbursement" describes how the claims will be reviewed, accepted, and settled. Although the term cost reimbursement implies that funding is received after-the-fact, the process of cost reimbursement under Federal awards has little to do with when cash is actually received. This is because, with few exceptions, assistance award recipients receive advance funding. Grant and cooperative agreement recipients are usually permitted to draw against their award amounts in advance, so long as they 1) limit their request for funds to the minimum amount needed, and 2) time the request as close as is administratively

feasible to the actual cash outlay for direct program costs and the proportionate share of any allowable indirect costs. (See 31 CFR §205.20; §__.21, OMB Circular A-102 Common Rule.) In contrast, Federal cost-reimbursement contracts are generally paid after cost has been incurred and as progress is being made toward performance.

Note: While, for cash-need purposes, advance funding might be provided under grants and cooperative agreements, the advanced funds must be viewed by recipient organizations as an accounts payable to the Federal Government.

The cost principles have a role to play at most stages of the assistance award or contract life cycle. These stages, and the role of Circular A-87 at each stage, are summarized in the chart on the following page:

At this stage in the cycle...	Circular A-87 plays this role:
Soliciting applications and/or proposals from governmental units	Awarding agency announces the applicability of the A-87 cost principles.
Preparing proposals or plans for use of funds	Applicant governmental unit includes only costs allocable, reasonable, and allowable under Circular A-87.
Notifying recipient of award	Applicable assistance or procurement award document cites the applicability of Circular A-87.
Expending funds	Governmental unit incurs costs for expenditures that are eligible under applicable program legislation, as well as allowable under Circular A-87, under control procedures that allow proper determination.
Developing and retaining documentation	As costs are incurred, governmental unit generates documentation consistent with that generated for expenditure of own-source revenue and with any specific requirements of Circular A-87 (e.g., personnel activity reports) — documentation is maintained in a system of records for at least the minimum period of time provided under § .42, OMB Circular A-102 Common Rule.
Preparing claims for direct costs and attributable indirect costs	At a frequency determined by the awarding agency and on authorized forms, governmental unit submits claims asserting that allowable and eligible costs have been incurred in accordance with A-87. Governmental unit is permitted to apply its indirect cost rate to those object class categories of expenditure to which the cognizant agency has agreed it should be applied.
Auditing Awards	Through test procedures, independent auditors or auditors representing awarding agencies review claims to determine whether incurred costs are appropriate under Circular A-87. Discrepancies are reported to awarding agencies as questioned costs requiring resolution.

2.7 Composition of Cost

The total amount claimable under a cost-based award covered by Circular A-87 equals the allowable direct costs, plus the allocable portion of allowable indirect costs, minus the applicable credits.

Total Amount Claimable =	allowable direct costs <i>plus</i> allocable portion of indirect costs <i>minus</i> applicable credits

The Circular makes clear that there is no universal rule for classifying costs as direct or indirect under every governmental accounting system. The essential difference is the degree of ease with

which a cost can be readily assigned to a particular cost objective with a high degree of accuracy. Such readily assigned costs are **direct costs**. **Indirect costs** are those that cannot be readily assigned to a particular cost objective without effort disproportionate to the benefits received. However, the Circular permits minor direct cost items to be treated as indirect costs for practicality, so long as consistent treatment of all such items is maintained.

Applicable credits are receipts or reductions of expenditure that offset or reduce costs allocable to Federal awards as direct or indirect costs. These are to be credited to the cost objective or the award, or refunded to the awarding agency, depending upon the circumstances and the timing of their accrual or receipt.

2.8 General Tests of Cost Allowability

Although Attachment B of Circular A-87 lists a number of selected items of cost, which frequently represent significant amounts in individual Federal awards or are costs for which there is a specific Federal policy, Attachment A establishes general tests of allowability that apply irrespective of whether a particular item of cost is specifically mentioned in Attachment B. These general tests frequently involve judgment and an assessment of the facts and circumstances in which the specific cost is incurred. The tests are not only listed in the Circular itself, but are frequently restated in compliance audit guidance that Federal and nonfederal auditors use to carry out field work and reporting.

2.8.1 Necessary and Reasonable Costs

The first general test of allowability is that the cost be necessary and reasonable for proper and efficient performance and administration of Federal awards. A cost is **reasonable** if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. The question of reasonableness is particularly important when governmental units or components are predominately Federally funded. In determining reasonableness of a given cost, consideration should be given to:

- whether the cost is of a type generally recognized as ordinary and necessary for the operation of the governmental unit or the performance of the Federal award;
- the restraints or requirements imposed by such factors as sound business practices; arms-length bargaining; Federal, state, and other laws and regulations; and Federal award terms and conditions;
- market prices for comparable goods or services;
- whether the individuals concerned acted with prudence in the circumstances, considering their responsibilities to the governmental unit, its employees, the public at large, and the Federal Government; and
- significant deviations from the established practices of the governmental unit which may unjustifiably increase the Federal award's cost.

2.8.2 Allocable Costs

The second general test of allowability is that the cost be allocable to Federal awards under the provisions of Circular A-87. A cost is **allocable** to a particular cost objective if the goods or

services involved are chargeable or assignable to that cost objective according to the relative benefits received. All activities which benefit from the governmental unit's indirect costs, including unallowable activities and services donated to the governmental unit by third parties, will receive an appropriate allocation of indirect costs.

Any cost allocable to a particular Federal award or cost objective under the principles in Circular A-87 may not be charged to other Federal awards to overcome fund deficiencies, to avoid restrictions imposed by law or terms of the Federal awards, or for other reasons. Such a practice constitutes unallowable cost shifting. However, this prohibition does not preclude governmental units from charging costs that are allowable and allocable under two or more awards, pursuant to existing program agreements. Such charges are viewed as "funding allocations" rather than cost allocations.

Where an accumulation of indirect costs will ultimately result in charges to a Federal award, a cost allocation plan or indirect cost rate agreement will be required as described in Attachments C, D, and E to Circular A-87.

2.8.3 The Other Tests of Allowability

In addition to reasonableness and allocability, the other general tests of allowability are that the cost:

- be authorized or not prohibited under state or local laws or regulations — a governmental unit may not accept and expend Federal funds to undertake an activity for which it does not have the authority under its own state or local law or which would constitute an illegal purpose;
- conform to any limitations or exclusions set forth in the cost principles, Federal laws, terms and conditions of the Federal award, or other governing regulations as to types or amounts of cost items;
- be consistent with policies, regulations, and procedures that apply uniformly to both Federal awards and other activities of the governmental unit;
- be accorded consistent treatment — a cost may not be assigned to a Federal award as a direct cost if any other cost incurred for the same purpose in like circumstances has been allocated to the Federal award as an indirect cost;
- be determined in accordance with generally accepted accounting principles, except as otherwise provided for in Circular A-87;
- not be included as a cost or used to meet cost-sharing or matching requirements of any other Federal award in either the current or a prior period, except as specifically provided by Federal law or regulation;
- be net of all applicable credits; and
- be adequately documented.

In general, to meet the test of adequate documentation of charges under a Federal award, a governmental unit must document charges in a manner consistent with documenting

expenditures of its own source revenue. However, certain provisions of Circular A-87 and the Common Rule issued pursuant to OMB Circular A-102 provide for specific standards for certain types of costs. For example, Circular A-87 addresses documentation for employee compensation, depreciation or use allowance for assets, and various types of allocated and billed indirect costs. The A-102 Common Rule establishes documentation requirements for purchase transactions (§___.36(b)(9)).

2.9 Required Government Certification

No cost allocation plan or indirect cost rate will be approved by the Federal Government unless the plan or rate proposal has been certified by the governmental unit. Except as noted below, no indirect costs will be reimbursed unless the governmental unit has an approved rate/plan or maintains on file a certified plan/rate, as appropriate.

The Federal Government may unilaterally establish such a cost allocation plan or indirect cost rate. Such a plan or rate may be based upon audited historical data or such other data that have been furnished to the cognizant Federal agency and for which it can be demonstrated that all unallowable costs have been excluded. When a cost allocation plan or indirect cost rate is unilaterally established by the Federal Government because of failure of the governmental unit to submit a certified proposal, the plan or rate will be established to ensure that potentially unallowable costs will not be reimbursed. [See also 4.5.6, Certification of CSCAPs, and 6.4.2, Required Certifications for state and local indirect cost rate proposals.]

2.10 Highlights of Changes Affecting Attachment A

- Gives Federal agencies the authority to test alternative methods of reimbursement, such as fee-for-service. [Att. A, ¶ A.2.b]
- Clarifies that, while government hospitals and educational institutions are subject to applicable requirements governing those organizations, the measurement of costs allocated or billed to them by other government departments must be made in accordance with Circular A-87 and must be accepted by all awarding agencies. [Att. A, ¶ A.3.a]
- Clarifies that subawards are subject to the cost principles applicable to the type of organization receiving the award. [Att. A, ¶ A.3.b]
- Circular A-87 is to be used as a guide in the pricing of fixed-price agreements. [Att. A, ¶ A.3.c]
- For contracts, makes Cost Accounting Standards (CAS) applicable where required. [Att. A, ¶ A.3.d]
- Expands the definition of "approval or authorization" of costs by the "awarding or cognizant agency." Clarifies that prior approval may be assumed where costs are allocated in accordance with an approved cost allocation plan. [Att. A, ¶ B.1]
- Adds new definitions for:

- Award;
- Awarding Agency;
- Central Service Cost Allocation Plan;
- Claim;
- Cognizant Agency;
- Common Rule;
- Contract;
- Governmental Unit;
- Indirect Cost Rate Proposal;
- Public Assistance Cost Allocation Plan; and
- State.

[Att. A, ¶¶ B.1-18]

- Clarifies that the definition of "cost" does not include transfers. [Att. A, ¶ B.9]
- Deleted specific prohibition that "routine costs of government" are unallowable. [Att. A, ¶ C.1.a] However, see Highlights of Attachment B, Part 3 of this guide.
- Adds a new section defining "reasonable costs" and criteria for measuring reasonableness. [Att. A, ¶ C.2]
- Clarifies that costs must be allocated to all benefitting activities, including those that are unallowable, as well as donated services. [Att. A, ¶ C.3.b]
- Clarifies when costs of activities allowable and allocable under multiple programs may be redistributed when funding ceilings for a given program are reached. (Note: not to be misconstrued as unallowable cost shifting.) [Att. A, ¶ C.3.c]
- Clarifies that direct costs are those that can be identified specifically with a particular, final cost objective. [Att. A, ¶ E.1]
- Adds a new section permitting the treatment of minor direct expenses as indirect. [Att. A, ¶ E.3]
- Adds a new section referencing other new sections dealing with the development and submission of indirect cost rates and cost allocation plans. [Att. A, ¶F.2]

- Previous sections dealing with the allocation of interagency costs have been combined into a new section (Attachment C) which has references to additional, new sections. The previous prohibition of charging general supervision, such as department heads, has been eliminated. In lieu of developing actual indirect costs associated with the allocated service, a standard 10% of direct salaries and wages may be used. This is applicable to services that are not included as billed or allocated services included in the state/local-wide cost allocation plan (SWCAP/LOCAP). [Att. A, § G]
- Sections dealing with cost allocation plans (CAPs) have been expanded and relocated elsewhere as Attachments (C and D) in the Circular. A new section (Attachment E) is added detailing required certifications for indirect cost (IDC) agreements and cost allocation plans submitted by state/local officials. [Att. A, § H]

2.11 Questions and Answers on Attachment A

2-1 **Circular A-87 now permits testing of alternative methods of reimbursement, such as fee-for-service. Under what circumstances may such alternative systems be used?** [Att. A, ¶ A.2.b]

Alternative reimbursement systems for administrative costs might involve a rate system whereby a single rate is paid for outputs, such as the number of programmatic services performed. As with billed services, such alternatives are acceptable for payment purposes, provided that the payments are periodically reconciled to actual costs. Reimbursement systems not based on costs are only allowable where the Federal funding legislation permits such a practice. However, where it can be demonstrated clearly that an alternative system will result in less costs to the Federal Government, the cognizant/awarding agency may deem that such a system satisfies statutory language limiting reimbursement to "expenditures."

2-2 **Some Federal programs use cost reports that apply to both proprietary and governmental organizations. These cost reports often dictate policies and/or provide for independent decisions different from what is prescribed in Circular A-87 or what has been approved by the cognizant agency with respect to cost allocation plans or indirect cost rates. Are governmental units so affected required to maintain separate reporting and accounting systems?** [Att. A, ¶ A.3]

No. Governmental units and Federal awarding agencies in the above situations are to comply with the provisions of A-87 and the costing methodology approved by the cognizant agency with respect to state/local-wide central service costs, billed services from other support agencies, and the distribution of agency/departmental overhead to direct cost objectives/programs. These indirect, overhead, "home office," and general and administrative costs are to be accepted on the awarding agency's cost report without additional review or approval. For example, the governmental unit might have a capitalization threshold higher than that allowed by the HIM-15 (the reimbursement manual used by Medicare). The indirect cost rate will reflect the higher limit. The HIM-15 provisions would only apply to direct costs.

2-3 **For awards to subrecipients, such as nonprofits or universities, must the governmental unit recognize an indirect cost rate established with the nonprofit**

or university by the Federal cognizant agency? [Att. A, ¶ A.3]

No, although governmental units are encouraged to do so. Governmental units are required to reimburse and measure costs for these organizations in accordance with the applicable cost principles, in this case A-122 and A-21, respectively. As such, the full reimbursement of allowable direct and indirect costs is expected.

The above-referenced cost principles do provide various methods for measuring costs. For example, the cognizant agency may have used a salary and wage base for distributing cost centers, while the governmental unit might require a modified total direct cost base. If differing bases or methods are imposed upon the subrecipient, dual cost accounting systems will be required. In addition, the use of a combination of bases may result in the over/under recovery of costs. OMB is studying this issue and may promulgate policy requiring consistent application of negotiated rates.

2-4 Do the Circular A-87 principles apply to the block grant programs? [Att. A, ¶ A.3]

While the Circular does not apply to many block grants, governmental units should verify the applicability of A-87 with the Federal awarding agency. However, where a governmental unit or component operates both block grants and other Federal programs subject to the Circular, cost allocation plans and indirect cost proposals must be prepared in accordance with A-87 and include the block grants in appropriate bases/cost centers to assure a proper allocation of costs.

2-5 Does Circular A-87 apply to performance partnerships? [Att. A, ¶ A.3]

Yes, OMB Circular A-87 applies to performance partnership programs.

2-6 Attachment A, paragraph B.1 defines different methods constituting Federal "approval." Can this definition be read to mean that approval of an indirect cost rate or state-wide cost allocation plan (SWCAP) represents approval of costs contained by reference in such plans or revisions? [Att. A, ¶ B.1]

No. This definition only relates to those items that would require prior approval per Attachment B of Circular A-87. It is intended to facilitate the "prior approval" process whereby allocated costs do not require separate approval from every Federal agency affected. In addition, this prior approval concept would not override or make allowable a cost element that is specifically unallowable under another provision of A-87 or program statute. With respect to public assistance cost allocation plans, approval is for methodologies, not costs claimed under such plans.

2-7 Where prior approval is required for a selected item of cost, how is the approval to be handled where the cost is allocated or distributed to a number of programs/cost objectives? [Att. A, ¶ B.1]

Where such costs are part of an indirect cost agreement or cost allocation plan, e.g. SWCAP, for which a cognizant agency has been designated, the acceptance of the item of allowable cost by the cognizant agency shall represent prior approval for all Federal

agencies.

2-8 How can I determine which Federal agency is cognizant for a particular governmental unit? [Att. A, ¶ B.6]

Appendix 2 is reserved for a future issuance of cognizant assignments pertaining to government agencies and local governments. At the time of this publication, OMB was in the process of revising the current document. The U.S. Department of Health and Human Services is cognizant for all state-wide cost allocation plans. For those entities not listed by OMB, cognizance is generally established based on the Federal agency providing the greatest dollar support that is subject to indirect cost rates.

2-9 In the revised Circular A-87 issued May 4, 1995, under the provisions concerning "Factors affecting allowability of costs," the prohibition of costs attributable to the routine activities of government has been deleted. Are such costs now allowable? [Att. A, ¶ C.1]

No. OMB omitted this prohibition under this section because it is now treated as a separate, unallowable cost element under "Selected Items of Cost" — Attachment B, paragraph 23. Such costs continue to be unallowable.

2-10 In the following examples, would a unit or component of government be in compliance with the "consistency" provisions of Attachment A, paragraphs C.1.e and f? [Att. A, ¶¶ C.1.e, f]

- (1) A state with several data processing recharge centers, each using different billing systems and charging bases.**
- (2) Within a state, one department computes the indirect cost rate using a salaries and wages (S&W) base while another uses modified total direct costs (MTDC).**
- (3) One department computes a single rate for all divisions versus another that develops multiple rates.**

Depending on the types of programs operated by the various departments and agencies, different methods of allocation may be required to achieve the most appropriate and equitable allocation results. Therefore, the use of different methods for allocating and distributing costs, as described, does not necessarily violate the intent of the A-87 provisions. It is the responsibility of the cognizant agency to assure that the method used in the negotiation and approval process results in the allocation of costs to all activities based on the concept of benefitting program or activity.

2-11 Circular A-87 stipulates that costs must be consistently treated as direct or indirect under like circumstances. Would this preclude, in the course of direct charging costs, a direct charge being made to an indirect cost center for those costs that are not assignable to a benefitting program, i.e., those that are truly of an indirect nature? [Att. A, ¶ C.1.f]

No. The requirement in the Circular is to prevent a practice where some of the costs

of a given activity are directly identified to programs/functions while other costs that could have also been charged as direct are treated as indirect. The distribution of a cost grouping or objective must include all benefitting programs/activities in the base, whether they be direct or indirect.

EXAMPLE: A local agency, in addition to the Director's Office, has five operating divisions. For its basic telephone service, the agency opts to allocate the bill to organizational units based on the number of telephones in each unit. It must allocate costs to each unit and the Director's Office (which is treated as indirect). It cannot allocate to just two divisions with the other three divisions' allocations being allocated back to the Director's Office.

2-12 Circular A-87 requires that costs be allocated to activities or cost objectives based on relative benefits received. Are there exceptions to this requirement? [Att. A, ¶ C.3]

Circular A-87 requires that where a cost or activity benefits multiple activities or programs, those costs must be allocated in accordance with the relative benefits received by each activity or program. This requirement is an underlying principle of cost allocation. Exceptions to this requirement are permissible only under certain circumstances. If an awarding agency determines that costs allocable to another program or cost objective are allowable under their program, then the unallocable costs may be borne by their program. This shifting of unallocable costs is permitted only when the head of the awarding agency advises the cognizant agency that under its enabling legislation, such cost shifting is allowed and expected. In the absence of such authorization, costs must be allocated to all benefitting programs.

2-13 Some Federal and state programs collect and use identical eligibility criteria or common data such as income, family structure, resources, etc. Can the costs of eligibility determination for several Federal/state programs be assigned to only one program, based on a concept of "primary program"? [Att. A, ¶ C.3]

Circular A-87 requires that common activities be allocated to all benefitting programs. The notion of "primary program" is contrary to the allocability provisions of A-87. As noted in the answer to Q&A 2-12 above, where the head of an awarding agency determines that the agency's enabling legislation permits reimbursement of unallocable costs, such costs may be allowed by the cognizant official for cost allocation or indirect cost agreements, when notified by the awarding agency head. Absent such notification, the primary program concept may not be used.

2-14 Sometimes, it is unclear when the costs of one program or activity end and those of another begin. For example, some Federal programs are categorical in nature, requiring some form of cost or beneficiary eligibility determination. In the course of determining that an individual is ineligible for the Federal program, it may be determined that the person qualifies for a state-only program. What criteria are to be used for allocating these costs? Should the Federal program be required to pay for all joint or common costs because, in the course of determining individuals eligible for the program, it follows that some individuals will be determined ineligible as well? [Att. A, ¶ C.3]

Some states have opted to provide benefits with state funding for individuals not covered by Federal programs. Quite often, in order to achieve economies, states will structure their intake or eligibility processes so that applying and determining eligibility for one or the other program can occur concurrently. As this is an efficient method of serving both programs, for which each receives a common benefit, it is appropriate and proper that each program receive an allocable share of these costs. A typical allocation base would be the number of positive eligibility determinations made for each program. (Such a methodology results in each program receiving a proportionate share of "ineligibility determination" costs.)

Whether such costs can be viewed as being attributable to the activity of determining ineligibility or a common eligibility cost depends on how the state has structured its operations. For example, if an eligibility determination runs its course for the Federal program, and the eligibility process begins anew for the state-only program, then there are costs of determining ineligibility solely for the Federal program. However, where the failure to qualify for the Federal program only requires some incremental work to be performed to determine eligibility for the state-only program (because information and data has been collected for both), then the latter program receives benefit from the common or joint effort previously expended and must receive an allocation of those costs.

In determining whether benefit is received from these common costs, consideration should be given to the following issues: Would the activity still exist, and thereby result in the same costs being incurred, if one program were terminated? Could a reasonable conclusion of eligibility or ineligibility for either program be made if potential beneficiaries were evaluated against certain key eligibility criteria in the early stages of the determination process (i.e., level of income, whether there are children in the home, etc.), rather than at the tail-end of the process?

- 2-15 Circular A-87 seems to require that donated services always be allocated indirect costs. Are there any circumstances when such a distribution is not required?** [Att. A, ¶ C.3.b]

As with the distribution of costs to any cost objective, no allocation is required when the component can demonstrate there is no benefit. If the level of benefit is not the same as for other benefitting activities, then additional, intermediate pools would be necessary so that only benefitting indirect costs are distributed to the donated services.

- 2-16 The discussion in Circular A-87 concerning allocable costs, Attachment A, paragraph C.3.c, stipulates that costs allocable to one program may not be shifted to another, yet it goes on to say that cost shifting is allowable. Is this inconsistent policy?** [Att. A, ¶ C.3.c]

No inconsistency was intended. OMB made a distinction between *cost allocation* and *funding allocations*. [Editor's note: OMB added the exception language to this provision at the specific request of HHS, to address confusion that had occurred in the funding of some of its programs. The term "cost shifting" should not have been used, because cost shifting is unallowable, per se.] A function or activity within the government organization that benefits two or more programs may be set up as a single cost objective. Costs allocable to that cost objective would be allowable under any of

the involved programs which benefit from these activities/costs. The government can make a business decision regarding what combination of funds made available under these programs would be applied to this cost objective. In public assistance agencies, for example, certain services rendered to children may comprise a cost objective. If the services provided and the criteria establishing the children's eligibility to receive them are the same for two or more child welfare programs, the government could fund the services with any combination of funds made available under these programs. This results in applying eligible funding sources to the single cost objective, rather than allocating the cost objective to the programs involved.

EXAMPLE: Program A allows payments for children in foster care whose parents' incomes do not exceed 180% of the poverty income level. The payments to the care givers are matched by the Federal program at 50%, with no ceiling on the total amount that can be paid by the Federal Government. Program B allows payments for children in foster care regardless of the parents' income. While Program B will match these payments at 75%, total Federal payments may not exceed \$10M. The state opts to establish a single cost center for children in foster care whose parents' income is less than 180% of the poverty level. As these children qualify for either program, the state can initially fund these services with the higher matching Program B funds (75%). When the Federal ceiling of \$10M is reached, the cost center can then be *funded*, from that point forward, with Program A funds, albeit at a lower matching rate of 50%. Children whose parents' income exceeds the 180% income level would be charged to a separate cost center, along with the attendant eligibility and other administrative costs. (Typically, the costs of determining eligibility for these two groups would initially be aggregated in an intermediate cost pool reflecting common costs. The pool would be further allocated to the two final cost objectives based on the number of children served in each.)

2-17 Is the list of applicable credits all inclusive? [Att. A, ¶ C.4.a]

No. There are other common examples. For instance, applicable credits result from allowable activities that generate income, such as income from sales of publications; income generated from employee morale, health, and welfare activities per Attachment B, paragraph 17; and interest earnings on internal service funds and positive cash flows.

2-18 If a government operates its entitlement programs through different component units, such as the health department and welfare department, may cost allocation plans be required from each? [Att. A, ¶ F.2]

Yes. The requirements of Attachment D apply to all public assistance programs, regardless of where they are organizationally located. Public assistance programs are not the only instances when a government component may need a cost allocation plan. Whenever the nature of the component's activities are such that direct costs cannot be adequately determined with reasonable precision, a cost allocation plan would be necessary. Typically, a plan is necessary when substantial "direct" costs of programs,

awards, contracts, projects, etc. consist of joint or common cost distributions. This would not preclude, however, the use of an indirect cost rate in conjunction with a cost allocation plan.

2-19 Are cost allocation plans only applicable to state/local-wide cost allocation plans (SWCAPs/LOCAPs) and public assistance cost allocation plans (PACAPs)? [Att. A, ¶ F.2]

No. The component or a Federal agency may request a cost allocation plan in lieu of an IDC rate under the circumstances described for public assistance plans in Q&A 2-18 above. Where a cost allocation plan is necessary for a component of the governmental unit for which the cognizant agency makes no awards, or has no knowledge of the component's programs, the awarding agency impacted the greatest may be designated to approve such plans.

2-20 Attachment A, Section G discusses the use of a standard 10% rate for services provided by one agency (except state/local-wide centralized services departments) to another within a governmental unit. Can this concept be used under any circumstances where a state makes a subaward to a local government? [Att. A, § G]

No. This provision only applies to components (agencies) within a specific governmental unit, not outside that unit.

2-21 Attachment A, Section G allows components, when billing another component for services, to include a flat 10% of salaries and wages in lieu of determining actual indirect costs. Under what circumstances would this be permissible? [Att. A, § G]

A number of agencies do not receive Federal awards and therefore have no need to obtain an indirect cost (IDC) rate from a cognizant agency. From time to time these agencies might provide a reimbursable service to another agency which does receive awards. OMB opted to allow the 10% of salaries and wages, which is viewed as nominal, rather than requiring such agencies to go through the burden of developing indirect cost rates for relatively insignificant activities. If an agency providing services has an IDC rate, that rate must be used in lieu of the flat 10% rate if its application results in less reimbursement.

PART 3

Attachment B — Selected Items of Cost

3.1 Handling Items of Cost Not Listed in Attachment B

Like other sets of Office of Management and Budget (OMB) cost principles, Circular A-87 lists selected items of cost that are common to performing and administering Federal awards to governmental units. The selection of these costs represents OMB's judgment that policy about allowability is either needed or desirable. However, OMB recognizes that it is not possible to develop comprehensive rules that address every possible type of cost that might arise in the context of awards to governmental entities. Accordingly, Attachment B of the Circular, which addresses the selected items, is introduced with a general policy that is intended to be helpful in making cost determinations. It states: "Failure to mention a particular item of cost in these sections is not intended to imply that it is either allowable or unallowable; rather, determination of allowability in each case should be based on the treatment or standards for similar or related items of cost."

Under this policy, if an item is not listed in the Circular, but a similar item is discussed, it may be that allowability can be determined by assessing the degree to which common characteristics exist between the two cost items. Alternatively, applying the general tests of allowability contained in Attachment A of the Circular could be determinative. It may be advisable to seek advance understanding with the awarding or cognizant agency concerning particular costs if allowability is more difficult to determine, although such a practice is not specifically mentioned in Circular A-87. Other OMB cost principles suggest this approach where doubts are present, but further state that the absence of such an advance understanding does not preclude allowability.

3.2 Prior Approval

In the past, because of concerns about the allocability of certain items of cost, OMB usually required that these items be subject to the prior approval of Federal agencies. The 1995 revision to the Circular changed the frequency and precision with which these approvals must be obtained. First, through definition changes and other means, it streamlined the award administration process by reducing the number of transactions subject to prior approval. Second, it expanded the actual definition of what constitutes approval. Under the new definition, the term "approval or authorization of the awarding or cognizant Federal agency" means "documentation evidencing consent prior to incurring a specific cost." However, the definition goes on to state that if costs are specifically identified in a Federal award document, approval of the document constitutes approval of the costs. If the costs are covered by a state/local-wide cost allocation plan or an indirect cost rate proposal, approval of the plan constitutes the approval of costs requiring prior approval. The addition of these policies in the 1995 revision is intended to preclude prior approval-seeking for costs requiring prior approval when a cost has already been considered and analyzed as part of another review process.

While not specifically mentioned in the Circular, most Federal awards will also identify the official(s) of the awarding agency who are authorized to issue approvals. Approval should always be documented in writing by the authorized Federal official.

3.3 Highlights of Changes Affecting Attachment B

Numerous selected items of cost were added to the listing in the 1995 revision. Many make the Circular consistent with OMB cost principles applicable to other types of recipients. Because of their newness or the relative lack of familiarity that officials of governmental recipients may have with these other cost principles, numerous questions have been raised concerning applicability. Many of these are addressed in the Questions and Answers section which follows the changes listed below.

- Attachment B has been reformatted into an alphabetized discussion of costs, noting in the discussion for each cost whether it is allowable or unallowable. Separate sections dealing with allowability/unallowability have been deleted. Where selected items of cost appear in new sections due to the alphabetical format and there is no substantive change in policy, no mention of the change is provided in this document. Also, as the discussion of allowability for a selected item of cost is applicable regardless of whether a cost is direct or indirect, specific references to billed and like services have been deleted. Again, if no substantive change has been made, no mention is made herein. [Att. B, ¶¶ 1-42]
- Significantly qualifies and defines "advertising and public relations costs" and when they are allowable. [Att. B, ¶ 2]
- Clarifies that "advisory councils" may be allowable as either direct or indirect costs. [Att. B, ¶ 3]
- Adds a new section specifically making alcoholic beverages unallowable. [Att. B, ¶ 4]
- Adds additional language as to what audit costs are allowable and stipulates that they are to be allocated based on the ratio of Federal funds to total expenditures. [Att. B, ¶ 5]
- The specific prohibition of "budgeting costs" attributable to routine costs of government has been deleted from this section. [Att. B, ¶ 9] However, see reference to Att.B,¶ 23, below.
- The section on "Compensation for personnel services" has been greatly expanded. Significant changes are:
 - criteria for determining what is reasonable compensation;
 - an expanded fringe benefits discussion rolled into this section that explains, among other things, how costs are claimed when using accrual or cash basis of accounting;

- considerable attention to the accounting and claiming of pension costs;
 - detailed requirements concerning salary support and time distribution systems; and
 - a new subsection on "donated services" which prohibits reimbursement of such services but nevertheless requires that they be included in the base for purposes of allocating indirect costs. [Att. B, ¶ 11]
- Contingencies continue to be unallowable but the section has been qualified to clarify that reserves for such things as pensions and other fringe benefits are permitted. [Att. B, ¶ 12]
 - A new section, "Defense and prosecution of criminal and civil proceedings, and claims" has replaced the former "Legal expenses" section. The new section incorporates statutorily required language applicable to contracts. Legal and related expenses incurred in the prosecution of claims against the Federal Government remain unallowable. [Att. B, ¶ 14]
 - An expanded section on "Depreciation and use allowances" adds the following provisions:
 - the assets of enterprise funds must be capitalized, as required by GAAP;
 - governmental subdivisions may not be considered donors for purposes of establishing an asset's value at fair market value (FMV);
 - componentization of buildings is allowable;
 - except for enterprise and bona-fide internal service funds, classes of assets must be the same basis as used in the governmentwide financial statements; and
 - when converting from use allowance to depreciation, the balance to be depreciated will be computed using a pro forma depreciation schedule starting with the date of acquisition.

The prohibition of excess capacity has been relocated to another section. (See reference to Att.B, ¶ 24, below). [Att. B, ¶ 15]

- The "Equipment and other capital expenditures" section has been expanded to:
 - define what is a capital expenditure;
 - allow governments to establish a capitalization threshold at the lessor of \$5,000 or the threshold used in preparing the financial statements;

- clarify that capital expenditures may only be allowed as a direct cost with prior approval; and
- provide guidance on how unamortized portions of assets are to be handled when a governmental unit changes its capitalization policy.

Rental costs have been removed from this section and given a dedicated citation. (see 3-22 below) [Att. B, ¶ 19]

- A section on "Fund raising and investment management costs" has been added. Fund raising and general investment activities/costs are unallowable but must be allocated a pro rata share of indirect costs. Investment activities related to pension funds, self-insurance funds, etc. are allowable. [Att. B, ¶ 21]
- A new section has been added addressing gains and losses and the relocation of Federally sponsored programs. While gains and losses on the sale, retirement, or other disposition of depreciable property must be accounted for in the current period, several methods are cited for handling the adjustment. Where Federal programs are relocated from a facility in which there was Federal participation in the financing of the facility, adjustments can be required by the cognizant agency. [Att. B, ¶ 22]
- General or routine costs of government have been given a separate section. In addition to the governor's office, several other examples are listed as being unallowable. [Att. B, ¶ 23]
- A new section addressing idle capacity and facilities was created which incorporates definitions of these terms and establishes parameters for establishing allowability. [Att. B, ¶ 24]
- The section on "Insurance and indemnification" has been expanded to address self-insurance funds such as worker's compensation and unemployment compensation. This discussion is quite detailed and covers such areas as measuring risk, funding, offsets for investment income, etc. [Att. B, ¶ 25]
- Interest is now allowable on equipment acquired before or after the effective date of the revised Circular. However, for existing debt, only interest expense incurred/paid in the government's fiscal year beginning on or after September 1, 1995 is allowable. Retroactive claims for interest paid in prior periods is unallowable. The Circular also requires, for facilities, that earnings on construction borrowings be offset against income expense. Where depreciation and interest expense exceeds principal and interest payments (positive cash flow), the state is required to "negotiate" the amount of allowable interest with the cognizant agency. While no change was made concerning the allowability of interest for facilities, the section now permits interest for reconstruction or remodeling completed after October 1, 1980. [Att. B, ¶ 26]
- A new section on "Lobbying" generally makes these costs unallowable. [Att. B, ¶ 27]

- The section on "Professional services" no longer requires prior approval and has been expanded to include retainer fees. Related to this, the previous requirement that the cost of "management studies" had to have specific prior approval has been deleted. [Att. B, ¶ 33]
- The Circular no longer requires prior approval of "Proposal costs" that are treated as an indirect costs. Prior approval is still required if the cost is claimed as a direct cost. [Att. B, ¶ 34]
- Two new sections have been added addressing "alterations" and "reconversion" costs of facilities. While both are allowable, circumstances dictate whether prior approval is required. Alterations incurred to meet the specific requirements of a Federal award require prior approval. Alterations at the termination of an award that are necessary to restore facilities to their prior condition are allowable. [Att. B, ¶ 36, 37]
- "Rental costs" has been expanded to address capital and less-than-arms-length leases. Allowable costs are limited to the pro forma costs of ownership. [Att. B, ¶ 38]
- The "Taxes" section has been qualified to exclude as allowable those taxes that are self-imposed and otherwise disproportionately affect Federal programs. This qualifier becomes effective on January 1, 1998. [Att. B, ¶ 39]
- Where a governmental unit fails to have written travel reimbursement policies, the "Travel" section now requires that General Services Administration (GSA) rules be used. Where noncommercial air transportation is used, allowable costs are limited to commercial fares. [Att. B, ¶ 41]

3.4 Questions and Answers on Attachment B

3-1 How are the cost allowability requirements of Circular A-87 different from those of Circular A-21 and A-122? [Att. B]

There are currently some differences between the various sets of OMB cost principles, but they are relatively minor. All three sets of principles reflect essentially the same policies toward cost allowability and documentation. OMB has stated that it intends to eliminate remaining differences as the circulars continue to be revised.

3-2 The previous version of Circular A-87 prohibited budgeting and accounting costs allocable to general costs of government. Are these costs now 100% allowable? [Att. B, ¶ 1]

No. In its 1995 revision of Circular A-87, OMB omitted language qualifying which accounting and budgeting costs are allowable. Those costs allocable to general or routine costs of government continue to be unallowable under the general provisions of Attachment B, paragraph 23, "General Government Expenses." In its efforts to reduce verbiage in the Circular, OMB determined that it was unnecessary to qualify every item of cost. All costs are subject to the general prohibition of allowing costs attributable to the general cost of government.

3-3 Other than the capitalization of ADP equipment and related hardware, must the developmental and testing costs for such systems be amortized? [Att. B, ¶ 6]

At the time of this guide's publication, no applicable industry-wide government accounting standards exist for the treatment of these costs. Governmental units are to treat these costs in accordance with their established capitalization policies. In the future, should the Governmental Accounting Standards Board issue applicable pronouncements on this subject, governmental units will be required to follow them.

3-4 Where financing was obtained to develop an ADP system, are there any limitations with respect to claiming interest expense associated with these costs?

Interest is only allowable on capital expenditures where there is interest expense and depreciation (or use allowance) in the current period. If development costs are not amortized, i.e. written off as expenditures, then no interest is allocable or allowable under Federal programs. However, interest expense incurred in the first year of the expenditure is allowable.

3-5 Lump sum leave (Unused Leave at B.11.d(3)) payments are to be allocated as general administrative expenses to all activities of the governmental unit or component. Why are both noted here, but only "governmental unit" is cited for severance pay (B.11.g(2))? [Att. B, ¶ 11.d]

The section dealing with severance pay requires an allocation of these costs "to all activities of the governmental unit as an indirect cost." This language is interpreted as including components; no distinction is intended.

3-6 If an employee worked on the same program during their entire employment, can their unpaid leave, at the time of separation, be charged to that program? [Att. B, ¶ 11.d(3)]

Attachment B, paragraph 11.d(3) requires that unpaid leave be treated as an indirect cost. If a governmental unit wishes to direct charge such costs, the alternative that would result in the same level of equity would be if unpaid leave for all employees were charged to the source(s) where the leave was earned. The allocation would not only have to be within the last component unit worked, but to all other units worked over the employees' careers. As this approach involves burdensome accounting for the entire work force, OMB provided the indirect cost approach as being the least burdensome.

3-7 In the preamble to its notice in the May 17, 1995 *Federal Register*, page 26485, OMB stated that a proposed revision requiring separate actuarial computations for different classes of employees had been deleted. OMB did not explain why this provision had been deleted. Does this mean that classes of employees, such as police and social workers, may now be combined for computing pension liabilities and employer contributions? [Att. B, ¶ 11.d(5)]

No. OMB has stated that this provision was deleted because it was redundant of a more general provision of the final revision to Circular A-87. Attachment B, paragraph 11.d(5) stipulates that fringe benefits must be allocated "in a manner consistent with the pattern of benefits attributable to the individuals or group(s) of employees...." As

such, it is the intent of OMB that separate actuarial analyses be made for pensions and other applicable fringe benefits involving different classes of employees having different cost patterns.

Basic guidelines affecting allowability of costs provide that policies, regulations, and procedures be consistently and uniformly applied to both Federal and nonfederal activities. This consistency concept recognizes that there will probably be several actuarial groupings to reflect different employee classes (e.g., police/fire, judges, regular classified, etc.). Consistency requires that pension contributions for employees within each actuarial grouping be based on the same assumptions and computations (e.g. 7% of salaries and wages).

- 3-8 Circular A-87 states that pension contributions by a governmental unit in excess of the actuarially determined amount for a fiscal year may be used as the governmental unit's contribution in future periods. Does this mean that the excess amount is not allowable in the year contributed, but may be allowed or recognized in future periods? If so, how should the unallowable amount be calculated? [Att. B, ¶ 11.e]**

The maximum amount allowed for pension costs in a given fiscal year would be the amount actually contributed, based on the amount determined for that fiscal year under an acceptable actuarial system that has been used by the government in its financial statements. Any amount exceeding this determination would be unallowable in the year funded but would be considered a prepaid contribution that can be used in whole or in part by the government in a future period when its contribution is less than the actuarially determined amount for that period. The amount allowed in this later period would reflect the amount prepaid, plus interest earnings on that amount, as computed based on the assumed interest rate used by the actuary in its determinations.

- 3-9 Circular A-87 notes only two acceptable methods for computing pension plan costs applicable to a governmental unit's fiscal year, i.e., the pay-as-you-go method or an acceptable actuarial cost method. It further notes the amounts that will be recognized as allowable for a given year, i.e., actual payments to retirees or their beneficiaries under the former method, and amounts funded within six months after the end of that year (extensions subject to approval) for the latter. If another method is used, e.g., an approved funding schedule by the state legislature, is that method acceptable if it produces contributions between what the two approved methods would allow? [Att. B, ¶ 11.e]**

This would be similar to an actuarial method where a governmental unit funds less than the actuarially determined amount. As provided in Attachment B, paragraph 11.e(2), costs that are funded after the six-month period would be allowable in the year the actual funding takes place. However, only the amount that would have been funded if contributions were made on a timely basis would be allowable. Any increased costs due to the delayed funding would be unallowable in the year funded.

- 3-10 Circular A-87 allows recognition of actuarial pension contributions in a specific year if these contributions are made in a period not exceeding six months after year end. An extension of the six months is permitted if an imputed interest offset adjustment is made to compensate for the difference in the timing of the Federal**

reimbursement versus the state/local contribution. Are such adjustments required during the course of the year, i.e. the timing between the Federal reimbursement during the twelve-month period and the actual contribution to the pension fund during that same period? [Att. B, ¶ 11.e(2)]

OMB did not believe it was necessary to establish rules concerning timely contributions, as this matter falls under the purview of cash draw downs and, as such, is subject to the provisions of the Cash Management Improvement Act (CMIA) (P.L. 101-453, implemented by the Treasury Department at 31 CFR Part 205). Where the cognizant agency determines that funds have been drawn down, retained for extended periods, and subsequently used to make untimely contributions, the cognizant agency is required to recover imputed interest through the Treasury Department under the auspices of the CMIA.

- 3-11 Attachment B, paragraph 11.e(5) provides for the Federal Government to receive a refund, withdrawal, or other credit if pension monies revert to state/local general revenues or other nonpension uses. How would the Federal Government refund be determined?** [Att. B, ¶ 11.e(5)]

The Federal refund percentage of the amount reverted to the governmental unit should be based on the same pro rata share of the pension contribution charged to Federal programs. However, because Federal pension contributions usually occur over a long period of time, an accurate determination of the pro rata share over this period is seldom feasible. The cognizant agency may negotiate with the governmental unit a reasonable estimate of the pro rata share or elect to use the universally accepted 20 percent as the approximation. The 20 percent representing the Federal share would be applied to the total amount transferred.

- 3-12 Severance payments associated with normal turnover are allowable and are to be allocated to all activities of the governmental unit as an indirect cost. Are governments required to allocate to the entire governmental unit, e.g. the state, through the state-wide cost allocation plan (SWCAP) as an indirect cost or just to all activities within the affected component of the governmental unit?** [Att. B, ¶ 11.g(2)]

Attachment B, paragraph 11.g(2) only refers to severance pay involved with normal turnover and not that experienced with reductions due to program cutbacks or elimination, reductions in the government workforce, buy-outs, etc. This section deals with relatively insignificant costs resulting from normal operations and are to be included in a component's indirect costs, the SWCAP/LOCAP, or a state/local-wide fringe benefit rate, depending on how the government accounts for such costs. However, they are not to be treated as direct costs.

- 3-13 Attachment B, paragraph 11.g(3) notes that "abnormal or mass severance pay will be considered on a case-by-case basis and is allowable only if approved by the cognizant Federal agency." What is the definition of "severance pay" in this case, and what must be submitted to the Federal Government for approval?** [Att. B, ¶ 11.g(3)]

The question raises several points and the responses to each are as follows:

- (1) Mass severance or termination benefits would include all expenses associated with the event. This would include: lump sum payments that may be linked to years of service, increased pension benefits such as granting additional years or eliminating penalties for early retirement, payments of unused leave, and the cost of any other incentive offered to employees as an incentive to leave government service, such as buy-outs.
- (2) The costs of these special termination benefits must be determined and prior approval of such costs must be obtained from the Federal cognizant office prior to claiming these costs directly or indirectly against Federal programs. The requests for prior approval, at a minimum, must demonstrate the reasonableness and allocability of such costs to Federal programs.
- (3) If a state or local government is contemplating such packages, they must obtain approval as required, based on the effective date of Circular A-87 for the specific governmental unit. In addition, even though the former Circular A-87 did not note a specific requirement for advance approval for such costs, it did require that, for claiming and reimbursement purposes, all costs be allocable to and benefit Federal programs.
- (4) Cognizant agencies will generally use the following criteria in making a determination as to whether the abnormal severance costs will be allowed.
 - a. The governmental unit must demonstrate that such costs are allocable to Federal programs.
 - b. The buy-out should be government-wide. (However, see Q&A 3-14 below.)
 - c. The plan should address policies concerning rehiring and forfeiture of buy-out or other severance payments if rehiring policies are not followed.
 - d. The plan should address estimated savings, total and Federal, in both dollars and number of employees.
 - e. The governmental unit should analyze the effect the downsizing will have on the operation, continuity, and effectiveness of programs.
 - f. The governmental unit and the cognizant agency also will establish an agreement providing for compensation to the Federal Government

should the terms and conditions of the buy-out/severance plan not be met.

3-14 Is there a prohibition on allocating or charging buy-out and other severance costs directly to the function or activity in which the employee last worked? [Att. B, ¶ 11.g(3)]

As stated in Attachment B, paragraph 11.g(3), each incentive package will be

determined on a case by case basis. The direct charging of buy-out costs to functions/programs/components is appropriate under certain circumstances. For example, where the state or the Federal Government is eliminating a program, charging the buy-out costs to that program is consistent with the allocability provisions of Circular A-87. However a problem may be created in this situation because the buy-out costs would be assigned to a component or program that no longer operates. If such programs are state/local-only supported programs, then such costs would not be allocable to Federal programs either directly or indirectly. If such programs are Federally supported programs, then these programs should provide for the costs of such cut backs or terminations because a basic A-87 cost principle at Attachment A, paragraph C.3.c. provides that "[a]ny cost allocable to a particular Federal award or cost objective under the principles provided for in this Circular may not be charged to other Federal awards to overcome fund deficiencies...."

3-15 What is a personnel activity report (PAR)? [Att. B, ¶ 11.h]

A PAR is a timesheet or log maintained by the employee which contemporaneously accounts for 100% of their time. The objective is to identify effort spent on multiple activities or programs. Breaks, meals, generic training, etc. can all be coded to a single activity such as "admin" or "other," which in turn would be reallocated to the activities or programs.

In limited situations a PAR can be a time certification relying on an informal log or calendar notations. For example, an attorney working in an agency general counsel office routinely works on general management activities, which are allowable, and his time is charged 100% to an indirect cost center. However, in one month he works three weeks with the state attorney general on a lawsuit against the Federal Government. For that month, it would be acceptable for him to complete an end-of-the-month certification reflecting a 25% distribution of time to the IDC pool and 75% to a cost center representing unallowable legal costs (pursuing claims against the Federal Government).

Caution must be exercised when using time certifications. Their use is only suitable where few activities are involved and the effort involved covers long periods without diversions to other efforts. Where effort is expended on a number of activities with constant variations throughout the day as well as from day to day, a month-end certification would be unacceptable. It would be at best a rough estimate of time expended and would not meet the requirement of an after-the-fact reporting of actual effort.

3-16 Attachment B, paragraph 11.h establishes acceptable standards for a personnel activity reporting (PAR) system. One standard requires an employee signature when working on multiple activities. If a government component maintains an ADP on-line PAR system which is fully computerized and paperless, would a "digital signature" (occurring when an employee logs on to the PAR system with a logon ID and a secret password) constitute an acceptable alternative to an employee signature? [Att. B, ¶ 11.h]

As long as the governmental unit can demonstrate and document that only the employees' actions would result in the identification of the activities to be charged, and

that it complies with the other criteria in Attachment B, paragraph 11.h(5), the procedure would be acceptable.

- 3-17 Some central services activities are billed based on the service hours provided to user agencies. Circular A-87 requires that "personnel activity reports or equivalent documentation...must reflect an after-the-fact distribution of the actual activity of each employee." Based on the requirements at Attachment B, paragraph 11.h, are timesheets reflecting actual effort required or are monthly estimates sufficient? [Att. B, ¶ 11.h]**

If an employee is assigned to and expected to work solely in one billed activity (cost objective), only periodic certifications, as required by Attachment B, paragraph 11.h(3), must be generated. However, if that employee is assigned to a billed activity in which multiple rates are developed, then personnel activity reports or equivalent documentation set forth in 11.h(4) and (5) are required. Monthly estimates can only be used for interim billing purposes. Such billings must be adjusted to actual effort based on the criteria set forth in 11.h(5)(e).

- 3-18 How should year-end bonuses be treated? [Att. B, ¶ 11.h]**

If the amounts involved are significant, they must be allocated based on the entire year's activity. As such, time and effort reports (or equivalent systems) must be averaged for the period covered by the bonuses, in this case, an entire year. However, if it can be demonstrated that the time and effort or other statistical data for the period in which the bonus was paid is typical of the entire period for which the bonus was awarded, then no redistribution is required.

- 3-19 If an employee works on only one Federal award, is a certification required? [Att. B, ¶ 11.h(3)]**

Yes. However, this requirement can be met through certain payroll codings and time and attendance certifications pursuant to payroll authorizations. For example, if (1) employees work in a dedicated function; (2) their potential assignment to multiple programs/activities is not within the authority, function, or purview of the supervisor responsible for certifying payroll time and attendance; and (3) the employee is coded to a dedicated function not benefitting multiple functions or programs, the payroll certification shall be accepted in lieu of the semi-annual certification of time and effort.

- 3-20 Will an employee working on two indirect cost activities subject to different allocation bases be required to maintain a personnel activity report? [Att. B, ¶ 11.h(4)(d)]**

Attachment B, paragraph 11.h(4)(d) requires that employees in these circumstances must complete personnel activity reports, whether through time sheets or some form of statistical sampling.

- 3-21 Where a personnel activity reporting system is based on employee time sheets, what are the minimum increments of time in which employees may record their time? [Att. B, ¶ 11.h(5)]**

The purpose of time and effort (T&E) reporting is to capture total activities expended on various Federal and state programs. Depending on the level of detail required by the enabling legislation or management, activity-specific vs. program-specific time might have to be captured. Increments of time should not be limited arbitrarily, because this may prevent employees from accurately and completely reporting effort on all programs and required activities if the minimum increment is too large.

Time sheets must be completed contemporaneously and must be detailed enough to reflect all activities performed during a specific period of time. The time increments should be sufficient to recognize the: (1) number of different activities performed, and (2) dynamics of these responsibilities. For example, very large time increments could be used for employees performing only a few functions which change very slowly over time. Conversely, very small increments would be needed for employees performing a multitude of very short-term tasks.

Reporting time frames established by a unit or component may be subject to Federal review. If the cognizant agency determines that an established time frame or increment is inadequate because it does not allow employees to report effort on all activities or programs fully and contemporaneously, the unit or component will be required to revise its system to capture all activities and programs. To avoid this condition, a statistical reporting system (e.g. random moment sampling) should be considered for employees working in dynamic situations (performing many different types of activities on a variety of programs over a short period of time).

3-22 For employees working on multiple activities where the component has opted to account for time based on time and effort reports, must the personnel activity report for the employee account for 100% of the worker's effort? [Att. B, ¶ 11.h(5)(b)]

Yes. Failure to account for 100% of an employee's or volunteer's time would result in the shifting of program/activity costs to those programs for which time is accounted.

3-23 Can the results of an acceptable statistical sampling method or time and effort reporting covering one period of time be applied to a different period, e.g., a prior quarter? [Att. B, ¶ 11.h(5)(c)]

No. The results of a specific period represents the values experienced during that period only. Attachment B, paragraph 11.h(5)(c) requires that time and effort reporting coincide with one or more pay periods. Therefore, retroactive application of such results, whether they are statistically based or effort reporting, is unacceptable. However, prior period actuals may be used as estimates for applying costs in a future period, provided that the estimates are adjusted back to actual effort for that period when claimed for reimbursement.

3-24 How often must time sheets be prepared? [Att. B, ¶ 11.h(5)(c)]

The timeliness of completing time and effort reports depends on the nature of activities being reported. The Circular requires that such reports must reflect the actual activity of each employee. If activities or programs worked on vary constantly throughout the work day, then they must be completed as each event begins and ends. However, in

accordance with Attachment B, paragraph 11.h(5)(c), they must be completed no less frequently than monthly.

3-25 Are legal costs associated with administrative appeals of disallowed costs, cost allocation and indirect cost proposal disputes, or other adverse decisions made by the Federal agency allowable? [Att. B, ¶ 14]

Circular A-87 stipulates that the costs of pursuing claims against the Federal Government are unallowable. However, OMB has deferred to agencies in interpreting this policy. Most, but not all, agencies have interpreted this policy as prohibiting costs associated with both administrative and judicial appeals occurring after a final management decision has been issued by the agency. As efforts are being made to establish a consistent interpretation throughout the Federal Government, governmental units should periodically check with their cognizant or awarding agency to determine if they are affected. Where such costs are interpreted as being unallowable, governmental units must establish methods and a cost center to aggregate such costs.

3-26 Attachment B, paragraph 14 refers only to those legal defense expenses deemed unallowable. What about accounting or other activities supporting unallowable legal defense activities? [Att. B, ¶ 14]

Although not mentioned specifically, other costs supporting unallowable legal defense activities would also be unallowable. Unallowable defense activities constitute the cost objective and any costs allocable to that activity are likewise unallowable.

3-27 How does a governmental unit identify unallowable legal defense and related costs? [Att. B, ¶ 14.b]

Unallowable activities must be identified through separate cost objectives or cost centers. With respect to salaries and wages, Attachment B, paragraph 11.h(4)(e) requires that unallowable activities be identified through the use of personnel activity reports or equivalent documentation. These costs would be fully burdened with applicable fringe benefits and related administrative costs.

3-28 Can depreciable lives of assets that are relied upon in the preparation of the financial statements differ from those used in filing claims with the Federal Government? [Att. B, ¶ 15]

In accordance with the consistency provisions of Attachment A, paragraph C.1.e, if a governmental unit elects to depreciate in its financial statements (CAFR), the depreciable lives and classes used in those statements must be used by all components of the government in their claims under Federal awards.

3-29 Most states do not have a state-wide policy on depreciation. Quite often, individual state agencies have policies that may be different from state practice, e.g., the state does not depreciate equipment in its financial statements. Are agency policies on depreciation sufficient, if applied consistently throughout the agency, or is the agency required to follow what is practiced by the state in developing its financial statements? [Att. B, ¶ 15]

OMB recognized that states are not required to depreciate assets in their financial statements. As such, OMB granted an exception to the consistency requirements of Attachment A, paragraph C.1.e. Even if the state financial statements do not provide for depreciation, a government component (e.g. Department of Transportation, public university, etc.) may claim this expense. However, the capitalization threshold used in the CAFR for the fixed asset group must be used by the agency in establishing which assets to depreciate. In addition, depreciable lives for classes of assets must be consistent throughout the component. Where componentization is elected for buildings, the practice must be consistently applied to that asset group throughout the component.

3-30 Where a governmental unit or component opts to change from use allowance to depreciation, how is this conversion to be handled? [Att. B, ¶ 15]

In accordance with Attachment B, paragraph 15.e, the asset's imputed book value at the time of conversion is to be established by assessing pro forma depreciation for those periods when use allowance was applicable, i.e. from the date of acquisition. The remaining balance is then depreciated over the remaining useful life.

3-31 May components of a governmental unit determine, establish, and account for the cost of assets on a different basis, i.e., some through the use allowance provision and others through depreciation? [Att. B, ¶ 15]

Generally, yes. Attachment B, paragraph 15.a, permits this. However, only one method — depreciation or use allowance — may be applied to a single class of assets. A combination of the two methods is not allowed.

The exception to the above is in the case of internal service funds (ISFs) and enterprise funds. OMB, at Attachment B, paragraph 15.a, recognizes the requirement in generally accepted accounting principles that assets in such funds must be depreciated. The use of a depreciation method in the ISFs is acceptable even though other central service activities (unbilled) are applying use allowance in the determination of their costs.

3-32 Under what circumstances can accelerated depreciation be claimed? [Att. B, ¶ 15.e]

Depreciation accounting is, frequently, a reflection of tax or social policy. In contrast to IRS regulations, Circular A-87 follows traditional financial precepts associated with the production of goods and services by requiring that straight line depreciation procedures be applied to recognize an asset's consumption over its useful life (based on historical information or experience). The straight line procedure is presumed to be the only acceptable method because it is extremely difficult to demonstrate that the expected consumption of an asset will be significantly greater in earlier portions of its useful life.

It is assumed that older assets will probably require more maintenance and repair costs than newer assets. However, since these "fix up" costs are recognized as current period expenses, maintenance and repair expenditures have no impact on annual depreciation costs. Depreciation expense might vary from year to year only if an organization could demonstrate that an asset contributes more (or less) each year to the production of

goods and services.

Alternative depreciation procedures may be acceptable if an asset's consumption is based on unit of production rather than estimated useful life. For example, an entity may have a policy of removing vehicles from service after 125,000 miles or replacing certain equipment after 200,000 hours of operation. In these cases, miles driven or operating hours per year could be used to compute annual depreciation (rather than estimated years of service).

3-33 Under what circumstances may a use allowance be allowed for assets which have been fully depreciated? [Att. B, ¶ 15.g]

In only the most extraordinary circumstances should a use allowance be allowed for fully depreciated assets. Increased maintenance and service costs resulting from the age of the asset generally are insufficient justifications for allowing use allowance, as such costs are reimbursable directly as current period operating expenses. Furthermore, capital improvements/repairs/renovations to maintain the original asset's viability are equally insufficient justification, as they are recoverable through depreciation. The reimbursement of use allowance may be justified when Federal programs had been charged with little or no depreciation expense in the past.

3-34 Under what circumstances may a use allowance be allowed for assets which have been subjected to use allowance and would be considered to be fully depreciated at the use allowance rate? [Att. B, ¶ 15.g]

As with situations where an asset has been fully depreciated, additional use allowance for any asset for which the past application of use allowance can be considered to have resulted in the full acquisition cost of the asset having been recovered, use allowance should only be allowed in exceptional cases. The concept of reasonableness assumes that claims submitted to the Federal Government (and other external organizations) for cost reimbursement should be limited to an asset's acquisition cost. In sum, any claim for cost reimbursement in excess of cost would be unreasonable and unallowable. The criteria for allowing use allowance for fully depreciated assets (see Q&A 3-33) should also be applied for assets that have been subjected to use allowance in the past.

3-35 Attachment B, paragraph 19.a(2) defines equipment as the lessor of the governmental unit's capitalization policy or \$5,000. However, Attachment B, paragraph 19.d stipulates that items of equipment less than \$5,000 can be charged directly to grants without prior approval of the grantor agency. Do these rules contradict each other? [Att. B, ¶ 19]

No. Attachment B, paragraph 19.c establishes the requirement for prior approval of capital expenditures. The purpose of Attachment B, paragraph 19.d is to establish the prior approval dollar threshold for capital expenditures charged direct to grants. Attachment B, paragraph 19.a(2) permits governmental units to write-off assets up to \$5,000, pursuant to an established government-wide capitalization policy. Based on these definitions, noncapital expenditures become classified as supplies or some other object of expenditure other than "equipment." However, even if a governmental unit has a capitalization policy of less than \$5,000, they may still claim direct capital expenditures as "equipment" without prior approval, up to \$5,000.

This distinction is necessary to avoid over-reimbursement of indirect costs where a modified total direct cost (MTDC) base is used to distribute indirect costs. When using an MTDC base, the cognizant agency excludes capital expenditures based on the organization's capitalization policy (not to exceed \$5,000). If amounts exceeding the organization's capitalization policy, up to \$5,000, were to be treated as supplies, then indirect costs would be applied to those supplies, resulting in over-reimbursement.

- 3-36 When a governmental unit does not account for depreciation in its financial statements, it theoretically does not have a capitalization policy. On what basis should the governmental unit charge use allowance if it does not have a capitalization policy? [Att. B, ¶ 19]**

Governments that do not report depreciation in their financial statements typically disclose a "fixed asset group." In determining which assets will be reported in this group, the government has established a dollar threshold, i.e., assets costing over a certain amount are included. For purposes of defining equipment and for purposes of charges to Federal programs, the threshold established for the "fixed asset group" would constitute the government's capitalization policy.

- 3-37 Circular A-87 permits governmental units to define equipment up to \$5,000. Assuming a government adopts the \$5,000 limit and purchases a computer system for \$1M, if no single component costs more than \$5,000, can the \$1M be expensed? [Att. B, ¶ 19.a]**

No. The components of the computer system make it useable for the purpose for which it was acquired and therefore establishes the "system" as the capital expenditure. (Att. B, ¶ 19a(1)) In accordance with generally accepted accounting principles, and the definition of "acquisition cost" in section __.3 of the Common Rule accompanying OMB Circular A-102, the entire system of \$1M is to be capitalized. Subsequent additions to the system, such as additional personal computers for new staff, may be treated as maintenance costs expensed to the current period.

- 3-38 A governmental unit does not depreciate capital expenditures but rather expenses everything. For CAFR reporting purposes, however, the unit maintains a fixed asset group category in which all assets over \$250 are tracked as capitalized assets. Which capitalization policy should it use for its central service allocation plan, i.e. \$250 or \$5,000? [Att. B, ¶ 19.d]**

In accordance with Attachment B, paragraph 19.d, the unit is required to use the lesser of \$5,000 or the same capitalization policy used in the development of its financial statements. The capturing of assets over \$250 in the fixed asset group category effectively establishes the unit's capitalization policy at that level. As such, capital expenditures over \$250 may not be expensed in the cost allocation plan. A use allowance may be claimed on those items.

- 3-39 Settlements and damages resulting from noncompliance with Federal, state, or local laws are unallowable. Would settlements with employees arising out of bargaining-unit negotiations and agreements also be unallowable? [Att. B, ¶ 20]**

Provided that no laws have been violated by the governmental unit, such settlements

and awards are allowable as a general management cost.

- 3-40 The Circular stipulates that when there is substantial relocation of Federal projects from a facility in which the Federal Government participated in the financing, space charges may be renegotiated. What criteria are to be used in determining "substantial relocation," and, if there is an adjustment, how should it be handled? [Att. B, ¶ 22]**

The criteria for determining whether a substantial relocation has occurred is if over 50% of Federally sponsored programs are transferred in the first 20 years of occupancy or where a pattern of "churning" Federally financed debt can be established. Cognizant agencies are to exercise caution in exercising the 50% rule, taking into consideration program changes, cutbacks, and the governmental unit's resource needs. Where churning has occurred, i.e. relocations are occurring to maintain Federal programs in debt-financed space, the cognizant agency may limit future space reimbursement to historical costs, i.e. the cost of the vacated space.

- 3-41 Under Attachment B, paragraph 23.a, five examples are presented as unallowable general government expenses. The previous version of A-87 identified others, e.g., accounting and budgeting. Are these latter items now allowable? [Att. B, ¶ 23]**

No, these items are still unallowable when attributable to general government functions. For example, budgeting functions in support of the state legislature, taxing functions of the state treasurer, and criminal prosecutions by the attorney general, are all routine costs of general government and are not allocable to Federal programs.

- 3-42 Attachment B, paragraph 25.e states that severance pay is allowable in the year paid with two conditions, one of which is that the cost is allocated as a general administrative expense to all activities of the government unit. Attachment B, paragraph 11.g also addresses the treatment of severance pay, but makes a distinction between normal turnover and mass severance. Is there a difference between these policies? [Att. B, ¶ 25.e]**

Attachment B, paragraph 25.e only covers normal severance. If severance payments are determined to be abnormal or mass severance, then the provisions at Attachment B, paragraph 11.g(3) must be applied.

- 3-43 Is interest allowed on the acquisition of land that is debt-financed? [Att. B, ¶ 26]**

Yes. However, principal payments for the acquisition of land remain unallowable. The pro rata share of debt payments attributable to land must be deducted from outflows when a cash flow adjustment is required under the provisions of Circular A-87 Attachment B, Paragraph 26. (See Illustration 3-1.)

- 3-44 How is interest expense on assets that have a shorter life than the debt instrument treated? [Att. B, ¶ 26]**

Interest on fully depreciated, scrapped, or nonexistent assets is unallowable. The interest is neither allocable to the asset nor is there an allocable benefit to Federal

programs. In addition, single debt-financing for assets having variable lives must be allocated to those assets. Governments are encouraged to structure their debt in such a way so as not to incur additional financing costs for periods beyond the useful lives of the financed assets.

EXAMPLE: A 25-year bond is issued for \$10M. \$7.5M is to be used to construct a facility with a 40-year life and \$2.5M is to be used to acquire equipment with a life of 15 years. Allocable interest would be calculated as follows:

Building: \$7.5M/\$10M	=	75%
Equipment: \$2.5M/\$10M	=	25%

As a result, 75% of annual interest would be allocable to the building, which would be fully allowable in years 1-25. With respect to the equipment, 25% of total annual interest would be allocable and allowable in years 1-15. In years 16-25, when the equipment has been fully depreciated or otherwise out-lived its useful life, 25% of annual interest would be unallowable.

- 3-45 Some governments issue blanket bond issuances to meet their capital needs. Is interest allowable where, in accordance with their capitalization policy, such expenditures are expensed or otherwise not recognized in the comprehensive annual financial report (CAFR) as "fixed assets"? [Att. B, ¶ 26.a]**

No. Expenditures for items expensed or otherwise written-off constitute operating expenditures, unless they are identified as fixed assets. Attachment B, paragraph 26.a only permits interest for capital expenditures. Interest for operating or working capital is unallowable.

- 3-46 Attachment B, paragraph 26.b allows interest on equipment paid or incurred on or after the applicable effective date of the revised Circular (May 4, 1995). However, in the preamble to the May 17, 1995 *Federal Register* notice of the Circular's issuance, page 26486, in response to a comment, OMB seems to exclude computer equipment. Is interest paid or incurred after the applicable effective date allowable? [Att. B, ¶ 26.b]**

In the preamble, OMB was responding to comments that sought allowability of interest on both equipment and facilities, regardless of when the assets were acquired. In justifying allowing interest on pre-effective date equipment, but not facilities, OMB reasoned that, except for computer equipment, such acquisitions typically were nominal in cost and had short lives. The intent was not to exclude computer equipment, but merely to state a fact. As such, interest on all equipment, including ADP, incurred or paid after September 1, 1995 is allowable regardless of when the debt was incurred. For those governmental units or components subject to Circular A-87 Attachments C, D and E, interest on equipment is allowable in the government's fiscal year starting after September 1, 1995. For facilities, interest is only allowable for those acquired or constructed after October 1, 1980.

- 3-47 Attachment B, paragraph 26.b(1) makes interest unallowable when a government**

borrow from itself or nonbona fide third parties. If the government has established quasi-public agencies or "authorities" to issue bonds for the acquisition of equipment and facilities, are these viewed as less than third-party transactions? [Att. B, ¶ 26.b(1)]

No. Bond issuing authorities are viewed as enterprises of the governmental unit. The authority typically is not operating at a profit and, as a result, reduces bond issuance costs. While the government is issuing the bonds, it is not borrowing from itself but rather from the general public, to which interest is paid. The intent of this A-87 provision is to prohibit reimbursement of costs such as a state agency borrowing funds from general revenues and the state treasurer charging the agency interest on the borrowings.

3-48 The Circular requires governmental units to negotiate with the cognizant agency the amount of interest expense to be allowed when depreciation and interest expense (inflows) exceeds principal and interest payments (outflows). Recovering positive cash flows in the early years will result in negative cash flows in the latter years. Doesn't this penalize the governmental unit in later years? [Att. B, ¶ 26.b(4)]

It is not OMB's intent to require the recovery of positive cash flows. During periods of positive cash flow, earnings, either actual or imputed, can be made on those funds. It is the intent of OMB that during such periods, those earnings on the positive cash flow should be used to offset interest expense. The net amount would be the allowable interest expense allocable to Federal awards. Components would retain the positive cash flow, but not the earnings, to meet shortages during periods of negative cash flow. The interest assessed should be based on actual interest earned or the state treasurer's average return on investment. A suggested format for computing and tracking cash flow is provided in Illustration 3-1.

Illustration 3-1

A-87 Excess Cash-Flow Calculation - Sample Format for Annual Report

Applicable for debt arrangements over \$1 million,
unless initial equity contribution equals 25 percent or more

		<u>Month 1</u>	<u>2</u>	<u>3</u>	<u>4 ***</u>	<u>12</u>	<u>Annual Total</u>
Year _____	of ____ Years						
Line 1	Prior Period's cumulative cash flow balance (Prior Month's or Year's Line 9)						
	Add this period's inflows:						
Line 2	Depreciation expense (Note 1)						
Line 3	Interest expense (Note 2)						
Line 4	Amortization of debt issuance costs (Note 2)						
	Subtract this period's outflows:						
Line 5	Principal payments (Note 3)						
Line 6	Interest payments (Note 3)						
Line 7	Subtotal of cumulative cash flows (Line 1+2+3+4 - 5 - 6)						
Line 8	In initial period only, subtract initial equity contribution (Note 4) (Will be zero after initial period)						
Line 9	Total of cumulative cash flows (In initial period, Line 7 - Line 8) (In subsequent periods, equals Line 7)						
Line 10	If Line 9 is positive, state month's closing interest rate based on actual or state treasurer's ROI If Line 9 is negative, put "0" (zero)						
Line 11	Imputed interest income on cumulative positive cash flow Monthly columns = (Line 10 x Line 9)/12						
Line 12	Allowable interest for period (Line 6 - Line 11)						
Note 1:	May include amortization of capitalized construction interest in accordance with GAAP. Depreciation expenses should be reported on a monthly basis (Annual expense/12) if the agency has an IDC rate.						
Note 2:	Interest expense and amortization of debt issuance costs that are not included in loan amount should be reported on a monthly basis (Annual expense/12) if the agency has an IDC rate.						
Note 3:	If land is included in the financing arrangement, Line 5 would be calculated as: principal payment - (Debt proceeds used to purchase land/total debt proceeds x principal payment). Principal and interest payments should be reported in the month that payments were made.						
Note 4:	This line may only include amounts of initial equity contribution made prior to occupancy of the facility. The amount is to be entered only in the initial period covered by the cash flow submission, and should be left blank in future periods.						

3-49 The Circular requires an adjustment to interest expense for earnings on positive cash flows. Since the Circular does not specify, how should this be accomplished? Does it apply to all debt? [Att. B, ¶ 26.b(4)]

While OMB did not provide guidance in Circular A-87, they have been more precise in other circulars on this subject. Circular A-122 and A-21 require that "[t]he rate of interest to be used to compute earnings on excess cash flows shall be the three month Treasury Bill closing rate as of the last business day of that month." Many organizations covered by Circulars A-21 and A-122 typically do not have adequate data to compute return on investments. Consistent with the other Circulars, under A-87, an offset is only required for debt over \$1,000,000.

As noted in Illustration 3-1, the cash flow schedule provides for: (1) a cumulative monthly reporting of cash flows; (2) offset of equity contributions on a "first-in-first-out" (FIFO) basis; (3) waiver of the offset requirement if equity contribution is 25% or more; (4) interest on land but not for principal payments on land; and (5) inflows to be averaged over a twelve-month period, regardless of when actual payments (outflows) are made. While components are not required to use the schedule in Illustration 3-1, cash flow computations and adjustments should be made in accordance with these policies.

3-50 What type of assets are subject to interest offset for earnings on positive cash flows? [Att. B, ¶ 26.b(4)]

OMB advised HHS that it intended that all capital expenditures be subject to the offset provision, where applicable. This is consistent with the other OMB cost circulars.

3-51 What are the submittal requirements for the cash flow analysis? [Att. B, ¶ 26.b(4)]

When required by the cognizant agency, the cash flow analysis is to be submitted with each submission of a component's indirect or cost allocation proposal. The analysis is to be prepared for each twelve-month period contained in the proposal. For those governments and components not required to submit a proposal to a cognizant agency, the analysis is to be prepared annually with a corresponding adjustment to allowable interest for the period.

3-52 Is it acceptable to treat proposal costs for Federal awards as indirect costs? [Att. B, ¶ 34]

Attachment B, paragraph 34 encourages such treatment. In accordance with Attachment A, paragraph C.1.e, the practice must be consistently applied throughout the governmental unit. The Circular allows the direct charging of these costs with the prior approval of the awarding agency. This practice is discouraged as it may create inconsistent treatment issues.

3-53 What are the allowable costs for capital leases? [Att. B, ¶ 38.d]

The Circular provides that capital leases are allowable to the extent that costs would have been allowed had the asset been purchased outright. As such, interest, depreciation or use allowances, maintenance fees/expenses, related administrative costs, taxes, and insurance are allowable. Interest costs are allowable to the extent they meet the requirements of Attachment B, paragraph 26. Unallowable costs include amounts paid for profit, management fees, and taxes that would not have been incurred had the government/component purchased the asset outright.

3-54 Are "payments in lieu of taxes" (PILOT) allowable? [Att. B, ¶ 39]

Generally, PILOT payments are allowable if they are consistently assessed against all activities, regardless of the source of funding.

3-55 If a governmental unit has its own plane(s), what documentation is needed to satisfy the Circular A-87 requirements for noncommercial travel? Can the cognizant agency approve rates for the aircraft that would meet these requirements? [Att. B, ¶ 41.d]

Attachment B, paragraph 41.d. limits reimbursement for use of entity-owned or private aircraft to the commercial air fare determined in accordance with Attachment B, paragraph 41.c, which discusses limitations on allowable commercial air fares. In essence, reimbursement for use of private aircraft is based on cost but cannot exceed what would have been reimbursed had commercial air transportation been used. There could be circumstances where the use of commercial air would result in greater costs than the use of private aircraft. In those situations, allowable costs would be based on actual costs.

PART 4

Attachment C — Requirements for Cost Allocation Plans

4.1 Highlights of New Section, Attachment C

A new attachment C has been added addressing Central Service Cost Allocation Plans (commonly referred to as the state-wide cost allocation plan or SWCAP and for local governments, LOCAP). The new Attachment generally has incorporated longstanding practices and procedures contained in internal HHS implementing material as well as historical convention.

4.2 What is a Central Service Cost Allocation Plan?

Most governmental units provide certain services, such as motor pools, computer centers, purchasing, accounting, etc., to operating agencies on a centralized basis. Because Federally supported awards are performed within the individual operating agencies, there needs to be a process through which these central service costs can be identified and assigned to benefitted activities on a reasonable and consistent basis. The central service cost allocation plan (CSCAP) provides that process.

4.3 Content of CSCAPs

CSCAPs must include all central service costs that will be claimed, whether as a billed or an allocated cost, under Federal awards. Costs of central services omitted from the plan **will not** be reimbursed. Documentation requirements are discussed in section 4.5 below.

Plans must include a projection of the next year's allocated central services cost. This projection should be based on either actual costs for the most recently completed year or the budget projection for the coming year. Plans must also include a reconciliation of actual allocated central services costs to the estimated costs used for either the most recently completed year or the year preceding the most recently completed year.

4.4 Requirements for Submission of Cost Allocation Plans

4.4.1 Role of Cognizant Agencies

Circular A-87 provides that, for certain larger governmental units and their subdivisions, Federal cognizant agencies will be appointed to review and approve cost allocation plans on behalf of other Federal agencies. The Circular further explains these assignments and the approval process that these agencies will use.

4.4.2 State Governments and "Major" Local Governments

All state governments must submit statewide cost allocation plans to the Department of Health and Human Services. All local governments that OMB designates as "major" are also required to submit their plans to a designated cognizant agency unless the

cognizant agency determines otherwise. Note: Indian tribal governments should use guidelines applicable to local governments and local education agencies (LEAs) should follow the procedures established by the U.S. Department of Education.

OMB periodically publishes a listing of major local governments in the *Federal Register*. The most recently published listing is contained in Appendix 2 of this guide. In general, cognizant agencies for local governments are assigned according to the predominance of Federal funding, although other factors such as availability of resources and past history may also be considered.

4.4.3 Local Governments Not Considered "Major"

Local governments that are not designated as "major" are not required to submit their cost allocation plans for Federal review and approval unless specifically instructed to do so by a Federal agency. Local governments that only receive funds as a subrecipient of another government should follow instructions from their pass-through grantors concerning submission and review. However, they are expected to prepare and retain their plans for audit by independent auditors and Federal auditors. Pass-through grantors (primary recipients) are expected to review and monitor subrecipient plans to provide reasonable assurance that provisions of Circular A-87 are being followed.

4.5 What Are the Documentation Requirements for a CSCAP?

All costs and other data used to distribute the costs included in the plan should be supported by formal accounting and other records that will support the appropriateness of the costs assigned to Federal awards.

4.5.1 Allocated Central Services

The allocated costs of the CSCAP are commonly referred to as "Section I" costs and are categorized as such in both the plan submission and the negotiated agreement. For each allocated central service, the proposed cost allocation plan must:

- briefly describe the service;
- identify the unit rendering the service and the operating agencies receiving the service;
- list the items of expense included in the cost of the service;
- identify the method used to distribute the cost of the service to benefitted agencies; and
- provide a summary schedule showing the allocation of each service to benefitted agencies.

In addition, all proposed cost allocation plans must be accompanied by:

- an organization chart which is sufficiently detailed to show operations, including the central service activities of the governmental unit, regardless of whether they are shown as benefitting from central service functions;

- a copy of the comprehensive annual financial report (CAFR) (or executive budget, if budgeted costs are being proposed) to support the allowable costs of each central service activity included in the plan; and
- a certification that the plan:
 - was prepared in accordance with A-87;
 - contains only allowable costs; and
 - was prepared in a manner that treated similar costs consistently among the various Federal awards and between Federal and nonfederal awards/activities.

4.5.2 Internal Service Funds

The internal service funds (ISFs) and other billed services in the CSCAP are commonly referred to as "Section II" costs in both the plan submission and the negotiated agreement. For each internal service fund or similar activity with an operating budget of \$5 million or more, the proposed cost allocation plan must include:

- a brief description of each service;
- a balance sheet for each fund based on individual accounts contained in the governmental unit's accounting system;
- a revenue/expenses statement with revenues broken out by source;
- a list of nonoperating transfers (as defined by generally accepted accounting principles) into and out of the fund;
- a description of the methodology used to charge the costs of each service to users, including how billing rates are determined;
- a schedule of current rates; and
- a schedule comparing total revenues (including imputed revenues) generated by the service to the allowable costs of the service under Circular A-87, with an explanation of how variances will be handled.

4.5.3 Self-Insurance Funds

For each self-insurance fund, the proposed cost allocation plan must include:

- the fund balance sheet;
- a statement of revenue and expenses, including a summary of billings and claims paid by the agency;
- a listing of all nonoperating transfers into and out of the fund;

- the type(s) of risk(s) covered by the fund;
- an explanation of how the level of fund contributions are determined;
- a description of the procedures used to charge or allocate fund contributions to benefitted activities;
- an identification and explanation of reserve levels in excess of claims:
 - submitted and adjudicated, but not paid;
 - submitted but not adjudicated; or
 - incurred but not submitted; and
- an insurance report.

4.5.4 Fringe Benefits Costs

For fringe benefit costs, the proposed cost allocation plan must:

- list fringe benefits provided to covered employees and the overall annual cost of each type of benefit;
- identify current fringe benefit policies; and
- describe procedures used to charge or allocate the costs of the benefits to benefitted activities.

4.5.5 Pension and Postretirement Health Insurance Plans

For pension and postretirement health insurance plans, the proposed cost allocation plan must provide:

- the governmental unit's funding policies, if different from actuarially determined rates;
- the pension plan's costs accrued for the year;
- the amount funded and date(s) of funding;
- a copy of the current actuarial report, including the actuarial assumptions;
- the plan trustee's report; and
- a schedule from the activity showing the value of the interest cost associated with late funding.

4.5.6 Certification

CSCAPs must be accompanied by a certification, shown in Attachment C, ¶ D.4. (See also 2.9, Government Certification)

4.6 How Should Allocated Costs Be Presented in a CSCAP?

4.6.1 Sample Formats for Central Service Cost Allocation Plans

The following pages illustrate a central service cost allocation plan. They consist of:

Illustration 4-1 - Statement of Function and Benefit, Personnel Department. The personnel department has been selected as an example of a central service. This schedule is a narrative description of the activities conducted by the personnel department, their necessity (benefits) to the successful performance of Federally supported programs, a description of the base(s) selected to distribute the costs of those activities to the organizations to which services are rendered, and the rationale for the base(s) selected.

Illustration 4-2 - Costs to be Allocated, Personnel Department. This illustration shows the composition of the costs of the personnel department as contained in official financial or budget statements and a reconciliation of those costs with the amount allocated in Illustration 4-1.

Illustration 4-3 - Allocation of Costs, Personnel Department. This illustration shows those state organizations to which the personnel department provides services and the allocation of its costs to those organizations. This illustration is supported by Illustrations 4-1 and 4-2.

Illustration 4-4 - Summary of Allocated Central Service Costs. This illustration shows each central service, and the attendant costs, which benefit Federal grants and contracts and for which a state or local government wishes to make a claim. This summary must be supported by detailed schedules comparable to Illustrations 4-1 — 4-3 for each included central service. (For purposes of preparing Attachment A of the Negotiation Agreement, only those state agencies receiving Federal funds are to be individually listed. The remaining agencies are to be grouped under "other.")

Illustration 4-5 - Summary of Central Services Billed. It is common practice for central service departments to bill those organizations to which they render services for the cost of those services. This summary illustrates the services billed to organizations conducting Federal grants and contracts, the costs included in the billing, the methodology for computing the billing rate, etc.

Amounts allocated to the operating departments from the central service cost allocation plan in Illustrations 4-4 and 4-5 are carried forward to Illustrations 6-1 — 6-4, which provide various sample formats for an indirect cost rate proposal.

Only a few of the many possible central services have been shown in Illustration 4-4 and only one central service department is shown in the accompanying Illustrations 4-1 through 4-3. A central service cost allocation plan may include any other services and their attendant costs which are allowable under OMB Circular A-87 and for which documentation can be provided. Each type of cost claimed should be supported by appropriate schedules and other documentation sufficient to provide a reasonable basis for evaluation and acceptance.

Illustration 4-1

Sample Central Service Cost Allocation Plan Statement of Function & Benefit, Personnel Department For the Fiscal Year Ended June 30, XXXX

The personnel department is responsible for overall administration of the Civil Service program. This includes recruiting, interviewing, testing, and referring potential candidates for the more than 2,000 municipal positions.

The personnel department administers the classifications and salary programs and is responsible for recommending personnel policies and procedures to the Civil Service Commission for approval.

The department is involved in the design of the various employee benefit programs. After installation, the department reviews and maintains the records of these programs.

Active and inactive personnel records are maintained on all municipal employees.

The personnel department is responsible for maintaining the safety program (including workmen's compensation and injury level) and the city training programs.

All functions and services performed by the personnel department benefit all departments of the city. Federal programs are benefitted because city employees are hired to work in these programs. Therefore, the costs of the personnel department have been distributed to all departments of the city.

The basis for allocation is the number of employees per department. The base data is readily available and verifiable. All employees receive essentially the same type and level of services. Therefore, this base reflects that condition by distributing the total cost of providing these services to each department in proportion to its relative number of employees.

This is a sample. In practice, this schedule should be sufficiently detailed to provide narrative explanations of the functions and benefits associated with the costs being allocated.

Illustration 4-2

Sample Central Service Cost Allocation Plan Costs to be Allocated, Personnel Department For the Fiscal Year Ended June 30, XXXX

Salaries and Wages	\$1,088,380
Fringe Benefits (19.8%)	215,499
Supplies	113,600
Travel	26,200
Equipment/Capital Outlay	41,560
Maintenance and Janitorial Services	26,040
Miscellaneous	<u>35,880</u>
Total Cost	\$1,547,159
Adjustments	
Less: Unallowable Costs	<40,979>
Capital Outlay	<41,560>
Costs Chargeable to Federal Grant (a)	<24,000>
Add: Use Allowance	<u>15,236</u>
Subtotal Adjustments	<u><91,303></u>
Total Allowable, Allocable Costs	<u>\$1,455,856</u> (b)

Notes:

- (a)** Represents charges to a Federal grant awarded to assist the state or local government in improving its efforts to hire and train disabled workers. If a supporting agency received an award from the Federal Government, all costs incurred in connection with the award (including any costs that are required for matching or cost sharing) must be eliminated prior to distributing the supporting agency's costs to the user departments or agencies.
- (b)** The costs allocated must be reconciled to appropriate financial documents, either financial statements, budgets, or a combination of both. In this example, the government's base data was cost incurred for its most recent fiscal year.

This is a sample. In practice, this schedule should be sufficiently detailed to show the costs of major activities, branches, etc. of the personnel departments in a manner permitting a reasonable assessment of the costs claimed against Federal programs.

Illustration 4-3

**Sample Central Service Cost Allocation Plan
Allocation of Costs, Personnel Department
For the Fiscal Year Ended June 30, XXXX**

<u>Department/Unit</u>	Number of <u>Employees (b)</u>	<u>Percent</u>	<u>Allocation (c)</u>
Health	188	6.61	96,232
Environmental Services	170	5.98	87,060
Social Services	61	2.14	31,155
Highway and Public Transportation	289	10.16	147,915
Police	570	20.04	291,754
Corrections	475	16.70	243,128
Other Departments (a)	<u>1,091</u>	<u>38.37</u>	<u>558,612</u>
Total	<u>2,844</u>	<u>100.00</u>	<u>\$1,455,856</u>

Notes:

- (a) Those departments that do not perform Federal programs may be grouped together. However, a one-time schedule is required, listing all agencies or functions listed under "other."
- (b) Allocation base must include all full- and part-time employees of all operating departments that are serviced by the personnel department.
- (c) Allocated amounts are carried forward to the summary schedule in Illustration 4-4. The total of \$1,455,856 comes from Illustration 4-2.

This is a sample. In practice, the type and level of service provided by the personnel department to the various organizations served may require a separate allocation for each service or to different organizations served.

Illustration 4-4

Sample Central Service Cost Allocation Plan Summary of Allocated Central Service Costs For the Fiscal Year Ended June 30, XXXX

Department/Operating Unit	Central Service Organizations <i>(c)</i>				Total Allocated Costs <i>(b)</i>
	Personnel <i>(a)</i>	Accounting/ Cmptr Svcs.	Purchasing	Audit	
Health	96,232	201,450	34,123	16,753	348,558
Environmental Services	87,060	216,220	22,211	12,210	337,701
Social Services	31,155	79,841	8,960	6,452	126,408
Highway and Public Transportation	147,915	428,550	67,512	62,271	706,248
Police	291,754	519,605	94,751	114,211	1,020,321
Corrections	243,128	497,431	99,970	145,260	985,789
Other Departments	<u>558,612</u>	<u>1,876,082</u>	<u>214,311</u>	<u>186,542</u>	<u>2,835,547</u>
TOTALS	<u>\$1,455,856</u>	<u>\$3,819,179</u>	<u>\$541,838</u>	<u>\$543,699</u>	<u>\$6,360,572</u>

Notes:

- (a)* Allocated amounts shown are from Illustration 4-3. In an actual plan, the remaining service departments would also need to be supported by separate schedules showing the computation of the allocated amounts.
- (b)* These amounts are includable in the indirect cost proposals of the individual operating departments/units. See Illustrations 6-1 — 6-4.
- (c)* Suggested allocation bases can be found in Section 4.6.2.

This is a sample. In practice, a state or local government may wish to claim more or fewer activities as charges to Federally supported programs. If so, this Illustration and its supporting schedules (Illustrations 4-1 — 4-3) would need to be modified accordingly.

Illustration 4-5

Sample Central Service Cost Allocation Plan Summary of Central Services Billed to User Organizations

Motor Pool The state (or local government) operates a central motor pool which makes cars, trucks, and buses available to the user departments. User departments are billed for each mile driven: cars - 40 cents per mile; trucks - 55 cents per mile; and buses - 75 cents per mile. The basis for the charge is the most recent study of cost per mile driven, performed by the internal audit staff. Any over- or under recovery is applied to the next year's expected expenditures and is included in that year's billing rate. The costs included are salaries and wages and fringe benefits of motor pool personnel; their travel; supplies and parts; and use charges for equipment, buildings, and vehicles determined in accordance with OMB Circular A-87.

Data Processing The state (or local government) operates a central data service center (DSC) consisting of a mainframe computer and an area network. The center provides both regular, continuing, and special job computer support to most operating and staff departments. Billings for services are made to user organizations based on a standard price schedule. The price schedule is related to, and designed to recover, the costs of various types of jobs on each system. It is revised quarterly and audited annually by the internal audit department. Profits or losses are carried forward and used to adjust price schedules of ensuing quarterly billing rates. Costs consist of salaries and wages and fringe benefits of center personnel, supplies, maintenance and utilities, and straight-line depreciation of equipment based on a fifteen-year life.

This is a sample. In actual practice, a complete listing of all billed components of the DSC would be required: e.g., CPU, programming, microfiche, etc.

Long Distance Telephone All long distance telephone calls are placed through a central switchboard and are billed to the organizations making the call.

Notes:

If a direct billing mechanism is used by the government, then all users must be billed, either through actual, memo, or imputed billings. Billing of selected departments and allocation of residual amounts through the cost allocation plan to remaining departments results in inequitable costing and is not acceptable. However, if all users are billed, residual amounts may be allocated through the allocation plan, provided they are not material and the allocation base is equitable.

A detailed breakdown of costs is not normally required as a part of this summary. However, the submitting state or local government must have and make available to the Federal cognizant agency such cost and revenue breakdowns, utilization records, and other information necessary to permit a reasonable assessment of the costs incurred and changes made.

This is a sample. In practice, the number and types of services billed may be greater than shown here and may require more extensive description and explanation.

4.6.2 Suggested Bases for Cost Distribution

Listed below are suggested bases for distributing joint costs of central-type services to local government departments or agencies and to projects and programs utilizing these services. The bases are suggestions only, and should not be used if they are not suitable for the particular services involved. Any method of distribution can be used which will produce an equitable distribution of cost. In selecting one method over another, consideration should be given to the additional effort required to achieve a greater degree of accuracy.

<i>Type of Service</i>	<i>Suggested Bases for Allocation</i>
Accounting	Number of transactions processed
Auditing	Direct audit hours
Budgeting	Direct hours of identifiable services of employees of central budget
Buildings lease management	Number of leases
Data processing	System usage
Disbursing service	Number of checks or warrants issued
Employees retirement system administration	Number of employees contributing
Insurance management service	Dollar value of insurance premiums
Legal services	Direct hours
Mail and messenger service	Number of documents handled or employees served
Motor pool costs, including automotive management	Miles driven and/or days used
Office machines and equipment maintenance repairs	Direct hours
Office space use and related costs (heat, light, janitorial services, etc.)	Square feet of space occupied
Organization and management services	Direct hours; Square feet
Payroll services	Number of employees
Personnel administration	Number of employees
Printing and reproduction	Direct hours, job basis, pages printed, etc.
Procurement service	Number of transactions processed
Local telephone	Number of telephone instruments
Health services	Number of employees
Fidelity bonding program	Employees subject to bond or penalty amounts

4.7 How Should Billed Costs Be Presented in a CSCAP?

"Billed costs" include internal service funds (ISFs), self-insurance funds (SIFs), and fringe benefits funds (FBFs). Illustrations 4-6 and 4-7 show suggested formats for presenting these costs in the CSCAP proposal. While these formats are not mandated, the information they contain is required, unless the cognizant agency waives the requirement.

Specifically, for all funds, including those under \$5 million, a schedule of retained earnings (see e.g., Illustration 4-7) must be submitted which shows:

- the beginning balance for the fiscal year;
- actual and imputed revenues;
- A-87 allowable costs, adjusted for:
 - capital expenditures,
 - depreciation or use allowance,
 - nonrecognized transfers,
 - bad debts,
 - CSCAP allocations,
 - actual or imputed earnings on monthly cash balances and replacement reserves;
- working capital reserve; and
- contributed capital.

Contributed capital consists of unallowable A-87 costs, such as reserves for future asset replacement and capital expenditures, and are funded by nonfederal funds.

For those funds which have operating budgets over \$5 million, a schedule of billed services must be submitted. Illustration 4-6 is a suggested format for presenting billings. Again, this format is only for illustration purposes, and is not required. However, the schedule must provide, for each fund:

- billings by user;
- revenues, both actual and imputed; and
- adjustments for the pro rata share of the rate representing bad debts, reserves for replacement costs, capital expenditures, etc.

STATE OF _____ FUND _____
SUMMARY OF ACTUAL AND IMPUTED REVENUES
FOR THE YEAR ENDING JUNE 30, 19____

Illustration 4-6
Summary of Actual and Imputed Revenues by Fund

ATTACHMENT

[illegible]

* FOR EXAMPLE, BASED ON EXPENDITURES EXCLUDING FLOW-THROUGH FUNDS.

** ACCOUNTS RECEIVABLE/BAD DEBT EXPENSE.

*** FOR EXAMPLE, INCREMENT FOR UNALLOWABLE COSTS SUCH AS INTEREST, RESERVES FOR REPLACEMENT, PROJECTED COST INCREASES, ETC. BILLED TO STATE FUNDS

**** SHOW THIS FIGURE AS "ACTUAL & IMPUTED REVENUES" ON RECONCILIATION OF FUND TO FEDERAL GUIDELINES (ATTACHMENT B).

***** MUST RECONCILE TO TOTAL ACTUAL COSTS PER STATE FINANCIAL REPORT.

MUST RECONCILE TO BILLED REVENUE PER STATE FINANCIAL REPORT.

Illustration 4-7 Reconciliation of Retained Earnings

STATE OF _____

FUND _____

ATTACHMENT B

RECONCILIATION OF RETAINED EARNINGS BALANCE TO FEDERAL GUIDELINES
FOR YEAR ENDING JUNE 30, 19 __

PART I A-87 R.E. BALANCE

(000s)

A-87 R.E. BALANCE JULY 1, 19 __

Balance Per Prior Year's Reconciliation of Fund to A-87

(Initial Year, Use CAFR RE Balance at Beginning of Year Less

Adjustments - e.g., Contrib, Capital)

_____ \$0

FY 19 __ RETAINED EARNINGS INCREASE (DECREASE) Per CAFR

A-87 Revenue (Actual and Imputed)

From Attachment A

Other-

\$0

_____ 0

Total Revenues

_____ \$0

Expenditures (Actual Costs):

Per State's Financial Report

\$0

Less A-87 Unallowable Costs (e.g.)-

Capital Outlay

(0)

Projected Cost Increases/Replacement Reserve

(0)

Bad Debt

(0)

Other - (e.g., Gain on Disposal of Assets)

(0)

Plus A-87 Allowable Costs (e.g.)-

Indirect Costs from SWCAP

0

(If Not Allocated in Section I Of SWCAP To User Depts/Programs)

Depreciation or Use Allowance

0

(If Not Included in Actual Costs Above)

Other-

_____ 0

OMB A-87 Allowable Expenditures

_____ \$0

Adjustments:

Imputed Interest Earnings on Monthly Average Cash Balance

0

at State Treasury Avg. Rate of Return

Other-

_____ 0

Total Adjustments

_____ \$0

A-87 R.E. BALANCE June 30, 19 __

(A)

_____ \$0

Allowable Reserve

(B)

_____ \$0

Excess Balance (A)-(B)

_____ \$0

(If less than zero, the amount on (A) is the beginning A-87 R.E. balance for the next year's reconciliation.

If there is an excess balance, then the federal share should be returned to the federal gov't and the amount

on (B) will be the beginning A-87 R.E. balance for the next year.)

PART II A-87 CONTRIBUTED CAPITAL BALANCE

A-87 CONTRIBUTED CAPITAL BALANCE JULY 1, 19 __

_____ \$0

TRANSFERS Per CAFR (Supported By Official Accounting Records)

Plus: Transfers in (e.g., Contrib. Capital)

\$0

Less: Transfers Out (e.g., Payback of Contrib. Capital, Other Users of Fund R.E.)

_____ (0)

Net Transfers

_____ \$0

A-87 CONTRIBUTED CAPITAL BALANCE JUNE 30, 19 __

(C)

_____ \$0

PART III A-87 ADJUSTMENTS BALANCE

A-87 ADJUSTMENTS BALANCE JULY 1, 19 __

ADJUSTMENTS:

Less: A-87 Unallowable Costs

(\$0)

Plus: A-87 Allowable Costs

0

Other-

_____ 0

Total Adjustments

_____ \$0

A-87 ADJUSTMENTS BALANCE JUNE 30, 19 __

(D)

_____ \$0

PART IV RECONCILIATION OF A-87 R.E., CONTRIBUTED CAPITAL AND ADJUSTMENTS BALANCES TO CAFR BALANCE

RECONCILIATION OF A-87 R.E., CONTR. CAPITAL & ADJUST. BALANCES TO CAFR (A) + (C) + (D)

_____ \$0

(Should Tie to the Fund Balance in the CAFR)

Instructions for Preparing the Reconciliation of Retained Earnings (R.E.) Balance to Federal Guidelines (Illustration 4-7)

General. A reconciliation schedule must be completed for all billed central services, including internal service funds (ISFs), self-insurance funds (SIFs), and fringe benefit funds (FBFs).

For those funds which utilize multiple billing rates (e.g., ADP funds), a reconciliation schedule may be required for **each** billing rate. An overall/average fund balance may not be appropriate, because excess charges may occur in one billed service but undercharges may occur in other billed services. In addition, various users do not utilize each/all billed services to the same extent.

Part I A-87 R.E. Balance

1. **Beginning A-87 R.E. Balance.** If this is the first time the reconciliation schedule is being prepared, the beginning A-87 R.E. balance should be the R.E. balance on the state's CAFR, including allowable adjustments (e.g., transfers in/transfers out, A-87 unallowable/allowable costs, imputed interest). If the fund has been reviewed in prior years, the beginning balance will be the ending balance from the previous year's reconciliation schedule. However, if adjustments for excess reserve balances have been made, then a zero balance may be the appropriate starting balance.
2. **A-87 Revenues.** Revenues shall consist of all revenues generated by the service, including unbilled and uncollected revenues. If some users were not billed for services (or were not billed at a full rate), a schedule showing the full imputed revenues associated with these users shall be provided (see Summary of Actual and Imputed Revenues - Illustration 4-6). Revenues should also include (i) all other revenues the fund earned from its operation, and (ii) interest earned on reserves. If imputed interest/investment earnings are shown at the bottom of the schedule, these amounts should not be included in this section.
3. **A-87 Expenditures.** The initial expenditure balance should reconcile to the CAFR (or other financial records). Adjustments in accordance with A-87 are made, for example, the exclusion of bad debts and the inclusion of allocated central service costs (SWCAP Section I costs).
4. **Imputed Interest.** There are different methods to compute imputed interest earnings. Currently, one acceptable method is the application of the state's Treasury Average Rate of Return to the monthly average cash balance for the year. If actual interest earned is computed incorrectly, then additional interest may be imputed.
5. **Allowable Reserves.**
 - A. **Internal Service Funds.** The allowable reserve for ISFs, which are identified in the CAFR, is equal to the ISF's billing cycle up to 60 days allowable operating expenditures. The reserve is determined by applying a percentage to the allowable operating expenditures (excludes depreciation/use allowance, start-up capital, and any reserves to fund

long-term assets). The percentage is the number of days in the billing cycle days divided by 360.

Reserves for other billed central services that are not identified as ISFs in the CAFR are unallowable.

B. **Self-Insurance Funds.** The allowable reserve for self-insurance funds is defined in Circular A-87, Attachment B, paragraph 25. d. It is normally limited to the discounted present value of claims (i) submitted and adjudicated but not paid; (ii) submitted but not adjudicated; and (iii) incurred but not submitted.

C. **Fringe Benefit Funds.**

(i) *Medical, Unemployment, and Workers' Compensation Insurance.* See self-insurance funds above.

(ii) *Pension Plan.* Actuarial determined, but limited to the amount funded in accordance with Circular A-87, Attachment B, Paragraph 11.e.

(iii) *Post-retirement Health Benefits.* Actuarial determined, but limited to the amount funded in accordance with Circular A-87, Attachment B, paragraph 11.f.

(iv) *Accrued Leave.* Accrued leave is the amount required to pay leave earned but not taken. The reserve must be a valid liability as defined by GAAP and is limited to the amount funded. It must be supported by the state's payroll records.

Note: To be considered funded, a reserve must be paid to a trustee (or insurer) who maintains a trust fund or reserve for the sole purpose of paying the specific fringe benefit for which the reserve is established. If there is no funding, costs are recognized when paid.

6. **Excess Balance.** The Federal share of the excess must be returned to the Federal Government. Exceptions are based on negotiator judgment. For example, the state could credit the appropriate Federal and state programs/agencies for the overcharged amount, or the future billing rates could be reduced.

Interest may be assessed, taking into consideration the time period required to affect the payback.

Part II A-87 Contributed Capital Balance

1. **Transfers In/Transfers Out.** Contributed capital represents contributions by the state to the fund to cover expenditures not allowable under A-87, capital expenditures, reserves for the acquisition of future assets, etc. Transfers in/transfers out are identified in the CAFR and are in compliance with GAAP. Examples include contributed capital to the fund by the state or the transfer out of earned capital/cash to a fund that is having cash flow problems.

Part III A-87 Adjustments Balance

1. **A-87 Adjustments.** Adjustments specific to A-87 must be identified and recorded. The figures should be the same as those identified in Part I above.

Part IV Reconciliation of R.E., Contr. Capital & Adjustments Balances to CAFR Balance

1. The ending balances for Parts I, II, and III are totaled. The total figure should reconcile to the CAFR fund balance.

Note: If this schedule is for a billed central service that is general funded (and not identified as an ISF in the CAFR), there will be no reconciliation.

4.8 Questions and Answers on Attachment C

- 4-1 **Under what, if any, circumstances can an approved cost allocation plan be reopened by either party?** [Att. C]

With respect to the governmental unit or component, the only circumstance whereby a negotiated plan can be re-opened is noted in Question 4-2 below. The basis for the cognizant agency to reopen the approved plan is stated in Attachment C, paragraph F.2, e.g., if there is a violation of a statute or if submitted information was materially incomplete or inaccurate. Inclusion of unallowable or unallocable costs under Circular A-87 will not be grounds for reopening. In such cases, a roll-forward adjustment or refund will be made at the cognizant agency's option.

- 4-2 **If a central service activity, either allocated (Section I) or billed (Section II), is omitted when the state/local-wide cost allocation plan (SWCAP/LOCAP) is approved, can the carry forward procedure be used to recover the cost of the omitted activity in a future plan?** [Att. C, § C]

Attachment C, Section C specifically states that costs of central services omitted from the plan will not be reimbursed. However, OMB clarifies in the preamble to the May 17, 1995 *Federal Register* notice of the Circular's issuance that if a service **did not exist** (as opposed to being overlooked) when the plan was prepared, the approved plan can be reopened to include the new activity. In such cases, the plan will be amended to include the nonexistent activity. The definition of "nonexistent" does not include central services that existed when the plan was finally approved, nor those that the state should have known would exist in the future, based on budgets approved by the state legislature.

- 4-3 **Does Circular A-87 require primary recipients to prospectively review cost allocation plans and negotiate indirect cost rates with all organizations to which it makes cost reimbursement subawards? OMB does not impose a similar requirement on Federal agencies.** [Att. C, ¶ D.3]

Circular A-87 does not specifically prescribe procedures to be used by primary recipients in accepting claims for indirect costs made by organizations to which they make subawards. The Circular states: "Where a local government only

receives funds as a sub-recipient, the primary recipient will be responsible for negotiating indirect cost rates and/or monitoring the sub-recipient's plan. " (Att. C, ¶ D.3.) This would permit a primary recipient to actually engage in prospective review and negotiation. Alternatively, the primary recipient could require subrecipients to develop the necessary documentation concerning indirect charges and retain the documentation for audit and could then review audit reports to determine whether proper cost charging occurred. It would also be acceptable for primary recipients to use a combination of these methods, depending upon the relative size of the subrecipient. As accountability for the Federal funds ultimately rests with the primary recipient, the level of risk and exposure should be the determining factors in what oversight will be required.

4-4 Attachment C, Section E provides the cognizant agency with flexibility in the types of information and documentation it can require when approving central service cost allocation plans (SWCAPs/LOCAPs). Are there limits on this authority? [Att. C, § E]

The data and information that a cognizant agency can require is subject to reasonableness. Factors to be considered when assessing documentation needs are: (1) the overall size of the government unit; (2) the timing of previous reviews and the results of such reviews; (3) the appearance of systemic problems; (4) the reoccurrence of problems/issues; (5) the veracity of information provided in the past; and (6) the level of "good faith" exercised in the past by the government or its consultants, if applicable.

4-5 Attachment C, paragraph E.2 requires that a summary schedule be provided showing the allocation of each service to the specific benefitted agencies. Can the allocations to small or inconsequential agencies be included in a grouping, such as "other"? [Att. C, ¶ E.2]

Such a practice is permissible where, in fact, the agencies/activities are inconsequential and they receive no Federal awards. However, a narrative description must be provided listing all agencies/activities that have been included in the grouping, so that it can be verified that all operations of the government have been included in the base.

4-6 Attachment C, paragraph E.3.b. identifies the requirements for the submission of information to the cognizant agency concerning internal service funds (ISFs). What is the definition of an ISF? [Att. C, ¶ E.3.b(1)]

The definition is provided in generally accepted accounting principles, i.e., a fund used "to account for the financing of goods or services provided by one department or agency to other departments or agencies of a government or to other governments, on a cost-reimbursement basis." (*Codification of Standards of Governmental Accounting*, 1300.104. Governmental Accounting Standards Board.) Internal Service Funds (ISFs) would be separately recognized in the financial statements using the accrual basis of accounting. However, this section of A-87 covers more than ISFs for central service activities of a state or local government. It covers the submission requirements of all central service activities for which the state or local government uses a billing mechanism (formal or memo billing) to assign or allocate costs to other components of the respective government. This requirement applies whether or not the "billed" activity is established in the unit's financial statements as a true ISF under

generally accepted accounting principles.

4-7 Under a central service cost allocation plan (SWCAP/LOCAP), is the government required to submit documentation for internal service funds (ISFs) with operating budgets under \$5 million? [Att. C, ¶ E.3.b(1)]

Attachment C, paragraph E.3.b(1) specifies documentation requirements for internal services funds (ISFs) with operating budgets of \$5 million or more. It also states that the requirements may be modified, expanded, or reduced by the cognizant agency on a case-by-case basis. At a minimum, the government or component must submit a schedule for ISFs under \$5 million that reconciles the ISF Retained Earnings. Illustration 4-7 provides a sample schedule format for making such presentations. This schedule provides information that is essential for Federal review and approval of the ISFs and which is not included in the comprehensive annual financial report (CAFR) or other financial statements. In addition, the reconciliation determines an A-87 allowable balance on an on-going basis. Additional documentation may be requested on a case-by-case basis, depending, in part, on the dollar impact on Federal awards and when a detailed review of the ISF was last performed by the cognizant Federal agency.

4-8 Attachment C, paragraph E.3.b(1) requires the governmental unit to provide a description of the procedures (methodology) used to charge the costs of each service to the user, including how the billing rates are determined. How much detail is required on how billing rates are determined? [Att. C, ¶ E.3.b(1)]

Like any other aspect of the submission requirements, the governmental unit is required to submit sufficient documentation for the reviewer to make an informed judgement as to the acceptability of the basis used by the unit of government. Such documentation would include: (1) the items of expense making up the billed activity; (2) the specific data used to develop the billing rate(s) and how often they are updated; (3) justification as to why the method used is the most appropriate for the activity; (4) an identification of any users that are not billed, with assurance that their share of services are reflected in the base; (5) how often billings are compared to actual costs and usage; (6) how variances will be adjusted; and (7) any other information the cognizant agency requires to evaluate the reasonableness of the billing system.

4-9 Attachment C, paragraph E.3.b(2) of the May 4, 1995 revision to Circular A-87 requires that the expenses of the billed function be broken out by object cost categories. In the past, submissions were permitted where a break-out of salaries and wages was made, but a roll-up of all other costs was presented as one amount. Can this practice continue, supported with detailed, on-site accounting records, or must the plans be modified to include the detail? [Att. C, ¶ E.3.b(2)]

A listing of the items of expenses is required for each central service activity whether it is a billed or unbilled activity. In addition, as noted in the beginning of Attachment C, Section E, the documentation requirements can be reduced by the cognizant agency. For example, reduced documentation might be appropriate for a central service function which has little or no impact on Federal awards. Therefore, the initial plan should address the A-87 documentation requirement, unless the cognizant agency approves otherwise based on the

Federal effort, significance of "roll-up amount," and other factors.

4-10 Under what circumstances are working capital reserves permitted for internal service funds (ISFs) and how are they to be determined? [Att. C, ¶ G.2]

Attachment C, paragraph G.2 permits working capital reserves to allow ISFs sufficient cash to sustain operations between billing cycles. While the Circular authorizes reserves of up to 60-day cash needs, their allowability is not automatic. The following factors are to be considered when establishing reserves and determining whether they will be allowable.

- (1) Reserves are only allowable for enterprise funds and bona fide ISFs recognized in the government's comprehensive annual financial report (CAFR). Reserves are not allowable for activities funded through general revenue appropriations.
- (2) For each fund for which a reserve is determined necessary, the number of days of cash needs, up to 60 days, must be fully supported by a cash flow analysis reflecting billing cycles, revenue receipts, and allowable disbursements.
- (3) Semi-annual or annual payments are to be amortized in billing rates.
- (4) Reserves, for purposes of Federal recognition, may only include allowable cash disbursements. Depreciation, principal payments, and capital expenditures are not allowable. However, interest payments are allowable.
- (5) Self-insurance funds, including fringe benefits operating as such, are further subject to the provisions of Circular A-87, Attachment B, paragraph 25.
- (6) Pension funds are subject to Circular A-87, Attachment B, paragraph 11.
- (7) Allowability of reserves covering longer periods can be granted by the cognizant agency in extraordinary circumstances where such needs are fully documented and justified.

4-11 Earnings on ISF cash balances are to be treated as applicable credits. If a state co-mingles its funds, how is the amount of earnings for a single fund to be determined? [Att. C, G]

When known, actual earnings should be used. In the circumstances described above, earnings may be imputed by applying the government's, e.g., State Treasurer, Average Rate of Return on the average monthly balance for a given fund.

4-12 Attachment C, paragraph G.4 establishes four methods for adjusting internal service funds (billed central services) for profits or losses realized from operations. Alternative (b) allows credits to amounts charged to the individual programs. This method would only cover profits. If losses occur, why can't individual programs be debited? [Att. C, ¶ G.4]

Effectively, alternative (b) is correcting billed costs in the current year, whereas alternative (c) is carrying forward the profit/loss into the next open fiscal period. The failure of the Circular to note how losses are to be treated in alternative (b) is an editing error. For consistency purposes, both alternative (b) and (c) cover profit and loss situations. However, only one method can be used in a given fiscal year.

- 4-13 Attachment C, paragraph G.4 allows adjustments to allocated, unbilled central service costs ("Section I costs") as an option for adjusting a particular billed service ("Section II costs") if the amount of the adjustment does not exceed \$500,000. May this adjustment be made in the normal course of plan preparation or is prior Federal approval required?** [Att. C, ¶ G.4]

Prior Federal approval is not required by Circular A-87. It should be noted, however, that the \$500,000 threshold applies to the entire billing function and not to components of that function.

EXAMPLE: A data service facility typically has numerous cost centers for which it develops individual billing rates. The allocation method for adjusting over/under billings can only be used if the net, total adjustment for the data facility is less than \$500,000.

- 4-14 For adjustments exceeding \$500,000, Attachment C, paragraph G.4 presents three options. What criteria will be used to select the method of recovery?** [Att. C, ¶ G.4]

The primary concern would be the assurance that the Federal programs charged in a given year receive an equitable and appropriate adjustment for the over/under billings. Consideration must also be given to the makeup of the user community in future periods as well as the level of support they will require.

PART 5

Attachment D — Public Assistance Cost Allocation Plans

5.1 Highlights of New Section, Attachment D

The new Attachment D deals with Public Assistance Cost Allocation Plans (PACAPs) and incorporates longstanding HHS policies and procedures. The Attachment makes HHS's 45 CFR Part 95, Subpart E applicable to all Federal programs administered by a public assistance agency, e.g. the U.S. Department of Agriculture's (USDA) Food Stamp program.

5.2 Applicability of Regulations at 45 CFR Part 95, Subpart E

Federal programs that provide public assistance to individual citizens are often administered at the state level by large, complex, multi-functional agencies. The programs administered by these governmental organizations are predominately financed by the Department of Health and Human Services (HHS). HHS has long required cost allocation plans for those programs and codified rules for development, submission, approval, and use of these plans in 45 CFR Part 95, Subpart E. However, these rules only applied to HHS programs, although there are other Federal agencies whose assistance awards may be handled by the same state units. Accordingly, revised OMB Circular A-87 provides a means for coordinating and assuring consistency among the various Federal agencies. Attachment D of the revised Circular:

- describes the basic policy concerning public assistance cost allocation plans (PACAPs);
- reflects the salient features of 45 CFR Part 95; and
- extends requirements of 45 CFR Part 95 to all Federal agencies whose programs are administered by a state public assistance agency.

A public assistance cost allocation plan must be prepared, documented, and implemented by all state public assistance agencies. The plan and any amendments to it must be submitted to the appropriate field office of HHS' Division of Cost Allocation. HHS, as well as other affected Federal agencies, will review new plans or plan amendments. The other agencies will provide comments to HHS, which will in turn act as the cognizant agency on behalf of the others. HHS conducts any negotiations with the state agency and is responsible for notifying the agency about action taken on the plan or plan amendment.

Due to the nature of state public assistance agency operations, a public assistance cost allocation plan is required in lieu of an indirect cost rate proposal. A large percentage of agency operations consist of common or indirect costs: program-specific, first-tier cost centers are minimal. Typically, a considerable amount of the work performed involves determining and continuing to verify the eligibility of program beneficiaries. The persons who handle these tasks do so for multiple Federal and state programs. For

example, in determining the eligibility of a person for one program, the case worker may concurrently perform tasks related to another program. Or, the determination established for one program simultaneously determines eligibility for additional programs without any additional incremental effort.

The nature of the work performed at state public assistance agencies can result in complex costing issues that are unique to those agencies. However, the concepts and principles contained in Attachment D of the Circular can have applications for other state and local agencies that operate in a Federally funded environment where an indirect cost rate inadequately identifies cost of operations and greater precision is needed. An example might be a state health department which has county and municipal facilities that offer a variety of services that are partially or completely Federally funded. For example, local public health clinics typically operate clinics where they provide general health assessments, medical care, immunizations, health counseling, nutrition guidance, etc. Their funding, for a single, one-day clinic, could come from a variety of sources, including direct Federal grants from several agencies, e.g., well baby clinics (MCH/HHS), nutrition assistance (WIC/USDA), immunizations (PHS/HHS), primary or secondary cost reimbursement funding for health assessments (EPSDT/HCFA/HHS), and provider fees for services provided (Medicaid/HHS). Obviously, the potential for duplicate claims is great. The cost allocation procedures described in 45 CFR Part 95, Subpart E can assist in clarifying the appropriate burden to be borne by each Federal program.

Another example of the importance of these procedures involves the somewhat atypical organizational structures that have arisen in recent years at the state level. Through the formation of cabinet or "umbrella" type structures, public assistance programs may be operated by the same entity type that handles unemployment programs, job training, juvenile detention, and even the state prison system. Some of the programs may include those, such as certain block grants, that have been exempted from mandatory application of Circular A-87. All of these programs and activities must be included in the PACAP to ensure that they receive an equitable share of administrative and other indirect costs. While the level of detail to be included in the cost allocation plan for these other nonpublic assistance programs is less than that required for the public assistance programs, HHS will, in reviewing and approving the plans, be responsive to the expressed needs of those Federal agencies whose programs are included and who need to identify allowable and unallowable program activities and costs for their programs. Where an operating component within the umbrella agency is funded primarily from a single Federal agency, that Federal agency may be designated by the cognizant agency responsible for reviewing and approving that component of the plan.

Under Attachment D of Circular A-87, when a letter of approval or disapproval of a PACAP is transmitted to a state public assistance agency in accordance with 45 CFR Part 95, Subpart E, the letter **will** apply to all Federal agencies and programs. This policy is effective for plans and amendments submitted or prepared for a state's fiscal years beginning on or after September 1, 1995.

5.3 Submission and Documentation Requirements

State public assistance agencies are required to submit a cost allocation plan that describes the procedures used to identify, measure, and allocate all costs to each of the programs they operate. The plan must contain sufficient detailed information for Federal officials to reach an informed judgment about the correctness and fairness of the methods employed by the state. The submission must be sent to the appropriate field office of the Division of Cost Allocation, HHS, and should include the following

features:

- an organizational chart showing the placement of each unit whose costs are charged to the programs operated by the state agency;
- a listing of all Federal and all nonfederal programs performed, administered, or serviced by these organizational units;
- a description of the activities performed by each organizational unit and, when not self-explanatory, an explanation of the benefits provided to Federal programs;
- the procedures used to identify, measure, and allocate all costs to each benefiting program and activity (including those that may be subject to different rates of Federal financial participation);
- the estimated cost impact resulting from proposed changes to a previously approved plan (however, subsequent approval of the cost allocation plan does not constitute approval of the estimated costs for use in calculating claims for Federal financial participation);
- unless the costs are addressed in a state or local-wide cost allocation plan or an umbrella department cost allocation plan, a statement stipulating that wherever costs are claimed for services provided by a governmental agency outside the state agency, they will be supported by a written agreement that includes certain minimum features, including (1) the specific services being purchased, (2) the basis on which billing will be made by the provider agency, and (3) a stipulation that the billing will be based on the actual cost incurred;
- a cost allocation plan for local agencies, if public assistance programs are administered by local governments under a state- supervised system;
- a certification by a duly authorized official of the state that (1) information contained in the plan was prepared in accordance with Circular A-87, (2) the costs have been accorded consistent treatment in accordance with generally accepted accounting principles, (3) an adequate accounting and statistical system exists to support claims that will be made under the plan, and (4) the information provided in support of the cost allocation plan is accurate; and
- other information that may be necessary for HHS to establish the validity of the procedures used to identify, measure, and allocate costs to all programs being operated by the state agency.

(45 CFR § 95.507).

5.4 Amendments

A state must promptly amend the public assistance cost allocation plan and submit the amended plan to the appropriate field office of the Division of Cost Allocation, HHS, whenever any of the following events occur:

- the procedures shown in the existing plan have become outdated because

of organizational changes, changes in Federal law or regulation, or significant changes in program levels affecting the validity of approved cost allocation procedures;

- a material defect is discovered in the cost allocation plan by the Division of Cost Allocation field office or by the state;
- the state programmatic plan for public assistance programs is amended in a manner that affects the allocation of costs; or
- other changes occur which make the allocation basis or procedures in the plan invalid.

(45 CFR § 95.509).

Even if none of these types of changes has occurred, an annual statement, indicating that the existing plan is not outdated, must be submitted by the state to the HHS Division of Cost Allocation field office.

If an amendment is submitted and approved, its effective date will generally be the first day of the calendar quarter following the date of the event that made the amendment necessary. However, under certain conditions involving inequity, error, or impracticality, the date could be established either earlier or later.

5.5 Review and Approval of Plans

Within sixty (60) days of receipt of a proposed cost allocation plan or amendment, the Director of the HHS Division of Cost Allocation field office will notify the state that the submission is either specifically approved or disapproved, that modifications are needed in order for approval to be granted, or that additional information is needed to evaluate the submission. Also, if a determination cannot be made within the 60 day period, the field office will notify the state. If a plan submission is disapproved, the state will be notified accordingly, along with the reasons for the disapproval. Under 45 CFR Part 16, a state may appeal a disapproval of a plan submission so long as the appeal is postmarked no later than 30 days after receipt of the determination letter. (45 CFR § 16.7(a)).

5.6 Claims Under PACAPs

Any claims developed under approved cost allocation plans must be for allowable costs under OMB Circular A-87. Where unallowable costs have been claimed, they must be refunded to the Federal program that originally accepted them either by a cash refund, an offset against a subsequent claim (if authorized), or credits to the amounts charged to individual awards.

5.7 Questions and Answers on Attachment D

5-1 In the early 1960s the former Department of Health, Education, and Welfare (HEW) issued a document entitled "Handbook of Public Assistance Administration." Is this issuance still in effect, and if so, which Federal issuance takes precedence when sections of that handbook contradict the cost principles of Circular A-87, e.g., treatment of the cost of land? [Att. D, § A]

Under an Action Transmittal Notice of August 11, 1975, the former Social and

Rehabilitation Service of (then) HEW advised State agencies that, as published in the *Federal Register* on August 11, 1975, Parts I, II, and VI, and Supplements A, B, and C of the Handbook were revoked. Parts III, IV, and V were still in effect to the extent that they were not superseded by subsequent regulation or policy issuances. OMB Circular A-87 was issued to bring consistency to the manner in which Federal awarding agencies measured and recognized allowable administrative costs. Federal agencies are required by OMB to implement the Circular and abide by those rules unless OMB has granted a specific waiver to the agency for a rule(s) or the Circular is in conflict with a given statute. Therefore, if the Handbook conflicts with any section of A-87, Circular A-87 policy would apply unless the exceptions noted above exist.

- 5-2 45 CFR Part 95.507(b)(6) requires that a statement be submitted describing services provided by a governmental agency outside the state agency other than those provided through the state-wide cost allocation plan (SWCAP) or umbrella department cost allocation plan (CAP) costs. If this other agency is only a subrecipient of Federal monies from the state (or local) agency and the subrecipient proposes a cost allocation procedure, who is responsible for the review and approval of this plan? [Att. D, ¶ D]**

Review and approval of the plan used by the subrecipient governmental agency is the responsibility of the state agency. The Part 95 provision referenced above does not require Federal approval. It has been long-standing policy that the prime grantee is responsible for assuring that subawardees properly spend and account for flow-through Federal funds. Where the subrecipient has an indirect cost agreement or cost allocation plan approved by a Federal cognizant agency, costing and claims to the primary recipient agency should be made in accordance with that agreement (plan). The amounts claimed under these procedures are still subject to audit and to Federal awarding agency review of quarterly claims.

- 5-3 Attachment D, paragraph D.2 states that the effective date of the plan is "the first day of the quarter following the submission of the plan or amendment, unless another date is specifically approved by HHS." 45 CFR 95.515 states "[a]s a general rule, the effective date of a cost allocation amendment shall be the first day of the calendar quarter following the date of the event that required the amendment." The date may be earlier or later based on specific conditions. Is there an inconsistency between the two effective dates as currently stated? [Att. D, ¶ D.2]**

No. The state agency is required to promptly amend its cost allocation plan when one of several conditions occurs. Therefore, these dates should effectively be the same.

- 5-4 Attachment D, paragraph E.3 states "[i]f a dispute arises in negotiation of a plan or from a disallowance involving two or more funding agencies, the dispute shall be resolved in accordance with the appeals procedures set out in 45 CFR Part 75. Disputes involving only one funding agency will be resolved in accordance with the funding agency's appeal process." The wording implies that single funding issue disputes, whether it involves the negotiation of a plan or disallowance, will be resolved through the funding agency appeal process. 45 CFR Part 95, Subpart E requires use of the Part 75 appeal process for plan disapprovals, and splits responsibility for cross-cutting and single agency disallowance actions. Is this inconsistent with the**

revision to Circular A-87? [Att. D, ¶ E.3]

No. Disputes involving plan disapprovals are subject to 45 CFR Part 16 governing the Departmental Appeals Board Procedures. (Due to reorganization within HHS, Part 75 has been rescinded.) Single-funding agency disallowance actions are appealed through the applicable funding agency, unless the issue(s) involve cost accounting practices or policies. In such cases, the cognizant agency may determine that the appeal will be handled through its process.

- 5-5 Attachment D, paragraph E.1 provides for after-the-fact reviews to assure compliance with approved plans. The circular states that these reviews can be accomplished by the funding agency, single audits, or the cognizant audit agency. Does the A-87 language preclude the cognizant agency responsible for approval of the plan from performing compliance reviews? [Att. D, ¶ E.1]**

No. The term "funding agency," in this context, includes the cognizant agency responsible for negotiating the plan approval. Compliance reviews are part of the oversight function in the approval of the cost allocation plan (CAP).

PART 6

Attachment E — State and Local Indirect Cost Rate Proposals

6.1 Highlights of New Section, Attachment E

Attachment E has been added for state and local indirect (IDC) rate proposals. This Attachment is also a compendium of conventions, internal HHS policies and procedures, and portions of the former OASC-10. The Attachment provides definitions, submission requirements, how to develop a rate(s), documentation requirements, etc. for IDC rates issued to state and local agencies.

6.2 Acceptable Methodologies for Indirect Cost Allocation and Rate Determination

6.2.1 Types of Rates

Circular A-87 defines four possible types of indirect cost rates. However, two of these types, the provisional and the final, are actually two stages of one approach. The types of rates are listed below:

1. A **provisional** rate is a temporary rate, agreed to in advance, based on anticipated future costs. It is subject to retroactive adjustment at a future date after costs are known.
2. A **final** rate is established after the costs are known. It adjusts the provisional rate but is administratively burdensome. Underpayments resulting from application of the provisional rate are subject to availability of funds, while overpayments must be credited or returned.
3. A **fixed** rate is also agreed to in advance, based on an estimate of future costs, but it is not retroactively adjusted. Instead, the difference between estimated and actual costs is carried forward to future years.
4. A **predetermined** rate is agreed to in advance, based on an estimate of future costs, but is not subject to adjustment except under very unique circumstances. It is intended to be permanent and thereby reduce the administrative burden associated with indirect cost recovery. A predetermined rate may not be used for any governmental unit that does not submit its indirect cost rate proposals to a cognizant agency for negotiation, nor may it be used on Federal contracts. The 1995 revision of Circular A-87 encourages long-term use of predetermined rates over a period of two to four years where there is a high degree of assurance that the agreed-upon rate will not exceed one that would result if actual costs were determined.

6.2.2 Direct Cost Bases

The direct cost base is used to distribute indirect costs to individual Federal awards, i.e., an indirect cost rate must be applied to a direct cost base in order to determine the

amount of indirect costs. There are two basic types of direct cost bases: total direct salaries and wages (S&W), or modified total direct costs (MTDC). MTDC exclude "any extraordinary or distorting expenditures," usually capital expenditures, subawards, contracts, assistance payments (e.g., to beneficiaries), and provider payments. The direct cost base selected should result in each award bearing a fair share of indirect costs in reasonable relation to the benefits received from those indirect costs.

6.2.3 Simplified Method

There are two basic methods for calculating indirect cost rates—the simplified method and the multiple rate method. Where each of a recipient agency's major functions benefit from its indirect costs to approximately the same degree, the allocation of indirect costs may be accomplished under the simplified method. The steps involved in calculating a rate under the simplified method are shown below:

Steps Involved in Calculating a Rate Under the Simplified Method

1. Adjust indirect costs for the period by eliminating any costs directly reimbursed through a Federal award awarded specifically for that purpose. For example, if a construction grant was received, then no depreciation or use allowance should be included in the indirect cost pool. Likewise, remove any administrative salaries included in the pool that were funded as direct in a grant. The pool also must be adjusted for any A-87 unallowables and capital expenditures. Use allowances should be computed and added to the pool along with any CSCAP allocations.
2. Adjust direct costs by eliminating flow-through funds and capital expenditures. Compute and add use allowances.
3. Divide the total allowable indirect costs (net of applicable credits) by an equitable direct cost base, e.g. salaries and wages or modified total direct costs.

Illustration 6-1 illustrates the distribution of indirect costs of a state or local government department, the division/bureaus of the department, and the cost of central services provided to it. Under the simplified method shown in this illustration, indirect costs are identified at the division or bureau level, and are so indicated. This method may be used if the ratio of the indirect costs to direct salaries and wages (or other selected base) of each division or bureau reasonably approximates the ratio of the other divisions or is otherwise not inequitable to the Federal Government. If the indirect/direct ratio varies significantly between divisions or bureaus, the multiple rate method (Illustration 6-3) should be used.

Illustration 6-1

**Sample Indirect Cost Rate Proposal - Simplified Method
Department of Environmental Services
For the Fiscal Year Ended June 30, XXXX**

					<u>Direct Costs (c)</u>	
	<u>Total</u>	<u>Exclusions</u>	<u>Expenditures Not Allowable</u>	<u>Indirect Costs</u>	<u>Direct Salaries & Wages</u>	<u>Expenditures For All Other Purposes</u>
<i>Division/Bureau</i>	<i>(e)</i>	<i>(a)</i>	<i>(b)</i>	<i>(d)</i>		
Air Quality and Noise	\$ 438,338		\$ 36,820	\$ 47,480	\$ 206,320	\$147,718
Community Environmental Control	691,931		22,161	61,210	481,182	127,378
Water Quality Management	2,390,738	\$1,800,000	9,945	52,641	410,771	117,381
Solid Waste Disposal	1,153,057		106,210	96,847	643,782	306,218
Parks and Forests	<u>844,617</u>		<u>115,000</u>	<u>91,119</u>	<u>450,788</u>	<u>187,710</u>
Subtotal	\$5,518,681	\$1,800,000	\$290,136	\$349,297	\$2,192,843	\$886,405
<i>Departmental Indirect Costs</i>						
Office of the Director	\$ 122,610			\$122,610		
Financial Management	155,275			155,275		
Administrative Services	86,930			86,930		
Equipment Use	<u>16,800</u>			<u>16,800</u>		
Running Subtotal	\$5,900,296	\$1,800,000	\$290,136	\$730,912	\$2,192,843	\$886,405
<i>Services Furnished (But Not Billed)</i>						
<i>By Other Government Agencies (f)</i>						
Personnel	\$ 87,060			\$ 87,060		
Accounting	216,220			216,220		
Purchasing	22,211			22,211		
Audit	<u>12,210</u>			<u>12,210</u>		
Total	<u>\$6,237,997</u>	<u>\$1,800,000</u>	<u>\$290,136</u>	<u>\$1,068,613</u>	<u>\$2,192,843</u>	<u>\$886,405</u>

This is a sample. It is not intended to prescribe methods of charging costs.

Notes to Illustration 6-1

- (a) Under some Federal programs, funds (called "flow-through funds") are provided to a primary recipient and subsequently passed through to another organization which actually performs the program for which the funds are provided. There is no measurable involvement by the primary recipient in the expenditure of the funds. The primary recipient's involvement is generally limited to monitoring and oversight. This example illustrates such a situation. Because these funds, which are recorded as a cost in the records of the department, do not reflect the expenditure of resources, they are excluded from the computation. However, if the primary recipient does in fact incur significant costs administering the grant, then it should be assessed for its equitable share of indirect costs. This column is normally used by states only and not local governments.
- (b) Expenditures not allowable. This amount represents costs or capital expenditures and costs, whether direct or indirect, which are unallowable in accordance with the cost principles. Although a cost may be unallowable, if it either generated or benefitted from the indirect costs, it should be moved to the base (provided that it is salaries and wages in this example) and allocated its share of indirect costs.
- (c) Under the simplified method, a determination is made as to which activities are direct, illustrated under the heading Direct Costs, and which are indirect, illustrated under the heading Indirect Costs.
- (d) Once the determination of direct/indirect has been made, a ratio should be determined for each division/bureau as shown in the following calculation:

	Indirect	Direct	Salaries
<u>Division/Bureau</u>	<u>Costs</u>	<u>and Wages</u>	<u>Ratio</u>
Air Quality & Noise	\$47,480	\$206,320	23.01%
Community Environmental Control	\$61,210	\$481,182	12.72%
Water Quality Management	\$52,641	\$410,771	12.82%
Solid Waste Disposal	\$96,847	\$643,782	15.04%
Parks & Forests	\$91,119	\$450,788	20.21%

In this illustration, the dollar amounts of indirect costs differ significantly between division or bureau; however, when individually expressed as a percentage of direct salaries and wages, the differences are minor. Therefore, a single overall rate for the department may be computed by adding the departmental indirect costs and the costs incurred by other government agencies and allocating the indirect cost pool over a single base.

- (e) Total departmental costs. This amount should be reconciled to the financial statements or other supporting documentation included in the proposal.
- (f) Costs incurred by other government agencies. This amount must agree with the amounts shown on the central service cost allocation plan (see Illustration 4-4). In Illustration 6-1, costs of \$337,701 represent costs of central services allocated to the entire department. Governmentwide services that are billed directly to departments or to programs must also be documented in the cost allocation plan (See Illustration 4-5).

Illustration 6-2

Department of Environmental Services Sample Indirect Cost Rate Proposal - Simplified Method For the Fiscal Year Ended June 30, XXXX

<u>Total</u>	<u>Exclusions & Expenditures Not Allowable</u>	<u>Indirect Costs</u>	<u>Direct Salaries & Wages</u>	<u>Other Direct Expenditures</u>
<u>\$6,237,997</u>	<u>\$290,136</u>	<u>\$1,068,613</u> (A)	<u>\$2,192,843</u> (B)	<u>\$886,405</u>

(A) divided by (B) = $\frac{\$1,068,613}{\$2,192,843}$ = Indirect cost rate of 48.73% of direct salaries and wages, excluding fringe benefits.

Notes:

The totals from Illustration 6-1 are brought forward to this illustration. The indirect cost rate is expressed as a percentage resulting from the ratio of the allowable indirect costs (\$1,068,613) to the direct salaries and wages (\$2,192,843).

In this illustration, fringe benefits applicable to direct salaries and wages are treated as direct costs.

This is a sample. It is not intended to prescribe methods of charging costs.

6.2.4 Multiple Allocation Base Method

Where a recipient agency's indirect costs benefit its major functions in varying degrees, the multiple rate method is more appropriate.

Steps Involved in Calculating Rates Under the Multiple Rate Method

1. Classify departmental indirect costs into functional cost groupings (cost pools) which benefit divisions of the agency in significantly different proportions.
2. Select appropriate bases for distribution of each classified pool of indirect costs.
3. Distribute each classified pool to the benefitting division.
4. Calculate an indirect cost rate for each division of the agency by relating the total indirect costs allocated to that division to that unit's direct cost base.

Illustration 6-3 shows the distribution of indirect costs on a multiple allocation basis to each division or bureau within a department. This method results in more definitive costing and should be used when operating differences between divisions or bureaus result in material differences in the use of resources and in costs.

The computation recognizes the indirect costs of each division or bureau, department level administration, and the cost of services furnished by other government agencies and approved through the central service cost allocation plan. These costs are allocated to the divisions or bureaus on bases which most fairly reflect the extent to which they benefit from or generate the costs. For example, the costs of purchasing services is allocated on the number of purchase orders issued, while the costs of personnel administration is allocated on the number of employees serviced.

Indirect costs allocated from the department level and from the central service plan are added to the indirect costs incurred by each division or bureau to arrive at total indirect costs for each of the divisions or bureaus. A rate is developed for each division or bureau by relating its indirect costs to its salaries and wages or other selected base.

Illustration 6-3

Sample Indirect Cost Rate Proposal - Multiple Rate Method Department of Environmental Services For the Fiscal Year Ended June 30, XXXX

		Allocation Base (a)	Total Indirect Costs (b)	Services Furnished by Other Gov't Agencies				Departmental Costs (d)						
				Personnel	Accounting	Purchasing	Audit	Director	Financial Mgmt.	Admin. Services	Equipment	Total (f)		
<i>Services Furnished (But Not Billed) By Other Government Agencies (c)</i>														
Personnel	No. of Employees		\$ 87,060	(\$87,060)										
Accounting	No. of Employees (e)		216,220		(\$216,220)									
Purchasing	No. of Purchase Orders		22,211				(\$22,211)							
Audit	No. of Audit Hours		<u>12,210</u>					(\$12,210)						
Subtotal			\$ <u>337,701</u>											
<i>Departmental Indirect Costs</i>														
Director's Ofc.	Direct Salaries & Wages		\$ 122,610					(\$122,610)						
Financial Mgmt.	Transactions Processed		155,275						(\$155,275)					
Admin. Services	Direct Salaries & Wages		86,930							(\$86,930)				
Equipment Use	Uses of Equipment		<u>16,800</u>									(\$16,800)		
Subtotal			\$ <u>381,615</u>											
<i>Division/Bureau</i>														
Air Quality and Noise	\$		47,480	\$ 17,545	\$ 41,495	\$ 3,434	\$ 1,089	\$ 24,522	\$ 23,776	\$ 15,543	\$ 1,000	\$ 175,884		
Community Environmental Control			61,210	12,920	30,575	3,434	1,089	24,522	29,885	10,659	1,000	175,294		
Water Quality Management			52,641	11,997	28,394	2,289	1,089	24,522	37,273	10,659	6,000	174,864		
Solid Waste Disposal			96,847	36,935	87,362	11,456	6,777	24,522	46,423	29,488	6,000	345,810		
<u>Parks and Forests</u>			<u>91,119</u>	<u>7,663</u>	<u>28,394</u>	<u>1,598</u>	<u>2,166</u>	<u>24,522</u>	<u>17,918</u>	<u>20,551</u>	<u>2,800</u>	<u>196,761</u>		
Subtotal			\$ <u>349,297</u>											
Totals			<u>\$1,068,613</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>- 0 -</u>	<u>\$ 1,068,613</u>	

This is a sample. It is not intended to prescribe methods of charging costs.

Notes to Illustration 6-3

- (a) The allocation bases used were selected as reasonable and applicable under the circumstances. Other bases could be just as acceptable if they represented a fair measure of cost generation or cost benefit.
- (b) The costs in this column must be reconciled to official financial statements. In this illustration, it is assumed that all costs incurred are allowable and relevant in accordance with OMB Circular A-87. To the extent that unallowable or excludable costs are included therein, a separate column should be added to the schedule to show the amounts and adjustments made.
- (c) These are carried forward from the central service cost allocation plan shown in Illustration 4-4. The costs of services furnished (but not billed) by other government agencies, which are derived through the central service cost allocation plan, are allocated to each functional division or bureau. This allocation could be made more precise by allocating the costs to each departmental administrative function, e.g., to financial management, administrative services, etc., and to the divisions or bureaus. The indirect costs of each departmental administrative service, plus its allocated amount of central service costs, would then be allocated to the divisions or bureaus. If the result of such allocations would have a material effect on the rates computed, the more precise method should be used. In the example presented, the dollar effect is not sufficiently material to warrant this level of precision. In addition to the listed unbilled services, the department also received services from other organizations for which it is billed at rates approved through the central service cost allocation plan (See Illustration 4-5). Illustration 6-3 assumes that these billed costs are already recorded in the accounting records of the department and included in the column Total Indirect Costs, or are treated as a direct cost.
- (d) Departmental indirect costs are allocated to each division or bureau. As with services furnished by other government agencies, explained in Note (c) above, the allocation of certain departmental indirect costs, such as equipment use charges, could have been allocated to other departmental administrative functions, if the results of such allocation would have had a material effect on the rates to be computed. In the example presented, the dollar effect is not sufficiently material to warrant the additional allocations.
- (e) Accounting services rendered by other agencies are allocated to the divisions or bureaus on the basis of number of employees. In Illustration 6-3, the accounting services provided by the central service agency were

predominantly payroll services.

- (f)* The total indirect expenses developed for each division or bureau is carried forward to Illustration 6-4, where the relationship between the indirect expenses and direct salaries and wages of each division or bureau is used to develop indirect cost rates.

Illustration 6-4

Sample Indirect Cost Rate Proposal - Multiple Rate Method Department of Environmental Services For the Fiscal Year Ended June 30, XXXX

<u>Divisions/Bureaus</u>	<u>Indirect Costs</u>	<u>Direct Salaries and Wages</u>	<u>Indirect Cost Rates</u>
	(a)	(b)	(c)
Air Quality and Noise	\$ 169,560	\$ 206,320	82.18%
Community Environmental Control	169,200	481,182	35.16%
Water Quality Management	168,666	410,771	41.06%
Solid Waste Disposal	336,612	643,782	52.29%
Parks and Forests	<u>190,904</u>	<u>450,788</u>	<u>42.35%</u>
Total	<u>\$1,068,613</u>	<u>\$2,192,843</u>	

Notes:

- (a) The amounts in this column are from Illustration 6-3.
- (b) The amounts in this column are derived from, and must be reconciled to, the books and records of the department. Salaries and wages is the preferred base. However, other bases may be used where it results in a more equitable allocation of costs. Generally, the same base should be used for all divisions; however, if approved by the cognizant Federal agency, different bases may be used for one or more of the divisions.
- (c) The indirect cost rate for each division/bureau is computed by dividing the indirect costs for each division/bureau by the direct salaries and wages of that division/bureau.

$$\frac{\text{division/bureau indirect costs}}{\text{division/bureau direct S\&W}} = \text{indirect cost rates for division/bureau}$$

This is a sample. It is not intended to prescribe methods of charging costs.

6.3 Special Rates

Circular A-87 notes that there may be instances where a single indirect rate for all activities of a recipient department or agency may not be appropriate. Factors such as different physical locations for work, level of administrative support needed, organizational arrangements, and subaward practices, or a combination of these factors, may create the need for separate rates. It is not uncommon for these types of situations to result in a headquarters rate and multiple off-site rates.

In addition, some Federal programs, such as those funded by the Department of Education, place limitations on allowable indirect costs. In those instances, restricted rates are issued.

6.4 Submission and Documentation of Proposals

6.4.1 Documenting Indirect Cost Proposals

A cognizant agency may require additional data, depending on the circumstances, but each indirect cost proposal must include, at a minimum:

1. The rates proposed, including subsidiary work sheets and other relevant data, cross-referenced and reconciled to the financial data.
2. For allocated central service costs, the summary table included in the approved central service cost allocation plan, unless otherwise available to the funding agency. The summary schedule from the approved central service cost allocation plan is frequently needed because the Federal agency that is cognizant for a departmental indirect cost rate proposal may be different from the one that is cognizant for the central service plan for the overall governmental unit.
3. A copy of the financial data upon which the rate is based.
4. The approximate amount of direct base costs incurred under Federal awards, broken out between salaries and wages and other direct costs. The cognizant agency will use the breakdown between salaries and wages and other direct costs within the direct base costs to determine whether to establish the resulting indirect cost rate on the basis of salaries and wages or modified total direct costs.
5. A chart showing the organizational structure of the agency during the period for which the proposal applies, along with a functional statement(s) noting the duties and/or responsibilities of all units that comprise the agency. The organizational chart that is submitted with

the indirect cost rate proposal should be accompanied by a narrative statement. This statement should provide sufficient detail about the functions that are performed by component units to permit the proposal reviewer (cost negotiator) from the cognizant agency to differentiate levels of benefit provided and received within the organization.

6.4.2 Required Certifications

Indirect cost rates, whether submitted to a Federal cognizant agency or maintained on file by the governmental unit, must be certified by the governmental unit using the Certificate of Indirect Costs as set forth in Attachment E. The certificate must be signed on behalf of the governmental unit by an individual at a level no lower than chief financial officer of the governmental unit that submits the proposal or component covered by the proposal. (See also 2.9, Government Certification.)

6.5 Review, Negotiation, and Approval of Rates

OMB Circular A-87 places considerable discretion with the cognizant Federal agency assigned to particular recipients. It permits the cognizant agency to determine, within reasonable bounds, the level of detail that is appropriate to support a cost allocation plan and/or an indirect cost rate proposal. This discretion carries over to the review and approval process as well.

6.5.1 The Review Process

In general, the cognizant agency will follow certain basic steps for most submissions. Note: there is no hard and fast rule about the approach or tools used. Typical steps in the review process are shown below:

Steps in the Review Process

1. Review the submission for materiality, completeness, and reliability of supporting data, including audited financial statements.
2. Acknowledge receipt and request any needed additional information.
3. Review prior negotiation and audit experience; assess prior agreements and applicable conditions.
4. Assess the submission's general reliability and the governmental unit's financial condition.
5. Determine the extent to which coordination with other awarding agencies may be necessary.
6. Review the proposal for accuracy and determine whether it includes all activities and costs of the governmental entity.
7. Determine whether unallowable costs have been excluded and whether allocation methods and billing mechanisms are appropriate and properly designed.
8. Assess what the appropriate rate base (salaries and wages, modified total direct cost, etc.) should be for the resulting indirect cost rate and the extent to which any rate established should be subsequently adjusted.

6.5.2 Indirect Cost Rate Negotiations

Negotiations about submissions may be limited or extensive, based largely on the results of the review steps described above. In the case where, for any number of reasons, a rate cannot be negotiated, the Circular does permit unilateral action by a cognizant agency to establish a rate.

6.5.3 Features of a Typical Rate Agreement

Appendix 3 is an example of a contemporary rate agreement containing the salient features that are likely to appear in those issued by most cognizant agencies. Note: there is no standard governmentwide Federal form employed for the purpose of rate determination.

6.6 Applying an Approved Rate to Grants and Contracts

6.6.1 Establishing the Amount of Approved Indirect Costs in the Award Budget

Because Circular A-87 establishes a policy that Federal programs bear their fair share of costs recognized under the Circular, Federal awarding agencies are expected to recognize and use indirect cost rates approved by the cognizant agency for a particular recipient. This recognition and use usually

occurs at the time that an award is made. Awarding agency officials review direct cost proposals and applications to determine that anticipated costs included are necessary, reasonable, and allocable. Any proposed indirect costs are assessed according to whether or not an agreement exists with a cognizant agency. If one does, the awarding agency officials determine whether it will be fully recognized and to which object class categories of expenditure it will be properly applied. (Some Federal programs impose regulatory limits on the indirect percentage that will be allowed, e.g., HHS training grants that limit reimbursement to 8% of MTDC.)

If no agreement exists, awarding agencies should encourage recipients to obtain one. In the interim, agencies may only award funds for direct and allocated costs. The awarding agency should conduct a review of these costs to determine the propriety of any allocations. Agencies may not establish indirect cost rates unless they are the cognizant agency for the recipient.

6.6.2 Applying the Rate to the Direct Cost Base and Calculating Claims

Once the indirect cost rate is recognized within an award document, the governmental unit is permitted to apply that rate to the applicable base of the allowable direct costs incurred during award performance. Periodically the governmental unit is expected to submit a Financial Status Report (usually either Standard Form 269 or 269A) which summarizes total expenditures incurred under the award. It may claim indirect costs by multiplying its indirect cost rate by the direct cost elements to which the rate may be applied under the terms of the award. Thus, its total cost recovery for the applicable period is comprised of the allowable direct costs incurred plus the allowable, allocable indirect costs.

6.6.3 Effect of Rate Changes from One Fiscal Year to Another

Occasionally, a governmental unit will receive an award which it performs over a period that extends beyond the applicability of a single, approved indirect cost rate. This is likely when the award period does not correspond to the fiscal year of the governmental unit. In such a case, the recipient is expected to apply its rate(s) to expenditures incurred during the applicable fiscal year and to maintain consistent accounting treatment according to its normal procedures of expenditure recognition.

6.7 Record Retention

The Common Rule issued pursuant to OMB Circular A-102 covers most policies associated with records to be retained and/or disclosed by a governmental unit receiving Federal assistance funds. Section __.42 of that rule requires that all financial and programmatic records, supporting documents, statistical records, and other records of recipients and

subrecipients be retained. Section __.36 (i)(10) of the rule covers the record retention requirement for contractors under grants and their subcontractors.

Generally, records must be retained for three years from the submission date of the final financial report for that funding period. However, if any litigation, claim, negotiation, audit, or other action involving the records has been initiated before the three-year retention period has expired, the records must be retained until the action is completed and all issues which arise from it have been resolved, or until the end of the regular three-year period, whichever is later. (A-102 Common Rule, §__.42(b)(2)).

Section __.42(c)(4) of the Common Rule states that records associated with indirect cost rate proposals and cost allocation plans are included within the scope of the broader record retention requirement. Under that provision, "indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates)" are covered.

6.8 Audit

Audit of Federal awards is an aid to determining whether financial information is accurate and whether an award recipient has complied with terms and conditions that could have an effect on claims for costs incurred under the award. Under the Inspector General Act of 1978, as amended, the Inspector General of a Federal agency may audit or investigate any program, function, or activity administered by that agency. This potential for review extends to those organizations (including state, local, and Indian tribal governments) that are performing under awards made by the Federal agency. However, as a way to assure the best use of audit resources, the Act requires the Inspectors General to determine the extent to which they can rely on audit work performed by nonfederal auditors. This policy, combined with the fact that the Single Audit Act of 1984, as amended, requires recipients to arrange to have independent audits performed on Federal financial assistance awards that they receive, means that these nonfederal examinations are the principal means by which a governmental unit's compliance with Circular A-87 is determined. OMB is responsible for issuing implementing policies, procedures, and guidelines under the Act.

Applicable OMB guidance for auditors performing audits under the Single Audit Act identifies general and specific requirements against which the auditor is expected to test governmental unit compliance. Several of these requirements relate to policies contained in Circular A-87. Included within the general requirements are:

- allowable costs/cost principles;

- Federal financial reports; and
- administrative requirements.

Included in the specific requirements section of each listed Federal program are use and use restrictions and limitations, including matching and cost sharing, maintenance of effort, and earmarking requirements.

6.9 Disputes and Appeals

If a dispute arises concerning the application of provisions of Circular A-87, the method of resolving the issues raised and the party responsible for adjudicating them depend on the nature of the dispute. For example, if a dispute arises concerning the submission, negotiation, or establishment of a cost allocation plan or indirect cost rate, the procedures of the cognizant agency govern. On the other hand, if a dispute arises about questioned or disallowed costs associated with a particular Federal award, the procedures of the awarding agency govern.

Costs incurred by a governmental unit may be questioned during conduct of an audit or through some other form of monitoring or awarding agency oversight. They may be questioned because of an alleged violation of applicable policy, because they are not supported by adequate documentation at the time of the audit, or because they are deemed to be unreasonable or unnecessary by the responsible auditor or other party examining them. The determination as to whether costs will be disallowed is made by an awarding agency official authorized to issue decisions on behalf of the agency. Depending upon awarding agency procedures, there may be several layers of review within the agency before such a decision is considered final.

Each Federal agency has its own regulations and policies governing administrative appeals of agency determinations, and many agencies either do not allow appeals, or limit them to very specific areas. The costs of prosecuting these claims may not be allowable under agency interpretations of the A-87 prohibition on pursuing claims against the Federal Government.

6.10 Questions and Answers on Attachment E

6-1 The definition of an "Indirect Cost Rate Proposal" in Attachment E, paragraph B.1 is "the documentation prepared by a government unit...to substantiate its request for the establishment of an indirect cost rate." Based on the definition of "Government Unit" in Attachment A, paragraph B.13, can a state submit a state-wide indirect cost rate proposal in lieu of a state-wide cost allocation plan (SWCAP)? [Att. E, ¶ B.1]

No. A state, if it wishes to identify and claim all administrative and support costs provided to its components (operating agencies) which receive Federal awards, must prepare and submit a state-wide central service plan (SWCAP) in accordance with Attachment C of A-87. That Attachment, at paragraph D.1, stipulates that "[e]ach State will submit a plan...." The use of the term "governmental unit" in the above referenced Attachment E is viewed as an editing error where "government component" was intended. The only government units that have been permitted to develop indirect cost rates in lieu of cost allocation plans for centralized government support activities are local units of government. This is permitted under Attachment C, paragraph D.3.

6-2 A review of Attachment E, paragraph D.1.b raises several questions:

- (a) When reference is made to "governmental unit," is it actually referring to a "government component" for which an indirect cost (IDC) rate is required?**
- (b) It notes that OMB will publish lists of governmental units and their Federal cognizant agencies. Governmental units not listed on OMB's published lists of governmental units and their cognizant agencies must prepare an IDC rate proposal, and keep it on record unless the cognizant Federal agency requires that it be submitted for review and negotiation. In the past, a state component was required to negotiate an IDC rate if it wanted to recover IDCs. Has this policy changed?**
- (c) Based on the comments in (b) above, is a local government that is assigned a cognizant Federal agency required to submit its IDC proposal for review and negotiation? [Att. E, ¶ D.1.b]**

The responses to each of the above are as follows:

- (a)** This is an editing error and "component" was intended.
- (b)** There has been no change. If a state component wishes to recover its IDC, it must develop, submit, and negotiate an IDC rate or cost allocation plan with the cognizant Federal agency.

- (c) Appendix 2 identifies "major" local governments that have been assigned a cognizant Federal agency. At the present time local governments are not required to submit proposals for approval unless the cognizant Federal agency requires submission.

6-3 Attachment E, paragraph F.3 discusses IDC CAPs for a governmental unit not by the use of a rate but through a narrative plan similar to public assistance plans. By definition a "governmental unit" is the entire state or local government, not a component thereof. Is this the intent of this section? [Att. E, ¶ F.3]

No. This was an editorial error. In some cases, because of the nature of its operations, a component or agency may find it necessary to develop a cost allocation plan rather than an indirect cost rate. See Q&A 2-18, Part 2 of this guide, for the criteria to be used when determining when a cost allocation plan should be used in lieu of an indirect cost rate.

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REFERENCE

OMB Circular A-87 references many documents. In addition, various bodies have issued documents which should be used in conjunction with Circular A-87 to ensure compliance with standards of accountability in Federal funds management. Pertinent documents are listed below, along with their issue date¹ and source.

This document:	as issued:	may be obtained from:
OMB Circular A-87, <i>Cost Principles for State, Local and Indian Tribal Governments</i>	May 17, 1995	Executive Office of the President (EOP) Publications Office, 202-395-7332 or via the Internet, http://www.whitehouse.gov/WH/EOP/omb OR the <i>Federal Register</i> ² at 60 FR 26484
OMB Circular A-102, <i>Grants and Cooperative Agreements with State and Local Governments</i> , and the accompanying Common Rule, <i>Uniform Administrative Requirements for Grants and Cooperative Agreement to State and Local Governments</i>	October 14, 1994 (Circular); March 11, 1988 (Common Rule), as revised April 19, 1995	Executive Office of the President (EOP) Publications Office, 202-395-7332 or via the Internet, http://www.whitehouse.gov/WH/EOP/omb OR the <i>Federal Register</i> , at 59 FR 52224, 53 FR 8087, 60 FR 19638
OMB Circular A-110, <i>Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations</i> , and the attached Common Rule	November 29, 1993	Executive Office of the President (EOP) Publications Office, 202-395-7332 or via the Internet, http://www.whitehouse.gov/WH/EOP/omb OR the <i>Federal Register</i> , at 58 FR 62992
The Federal Acquisition Streamlining Act of 1994 (FASA) (PL 103-355)	October 13, 1994	<i>Statutes at large</i> ³

¹ All issue dates listed in the Reference section of this guide are issue dates as of publication, 4/8/97.

² Back issues of the *Federal Register* are generally available in paper or on microfiche at law libraries and larger public libraries. The 1995 and later issues (volumes 60 and up) are available via GPO Access on the Internet, <http://www.access.gpo.gov>.

³ Available at law libraries and some larger public libraries. Statutes are filed by public law number.

This document:	as issued:	may be obtained from:
OMB Circular A-128, <i>Audits of State and Local Governments</i> ⁴	April 12, 1985	Executive Office of the President (EOP) Publications Office, 202-395-7332, also via fax-on-demand, 202-395-9068 ⁵ , or via the Internet, http://www.whitehouse.gov/WH/EOP/omb
OMB Circular A-133, <i>Audits of Institutions of Higher Education and Other Non-Profit Institutions</i>	April 30, 1996	Executive Office of the President (EOP) Publications Office, 202-395-7332, also via fax-on-demand, 202-395-9068, or via the Internet, http://www.whitehouse.gov/WH/EOP/omb OR the <i>Federal Register</i> , at 61 FR 19134, via the Internet, http://www.access.gpo.gov
Compliance Supplement for Single Audits of State and Local Governments	September 1990	US Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328, 202-512-1800
Questions and Answers on the Single Audit Process of OMB Circular A-128, "Single Audits of State and Local Governments"	November 13, 1987	The <i>Federal Register</i> , at 52 FR 43712
Common Rule on New Restrictions on Lobbying	February 6, 1990	The <i>Federal Register</i> , at 55 FR 6736
Lobbying Disclosure Act of 1995 (PL 104-65)	December 1995	<i>Statutes at Large</i> OR via the Internet through GPO Access, http://www.access.gpo.gov
OMB Circular A-21, <i>Cost Principles for Educational Institutions</i>	May 8, 1996	Executive Office of the President (EOP) Publications Office, 202-395-7332, or via the Internet, http://www.whitehouse.gov/WH/EOP/omb OR the <i>Federal Register</i> , at 61 FR 20880, via the Internet, http://www.access.gpo.gov
OMB Circular A-122, <i>Cost Principles for Nonprofit Organizations</i>	July 8, 1980, and revised April 27, 1984, May 19, 1987, and October 6, 1995	Executive Office of the President (EOP) Publications Office, 202-395-7332 OR the <i>Federal Register</i> , at 45 FR 46022, 49 FR 18260, 52 FR 19788, 60 FR 52516

⁴ This Circular is scheduled to be rescinded; state and local government audits will be covered by a revised OMB Circular A-133.

⁵ Only circulars of less than 50 pages are available from OMB's fax-on-demand service.

This document:	as issued:	may be obtained from:
45 CFR Part 95, General Administration – Grant Programs (Public Assistance and Medical Assistance)	October 1, 1996	US Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328, 202- 512-1800

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APPENDIX 1

OMB CIRCULAR A-87

Cost Principles for State, Local, and Indian Tribal Governments

APPENDIX 2

Cognizant Agency Assignments

APPENDIX 3

Sample Indirect Cost Rate Agreement

STATE AND LOCAL RATE AGREEMENT

DATE: July 3, 1996

DEPARTMENT/AGENCY:
State of X Family & Social
Services Administration

FILING REF.: The preceding
Agreement was dated
May 10, 1994

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES*

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED.(PREDETERMINED)

<u>TYPE</u>	<u>EFFECTIVE PERIOD</u>		<u>RATE(%)</u>	<u>LOCATIONS</u>	<u>APPLICABLE TO</u>
	<u>FROM</u>	<u>TO</u>			
FINAL	07/01/93	06/30/94	14.4	* All	Division of DARS
PROV.	07/01/94	UNTIL AMENDED	14.4	* All	Division of DARS
FINAL	07/01/93	06/30/94	4.4	** All	Div of Mental Health
PROV.	07/01/94	UNTIL AMENDED	4.4	** All	Div of Mental Health

****BASE:**

Total direct costs of the Division of Mental Health, exclusive of items of equipment, alterations and renovations, State Hospital expenses, and subawards and flow-through funds.

***BASE:**

Direct salaries and wages, including all fringe benefits for the Division of Disabilities, Aging, and Rehabilitative Services (DARS), exclusive of the Developmental Disabilities Centers.

NOTE: The State claims use allowance on capital expenditures over \$1,000.

DEPARTMENT/AGENCY:
State of X Family & Social Services Administration

AGREEMENT DATE: July 3, 1996

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

Fringe benefits are specifically identified to each employee and are charged individually as direct costs. The directly claimed fringe benefits are listed in the Special Remarks Section of this Agreement.

TREATMENT OF PAID ABSENCES:

Vacation, holiday, sick leave pay, and other paid absences are included in salaries and wages and are claimed on grants, contracts, and other agreements as part of the normal cost for salaries and wages. Separate claims for the costs of these paid absences are not made.

FRINGE BENEFITS:

FICA

Retirement

Group Insurance

Worker's Compensation

Unemployment Insurance

ORGANIZATION:
State of X Family & Social Services Administration

AGREEMENT DATE: July 3, 1996

SECTION III: GENERAL

A. LIMITATIONS:

The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract, or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its indirect cost pool as finally accepted: such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as indirect costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING CHANGES:

This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from indirect to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES:

If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES:

The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-87, and should be applied to grants, contracts, and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

E. OTHER:

If any Federal contract, grant, or other agreement is reimbursing indirect costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected programs, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of indirect costs allocable to these programs.

BY THE DEPARTMENT/AGENCY:

State of X Family & Social Services Administration
(DEPARTMENT/AGENCY)

(SIGNATURE)

(NAME)

(TITLE)

(DATE)

BY THE COGNIZANT AGENCY
ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES
(AGENCY)

(SIGNATURE)

(NAME)

DIRECTOR, DIVISION OF COST ALLOCATION
(TITLE)

July 3, 1996
(DATE) 5629

HHS REPRESENTATIVE: _____

Telephone: _____

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Guidelines for States Participating in the Pipeline Safety Program

Appendix O

APPENDIX O
PHMSA State Pipeline Safety Grants
Guidance for Indirect Cost Recovery
Revised December 2023

Summary

The purpose of this appendix is to guide all pipeline safety grant programs as to the establishment of an indirect cost rate or other options to collect indirect costs. This replaces any previously issued guidance.

Summary of Topics

- ***Overview of 2 CFR 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards***
- ***What are an Indirect Cost Rate and Indirect Cost Proposal?***
- ***What do State Programs need to do?***
- ***Where should programs go for guidance?***

Overview of 2 CFR 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

2 CFR 200 is the Federal Government Guidance on Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards. This codified regulation provides a government-wide framework for grants management. 2 CFR 200 supersedes and streamlines the requirements from any previously applicable requirements under 2 CFR 225 and any previous OMB Circulars A-87 and OMB Circular A-133, which applied to pipeline safety grants.

In determining whether costs are allowable or not follow these basic guidelines:

- Necessary and reasonable
- Allocable
- Authorized under state or local laws
- Not restricted by PHMSA policy
- Not otherwise restricted by statute
- All activities are charged uniformly
- Consistent treatment
- In accordance with GAAP
- Not included as a cost of another federal award
- Net of all applicable credits
- Adequately document

What is an Indirect Cost Rate and Indirect Cost Rate Proposal?

Indirect Cost Rate

An indirect cost rate is a device for determining equitably the proportion of indirect costs for each program. An indirect cost rate assists a grantee to obtain the full cost of operating a grant or a program, not just the more easily identifiable “direct cost”.

An indirect cost rate is the ratio (expressed as a percentage) of the indirect cost to a direct cost base. Indirect costs may be recovered only to the extent that direct costs were incurred. To determine the reimbursable amount for indirect costs, the indirect cost rate is applied to the amount of direct costs expended, NOT to the total grant award. The direct cost base can vary from state to state but each is determined in accordance with 2 CFR 200.

Per 2 CFR 200 – Appendix VII, “indirect costs include (a) the indirect costs originating in each department or agency of the governmental unit carrying out Federal awards and (b) the costs of central governmental services distributed through the central service cost allocation plan (as described in Attachment V to Part 200) and not otherwise treated as direct costs”.

Indirect costs are normally charged to federal awards by the use of an indirect cost rate. A separate indirect cost rate(s) is usually developed for each department or agency of the governmental unit claiming indirect costs under federal awards. In addition to Appendix VII of 2 CFR 200, guidelines and illustrations of indirect cost proposals are provided in a brochure published by the Department of Health and Human Services entitled “A Guide for State and Local Government Agencies: Cost Principles and Procedures for Establishing Cost Allocation Plans and Indirect Cost Rates for Grants and Contracts with the Federal Government”. This is also known as ASMB C-10 and is located in the State Guidelines as Appendix N.

Indirect Cost Rate Proposal

An indirect cost rate proposal is the documentation prepared by a governmental unit or subdivision thereof to substantiate its request for the establishment of an indirect cost rate. All pipeline safety programs desiring to claim indirect costs in their grant reimbursement must prepare an indirect cost rate proposal., The proposal and related documentation must be retained for audit in accordance to record retention requirements.

Proposal requirements include the following:

- Identification of costs considered to be indirect
- Identification of costs used as the direct costs to assist in setting the rate
- Rate(s) Development Schedules
- Copies of Financial Data
- Organizational Charts
- Certification of the rate by an authorized official

Indirect Cost Rate Types

The indirect cost rate type is determined between the cognizant agency and the grantee.

Descriptions of the differing rates are as follows:

- "Predetermined rate" means an indirect cost rate, applicable to a specified current or future period, usually the governmental unit's fiscal year. This rate is based on an estimate of the costs to be incurred during the period. Except under very unusual circumstances, a predetermined rate is not subject to adjustment. (Because of legal constraints, predetermined rates are not permitted for Federal contracts; they may, however, be used for grants or cooperative agreements.) Predetermined rates may not be used by governmental units that have not submitted and negotiated the rate with the cognizant agency. Given the potential advantages offered by this procedure, negotiation of predetermined rates for indirect costs for a period of two to four years should be the norm in those situations where the cost experience and other pertinent facts available are deemed sufficient to enable the parties involved to reach an informed judgment as to the probable level of indirect costs during the ensuing accounting periods.
- "Fixed rate" means an indirect cost rate that has the same characteristics as a predetermined rate, except that the difference between the estimated costs and the actual, allowable costs of the period covered by the rate is carried forward as an adjustment to the rate computation of a subsequent period.
- "Provisional rate" means a temporary indirect cost rate applicable to a specified period which is used for funding, interim reimbursement, and reporting indirect costs on Federal awards pending the establishment of a "final" rate for that period.

- "Final rate" means an indirect cost rate applicable to a specified past period which is based on the actual allowable costs of the period. A final audited rate is not subject to adjustment.
- "De Minimis rate" means a rate of 10% of modified total direct costs (MTDC) and may be used indefinitely without having a negotiated indirect rate. See 2 CFR 200.414.

Indirect Cost Rate Cap

There is a program implemented cap on indirect costs of 20% of total direct costs submitted for reimbursement. Due to federal funding limitations, and to substantially fund the direct costs of all programs, this cap is implemented and consistent with previous program policy. An analysis shows the negative impact on the future ability to fund essential pipeline program direct costs of all programs due to the excessive indirect costs collected by a small number of participating programs.

What do State Programs need to do?

Who will approve the indirect cost proposal?

The "Cognizant" federal agency is responsible for indirect cost proposals developed under 2 CFR 200 for each grant program. This agency is typically the federal agency from which the state agency receives the majority of its federal funding. In most cases, this agency is PHMSA, and all indirect cost plans shall be submitted to Rex Evans via email at rex.evans@dot.gov. PHMSA/DOT will likely be the cognizant agent for most programs that have not previously secured an indirect cost rate, but it is recommended that each program consult its state grant office for initial assistance.

What will each program need?

All state programs will need to have either an approved indirect cost rate agreement from their cognizant agent if other than PHMSA, an accepted indirect cost plan submitted to PHMSA, or they may unconditionally collect the de minimis rate of 10% of MTDC as noted above. PHMSA reserves the right to negotiate any proposal submitted where PHMSA serves as the cognizant agent.

When is an indirect cost plan developed?

Indirect cost proposals should be developed within six months after the close of the governmental unit's fiscal year unless an exception is approved by the cognizant federal agency. (See Appendix VII of 2 CFR 200 for guidance)

When PHMSA is the cognizant agency, when should plans be submitted?

Updated indirect cost plans should be submitted by December 31 to rex.evans@dot.gov.

Does the program have to have an “Indirect Cost Rate Agreement”?

No. If a state chooses, no plan or agreement is necessary and may collect up to a maximum of 10% of MTDC.

Is there a cap on the amount of indirect costs a program can recover?

Yes, per the program implemented policy as described above, there is a limitation of 20% of direct program costs that can be submitted for reimbursement in the pipeline safety grant program.

Where should programs go for guidance?

1. Your agency financial personnel and state grant office should be the first place you seek guidance
2. See 2 CFR 200 and ASMB C-10
3. PHMSA State Programs Contact:
Rex Evans – rex.evans@dot.gov
217-801-8014

Guidelines for States Participating in the Pipeline Safety Program

Appendix P



U. S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

**PHMSA Office of Pipeline Safety Procedure to Monitor, Evaluate, and Reject a State Program's
Certification**

Effective Date: April 2012

I. Purpose

The following procedure outlines the process by which the Secretary of Transportation (Secretary), and PHMSA as the designee, may monitor, evaluate, and reject a state program's certification and therefore assume *intrastate* regulatory, inspection, and enforcement responsibilities, from a state under an annual certification. The Secretary may enter into a certification agreement with a state such that the state assumes regulatory oversight responsibility for intrastate facilities within that state. The certification requires that the state successfully meet several requirements, further discussed in this document.

II. Secretary's Authority to Monitor State Programs

After a state becomes certified to regulate its intrastate facilities, the Secretary may monitor a safety program to ensure that the program complies with the certification. PHMSA's Office of Pipeline Safety (OPS) monitors the performance of the state agencies participating in the pipeline safety program through PHMSA's State Programs Division.

PHMSA has broad statutory authority to regulate pipeline safety. If PHMSA determines that the state is not satisfactorily complying with the certification requirements, then PHMSA may reject the certification, assert United States Government jurisdiction, or take other appropriate action to achieve adequate oversight. PHMSA may adopt policies and rules implementing its statutory authority to reject a state's certification

***III. Establishment of Administrative Process and Procedures for Unsatisfactory
Compliance with Certification Requirements***

The following includes the administrative process and procedures PHMSA will follow if a state is found to have such deficiencies in its pipeline safety program that it is not satisfactorily complying with the certification requirements and the statute. Such a finding is a prerequisite before PHMSA may initiate a proceeding to reject a state's certification. In determining a state program's inadequacies, PHMSA may also evaluate a state's overall pipeline safety program, as well as evaluate past specific state oversight activities and enforcement actions. This document also includes the established administrative process and procedures and other remedies available to a state for contesting a notice alleging it failed to satisfactorily comply with the certification, should the state elect to do so.

IV. Considerations and alternatives before PHMSA rejects a state's certification

Before rejecting a state certification, PHMSA's Associate Administrator, OPS, may take other appropriate action to achieve adequate compliance with the certification, which may include:

- A. The Director of State Programs may issue a letter to the State Senior Official responsible for the pipeline safety program identifying the state's deficiencies and warning the state to make certain improvements or take other actions necessary to maintain the state's certification with PHMSA.
- B. PHMSA may notify the state in writing of the proposed action(s) to reject, suspend, or modify a state's certificate and provide that the matter may be resolved once PHMSA verifies that the evidence submitted by the state demonstrates completion of the following:
 - 1. corrected the deficiencies,
 - 2. complied with the required corrective action(s), or
 - 3. a written agreement to correct the deficiencies within the time specified by PHMSA; or on or before the end of the suspension period.
- C. After giving the state an opportunity to respond, PHMSA may:
 - 1. temporarily suspend the state's certificate, if PHMSA determined that the deficiency can be corrected within a reasonable amount of time;
 - 2. allow states, deemed to have failed to satisfactorily comply with the certification requirements, the opportunity to enhance their programs and to demonstrate their adequacy through periodic reviews; or
 - 3. convert a state certification to a 49 U.S.C. § 60106 agreement, which reduces the state's pipeline safety responsibility.
- D. A state may give up its certificate prior to a final action by PHMSA to reject the state's certificate. The state may do this by sending a certified letter of intent to relinquish all pipeline safety responsibilities to the Associate Administrator, OPS. The letter should include a brief explanation with a description of any outstanding or active inspections and enforcement activities, and include a statement that the state understands and agrees that by relinquishing the certification PHMSA will assume responsibility for intrastate pipeline safety.
- E. PHMSA may take steps to reject a state's certification if the state failed to demonstrate that it made improvements or took other actions required by PHMSA to maintain the state's certification.

V. PHMSA's rejection of a state's certification

When PHMSA finds that a state has such deficiencies in its pipeline safety program that it is not satisfactorily complying with the certification requirements, then PHMSA may initiate

action to reject a state's certification. PHMSA must document the basis for an allegation that a state failed to satisfactorily comply with the certification requirements.

VI. Unsatisfactory Compliance Elements

Below are illustrative examples of nonconformance. A state program may be considered unsatisfactory if the state engages in one or more of these (as circumstances warrant):

- A. Substantially failed to conform to the requirements detailed in its certification or the statute when the state:
 - Failed to have regulatory jurisdiction over the standards and practices prescribed by the certification and statute,
 - Failed consistently to take enforcement or corrective action after finding significant violations of pipeline safety laws and regulation,
 - Failed to adopt regulations at least as stringent as the minimum Federal regulations,
 - Failed to provide adequate oversight through ways that include inspections conducted by State employees that meet the qualifications prescribed by the statute,
 - Failed to encourage and promote the establishment of a damage prevention program to prevent excavation damage to pipelines, to which the certification applies, subjecting persons who violate the program requirements to civil penalties and other enforcement actions substantially the same as prescribed by the statute,
 - Failed to provide for the enforcement of record maintenance, reporting, and inspection substantially the same as provided in the statute, or
- B. Failed to provide for the enforcement of safety standards under a state law by injunctive relief and civil penalties substantially the same as provided in the statute.
- C. Has been unable to have the majority of inspectors successfully complete requisite pipeline safety training conducted by PHMSA.
- D. Engaged in any behavior that gives PHMSA reason to believe the state has not satisfactorily complied with the certification requirements or statute.
- E. Performance indicators, such as incident rates in combination with corrective actions, indicate the state is not satisfactorily meeting the intent of the safety oversight program.

VII. Adjudication Process and Procedures: Notice of Intent to Reject a State's Certification/Show Cause Order

When PHMSA determines that a state has such deficiencies in its pipeline safety program that it is not satisfactorily complying with the certification requirements, PHMSA must notify the state of its intent to reject the state's certification and provide an opportunity for a hearing before taking final action. PHMSA's Associate Administrator, OPS, may initiate the proceedings by serving Notice on the State with an order to show cause why the state's certificate should not be rejected. The Notice must include the basis for each allegation that a state failed to satisfactorily comply with the certification requirements. When Notice is given, the state bears the burden of proof that it is enforcing satisfactorily compliance with the prescribed standards. The Notice shall provide an opportunity for the state to appear at a hearing to show cause why PHMSA should not reject its certificate or to show cause why it has not completed any required action(s) identified in written correspondence from PHMSA.

The show cause order shall provide:

- ❖ a time and place for the hearing and shall be served upon the state to give evidence upon the matter specified therein
- ❖ contain a statement(s) of the matters or allegations with respect to which PHMSA is inquiring;
- ❖ notify the state they bear the burden of proof for enforcing satisfactorily compliance with the prescribed standards
- ❖ notice and opportunity for the state to respond to any allegation(s) that it has not satisfactorily enforced compliance with safety standards in accordance with 49 U.S.C. Chapter 60101 *et seq.*
- ❖ PHMSA may dismiss a Notice to show cause before issuing a final order based on evidence that the state has taken action to address the alleged deficiencies
- ❖ the state appear no less than twenty business days after the receipt of such order, except where the safety of life, environment or property is involved, PHMSA may provide in the order for a shorter period of time to appear
- ❖ an extension of time may be granted upon a written request timely submitted by the state demonstrating good cause for an extension
- ❖ notice and opportunity to be represented by counsel at the hearing.
- ❖ notice and opportunity for the state to present witnesses, and submit any relevant explanations, information and material during a hearing.
- ❖ an opportunity to present evidence on any allegation(s)
- ❖ PHMSA to make publicly available all notices, findings and determinations.
- ❖ an opportunity for the state to petition for reconsideration of the final determination[process to be further defined]

PHMSA shall make a final written determination, including the reasons for the decision. PHMSA will notify the state of its final determination, including a brief statement of the reason(s) why the state's certificate should or should not be rejected, or whether other appropriate action may be taken.

VIII. Adverse Action

Any adverse action taken by PHMSA against a state may impact the state's grant funding.

IX. Reinstatement of State Certification

A decertified State may apply for certification to PHMSA and must provide supporting documentation that the state meets certification requirements.

- A. A state applying for reinstatement must provide evidence of compliance with all certification requirements, at least 30 days prior to the next grant application/certification opportunity.
- B. PHMSA will respond to such requests and perform an adequacy review in a timely manner.
- C. PHMSA may not consider an untimely application for reinstatement or an application that failed to include all evidence of compliance at least 30 days prior to the next grant application/certification opportunity.
- D. PHMSA may grant a request to reinstate a state's certification upon such showing by the state that it has improved its pipeline safety program to an adequate level.

Relevant Contacts

Office of Pipeline Safety - Zach Barrett, Director of State Programs

Alan Mayberry, Deputy AA Policy & Programs

Office of Chief Counsel – Deputy Chief Counsel

Chief Counsel

Guidelines for States Participating in the Pipeline Safety Program

Appendix Q

Revised December 2024

STATE PERFORMANCE CRITERIA

(Gas)

1. RATING FROM STATE EVALUATION (50 PERCENT OF SCORE)

2. SELECTED INFORMATION FROM STATE PROGRESS REPORT/AGREEMENT (50 PERCENT OF SCORE)

A. Gas Programs - Extent of Intrastate Safety Jurisdiction (12 Points)

(Progress Report Attachment 1)

N = Number of operator types over which state has jurisdiction

M = Number of operator types located in state

60105 State: N/M x 12

60106 State: N/M x 12 x .5

Distribution

1. Private
2. Municipal
3. Master Meter
4. LP Gas
5. LNG Plants

Transmission

6. Intrastate

Other

7. Gathering Lines (jurisdictional)
8. Offshore Facilities (state waters)

B. Inspector Qualifications (8 POINTS)

(Progress Report Attachment 7, 7a)

- 8 - Highest percentage of inspectors in categories I and II (Highest percentage of inspectors (50% or greater) are in categories I and II combined)
- 4 - Highest percentage of inspectors in categories I, II and III (If percentage of categories I and II combined are less than 50% but percentage of inspectors in categories I, II and III combined are 50% or greater)
- 0 - Highest percentage of inspectors in categories III, IV and V (If categories I, II and III combined are below 50%.)

C. Number of Inspection Person-Days and Allocation of Effort (11 POINTS)

(Progress Report Attachment 2)

Inspection Person-Days (9 points) –

- Did state meet total minimum number of required Person-Days? (Actual Person-Days are verified on Attachment 2 and required minimum Person-Days are communicated to each program)
 - o ***Calculation = Total Actual Person-Days/Total Required Person-Days***

9 - Meets or exceeds the recommended number of inspection person-days.

7 - Comes within 10 percent of meeting the recommended number of inspection Person-days (achieved 90 percent or above of recommended number).

5 - Comes within 25 percent of meeting the recommended number of inspection person-days (achieved 75 percent or above of recommended number).

3 - Meets less than 75 percent but at least 50 percent of the recommended number of inspection person-days (achieved 50 to 75 percent of recommended number).

0 - Meets less than 50 percent of recommended number of inspection person-days (achieved under 50 percent of recommended number).

Allocation of Effort (2 points) –

- Did state meet minimum ***Allocation of Effort*** – each pipeline inspector must devote a minimum of 85 inspection person-days to pipeline compliance activities each calendar year. (See Chapter 4.2 of State Guidelines)
 - o ***Calculation = Total Actual Person-Days (Attachment 2) / Total Actual Person-Years (Attachment 7)*** - Must be greater than > 85.

2- Meets or exceeds Allocation of Effort per Person-Year (>85).

0 - Does not meet Allocation of Effort per Person-Year (<85).

D. State Adoption of Maximum Civil Penalty Requirement (4 POINTS)

(Progress Report Attachment 8, Section I, Item 1)

- 4 - Adopted \$100,000/day; up to \$1,000,000
- 2 - Taking steps to adopts (has filed draft legislation)
- 0 - Not Adopted

Note: "If the state has already lost all four points for neglecting to implement appropriate civil penalties, no partial points will be awarded until the requirement is met".

E. State Adoption of Applicable Federal Regulations (8 POINTS)

(Progress Report Attachment 8, Section I, Items 2, 3, 4, 5, and 6)

- 8 - Adopted within 24 months of effective date (or two general sessions of the state legislature, whichever is longer).
- 5 - Taking steps to adopt (has filed draft legislation).
- 3 - Adopted all regulations within required time frame except one -- where continuing opposition has blocked adoption and state is not presently attempting to adopt.
- 0 - Not Adopted within 36 months of effective date.

F. One Call System Minimum Requirements under Part 198 (4 POINTS)

(Progress Report Attachment 8 Section III)

- 0.5 - Mandatory coverage of areas having pipeline facilities
- 0.5 - Qualification for operation of one-call system
- 0.5 - Mandatory excavator notification of one-call center
- 0.5 - State determination whether calls to center are toll free
- 0.5 - Mandatory intrastate pipeline operator participation
- 0.5 - Mandatory operator response to notification
- 0.5 - Mandatory notification of excavators/public
- 0.5 - Civil penalties/injunctive relief substantially same as DOT

G. State Attendance at NAPS Regional National Meetings* (3 POINTS)

(Progress Report Attachment 8, Section III)

- 3 - Attended full time (lead rep or alternate pipeline program staff)
- 1 - Attended less than full time
- 0 - No one attended

* Waiver of meeting attendance must be granted by Director of State Programs

H. Penalty Points

- 2 - State CY Progress Report not received at PHMSA HQ by due date
- 4 - points assigned if over 1 month late

I. Penalty Points – State Damage Prevention Adequacy Determination (49 CFR Part 198.53)

- 1 – State Damage Prevention program deemed inadequate >5 years of finding.
- 2 – State Damage Prevention program deemed inadequate >6 years of finding.
- 3 – State Damage Prevention program deemed inadequate >7 years of finding.
- 4 – State Damage Prevention program deemed inadequate >8 years of finding.

STATE PERFORMANCE CRITERIA (Hazardous Liquid)

J. RATING FROM STATE EVALUATION (50 PERCENT OF SCORE)

II. SELECTED INFORMATION FROM STATE PROGRESS REPORT/AGREEMENT (50 PERCENT OF SCORE)

A. Hazardous Liquid Programs - Extent of Intrastate Safety Jurisdiction (12 Points) (Progress Report Attachment 1)

N = Number of operator types over which state has jurisdiction

M = Number of operator types located in state

60105 State: $N/M \times 12$

60106 State: $N/M \times 12 \times .5$

1. Petroleum and Petroleum Products
2. Anhydrous Ammonia
3. Carbon Dioxide

B. Inspector Qualifications (8 POINTS) (Progress Report Attachment 7, 7a)

- 8 - Highest percentage of inspectors in categories I and II (Highest percentage of inspectors (50% or greater) are in categories I and II combined)
- 4 - Highest percentage of inspectors in categories I, II and III (If percentage of categories I and II combined are less than 50% but percentage of inspectors in categories I, II and III combined are 50% or greater)
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(Progress Report Attachment 2)

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 - o **Calculation = Total Actual Person-Days/Total Required Person-Days**
- 9 - Meets or exceeds the recommended number of inspection person-days.
- 7 - Comes within 10 percent of meeting the recommended number of inspection Person-days (achieved 90 percent or above of recommended number).
- 5 - Comes within 25 percent of meeting the recommended number of inspection person-days (achieved 75 percent or above of recommended number).
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- 2 - Meets or exceeds Allocation of Effort per Person-Year (>85).
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E. State Adoption of Applicable Federal Regulations (8 POINTS)

(Progress Report Attachment 8, Section I, Items 2, 3, 4, 5, and 6)

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- 5 - Taking steps to adopt (has filed draft legislation).
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- 4 – State Damage Prevention program deemed inadequate >8 years of finding.

Guidelines for States Participating in the Pipeline Safety Program

Appendix R



National Transportation Safety Board

Washington, D.C. 20594

Pipeline Accident Brief

Accident No.:	DCA-99-MP-004
Type of System:	Natural gas service line
Type of Accident:	Rupture, explosion, and fire
Location:	Bridgeport, Alabama
Date and Time:	January 22, 1999, 10:02 a.m. CST
Owner/Operator:	Utilities Board of the City of Bridgeport
Property Damage and Losses:	\$1.4 million
Fatalities:	3
Injuries:	6
Material Released:	Natural gas
Pressure:	35 psig
Type of Failure:	Excavation damage
Component Affected:	¾-inch steel gas service line

The Accident

On January 22, 1999, while digging a trench behind a building at 406 Alabama Avenue, a backhoe operator damaged a ¾-inch steel natural gas service line and a 1-inch water service line. This resulted in two leaks in the natural gas service line, which was operated at 35 psig. One leak occurred where the backhoe bucket had contacted and pulled the natural gas service line. (See figure 1.) The other was a physical separation of the gas service line at an underground joint near the meter, which was close to the building. Gas migrated into the building at 406 Alabama Avenue, where it ignited about 10:02 a.m. An explosion followed, destroying three buildings: 404, 406, and 408 Alabama Avenue (see figure 2). Other buildings within a two-block area of the explosion sustained significant damage. Three fatalities, five serious injuries,¹ and one minor injury resulted from this accident.

¹ According to the Jackson County Coroner, on March 23, 2000, 14 months and 1 day after the accident, one of the seriously injured persons died as a result of injuries sustained in the explosion. In accordance with 49 *Code of Federal Regulations* (CFR) 830.2, his injuries continue to be classified as "serious" for reporting purposes. Title 49 CFR 830.2 defines fatal injury as "any injury which results in death *within 30 days* of the accident."

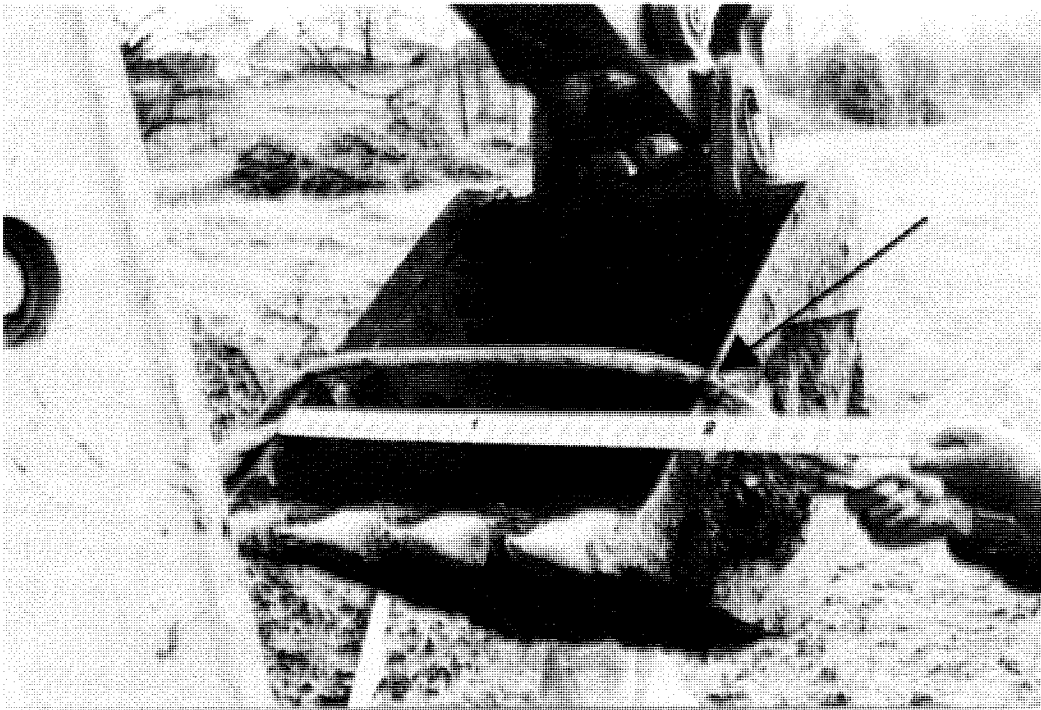


Figure 1. Damaged section of the gas service line to 406 Alabama Avenue. (Arrow shows leak location. Note how the bowed area corresponds with the width of a backhoe bucket.)



Figure 2. Damage to 404, 406, and 408 Alabama Avenue

Preaccident Events

The owner of R&B Construction (R&B) told investigators that the owner of 408 Alabama Avenue had hired R&B to dig a trench from an electric pole behind 404 Alabama Avenue to his building for an underground electric service cable. (See figure 3.) The owner of R&B told investigators that he had not planned beforehand to dig the trench to 408 Alabama Avenue on the morning of the accident and that he did not call the Alabama Line Location Center, Inc.² However, when a part-time employee, who had operated a backhoe for R&B in the past, arrived at the R&B office the morning of January 22 looking for work, the owner of R&B decided to have the employee dig the trench that day.

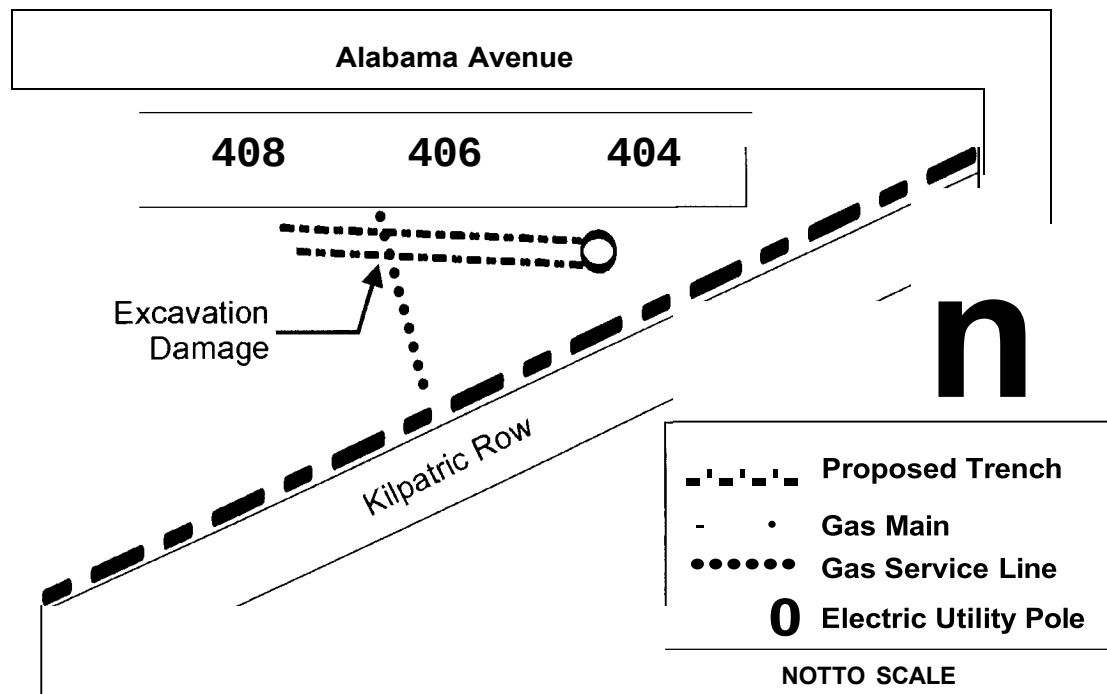


Figure 3. Schematic of accident area

The owner of R&B was a full-time employee of the Utilities Board of the City of Bridgeport (Utilities Board) at the time of the accident.³ He and a Utilities Board coworker, who was the acting supervisor of the Utilities Board field personnel on the morning of the accident, told Safety Board investigators that on the way to work that morning, they located and marked the gas and water service lines for the trenching

² Since the accident, the Alabama Line Location Center has been redesignated Alabama One Call.

³ The Utilities Board owns and operates Bridgeport's water and natural gas distribution systems.

activity. The owner of R&B told investigators that blue paint was used to mark both service lines because that was the only paint that they had.⁴ Upon their arrival the day after the explosion, Safety Board investigators could not find any blue or other line markings on the ground at the accident scene. Representatives from the Alabama Public Service Commission and the Alabama State Fire Marshals Office also did not observe any markings on the ground when they arrived at the accident scene within hours of the explosion.

The owner of R&B and the acting supervisor left the excavation site about 8:15 a.m. to go to the Utilities Board shop. They told investigators that, before they left, they had asked the owner of 408 Alabama Avenue to watch the backhoe operator. The R&B backhoe operator arrived at the excavation site some time after 8:15 a.m. While digging the trench, the backhoe operator damaged the underground gas and water service lines to 406 Alabama Avenue, resulting in leaks in the water and gas service lines. About 9:15 a.m., the owner of 408 Alabama Avenue went to the Utilities Board office at 513 Alabama Avenue and reported the excavation damage. He then returned to the excavation site. The General Manager of the Utilities Board said the owner of 408 Alabama Avenue reported that the water line and possibly the gas line were damaged.

The Utilities Board paged its field personnel between 9:18 and 9:22 a.m. Shortly afterward, five Utilities Board employees responded to the excavation site from three locations to locate and repair the leaks. One of the Utilities Board employees told Safety Board investigators that upon his arrival at the accident scene, the R&B backhoe operator showed him where he had wrapped black tape over the leak in the gas service line. In addition, he and other Utilities Board employees noticed that water was running on the ground. They could hear the hissing of leaking gas and smell a strong natural gas odor in the general area.

The Utilities Board employee who was the acting supervisor turned the water off so that field personnel could excavate and locate the leak. The acting supervisor could see a portion of the pulled gas service line above ground and said that he suspected that the gas service line was severed at some point. Though the acting supervisor could hear the gas blowing and see the gas bubbling from the water in the excavated ditch, he did not know the direction in which the gas was blowing. He told investigators that he "was hoping" that the line was pulled off at the main and that the gas was blowing up into the air. He added that he believed the leak was routine and the situation was safe. The Utilities Board employees did not check for gas migrating underground or accumulating in buildings and did not stop the flow of gas. After the acting supervisor turned off the water, a Utilities Board employee started digging to remove water and soil from the trench with a backhoe. By this time, the owner of R&B, because he was a Utilities Board employee and was paged, had arrived at the excavation site.

⁴ The Superintendent of the Utilities Board told Safety Board investigators that the Utilities Board uses yellow paint to mark gas lines and blue paint to mark water lines.

Shortly after the Utilities Board backhoe operator started digging, the building at 406 Alabama Avenue exploded. The owner of 408 Alabama Avenue, the R&B backhoe operator, and a Utilities Board employee received fatal injuries. Five other people, including a bystander, received serious injuries, and one person received a minor injury.

The Alabama State Fire Marshals Office determined that the likely source of ignition for the accumulated natural gas was a gas-fired heater at 406 Alabama Avenue, which had an active pilot light at the time of explosion.⁵ The Superintendent of the Utilities Board estimated that within 5 to 10 minutes after the explosion he had closed two valves on the 4-inch natural gas main feeding the natural gas to the broken service line.

R&B Construction

R&B is a small construction company that employs part-time employees. At the time of the accident, it did not have employee qualification and training records or written procedures for excavating near underground utility lines.

Recognizing that damages to underground facilities are usually preventable, and most frequently occur due to a breakdown in the damage prevention process, Government and industry have been working to identify and validate existing best practices for preventing damage to underground facilities. The resulting *Common Ground* study of one-call systems and damage prevention best practices⁶ discusses, among other best practices, the need to "call before you dig." The study recommends, "Unless otherwise specified in state law, the excavator calls the one-call center at least two working days and no more than ten working days prior to beginning excavation."⁷ It also recommends that an excavator observe a "tolerance zone" that includes the width of the facility plus 18 inches on either side and asks that excavators exercise reasonable care when excavating within the tolerance zone to protect the underground facilities.

⁵ Although the gas line had separated underground, the compacted earth surrounding the line would have provided a path that allowed continued gas flow sufficient to have fueled the pilot light.

⁶ *Common Ground: Study of One-Call Systems and Damage Prevention Best Practices*, U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety, Washington, D.C., August 1999. The *Common Ground* study, as authorized by the *Transportation Equity Act for the 21st Century* (TEA 21), was prepared by more than 160 individuals representing a wide range of interests, organizations, and viewpoints on preventing damage to underground utilities. A nonprofit organization, the Common Ground Alliance, has been formed to implement the best practices discussed in the *Common Ground* study.

⁷ Alabama State law is similar to this recommendation.

Bridgeport Utilities Board Procedures for Responding to Pipeline Emergencies

The Utilities Board's written emergency procedures in effect at the time of the January 22, 1999, accident instruct service personnel to " ... evaluate the extent of the emergency, request assistance as needed, and inform the manager if necessary." The procedures further direct service personnel to:

Evacuate and secure the area if necessary. Actions should be directed towards protecting people *first* and then property.

... If, in the opinion of the person in charge, the emergency is so severe that immediate shutdown is imperative, he may do so without clearance from the Manager.

However, the procedures do not instruct employees responding to a reported leak to consider the possibility of multiple leaks, check for gas accumulation in nearby buildings, and, if necessary, to take steps to promptly stop the flow of gas.

During its annual inspections of the Utilities Board, the Alabama Public Service Commission did not identify any deficiencies in the Utility Board's emergency procedures. Since the accident, the emergency procedures have been changed only to update the names, addresses, and phone numbers of contact persons and employees.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the accident was the failure of **R&B** Construction to establish and follow safe procedures for excavation activities, resulting in damage to a ¾-inch natural gas service line, and the failure of the Utilities Board of the City of Bridgeport to provide appropriate emergency response to the resulting natural gas leak.

Adopted: November 28, 2000



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: December 15, 2000

In reply refer to: P-00-20 and -21

Honorable Kelley S. Coyner
Administrator
Research and Special Programs Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

On January 22, 1999, while digging a trench behind a building at 406 Alabama Avenue, a backhoe operator damaged a 3/4-inch steel natural gas service line and 1-inch water service line, both of which were underground. This resulted in two leaks in the natural gas service line, which was operated at 35 psig. One leak occurred where the backhoe bucket had contacted and pulled the natural gas service line. The other was a physical separation of the gas service line at an underground joint near the meter, which was close to the building. Gas migrated into the building at 406 Alabama Avenue, where it ignited about 10:02 a.m. An explosion¹ followed, destroying three buildings: 404, 406, and 408 Alabama Avenue. Other buildings within a two-block area of the explosion were significantly damaged. Three fatalities, five serious injuries,² and one minor injury resulted from this accident.

The National Transportation Safety Board determined that the probable cause of the accident was the failure of **R&B Construction (R&B)** to establish and follow safe procedures for excavation activities, resulting in damage to a 3/4-inch gas service line, and the failure of the Utilities Board of the City of Bridgeport (Utilities Board) to provide appropriate emergency response to the subsequent natural gas leak.

The Utilities Board paged its field personnel shortly after the leak was reported, between 9:18 and 9:22 a.m. Shortly afterward, five Utilities Board employees responded to the excavation site from three locations to locate and repair the leaks. One of the Utilities Board employees told Safety Board investigators that upon his arrival at the accident scene, the R&B backhoe operator showed him where he had wrapped black tape over the leak in the gas service line. In addition, he and other Utilities Board employees noticed that water was running on the

¹ For additional information, read Pipeline Accident *Brief-Natural Gas Pipeline Rupture, Explosion, and Fire, Bridgeport, Alabama, January 22, 1999* (NTSB/PAB-00/01).

² According to the Jackson County Coroner, on March 23, 2000, 14 months and 1 day after the accident, one of the seriously injured persons died as a result of injuries sustained in the explosion. In accordance with 49 *Code of Federal Regulations* (CFR) 830.2, his injuries continue to be classified as "serious" for reporting purposes. 49 CFR 830.2 defines fatal injury as "any injury which results in death *within 30 days* of the accident."

ground. They could hear the hissing of leaking gas and smell a strong natural gas odor in the general area.

The Utilities Board employee who was the acting supervisor turned the water off so that field personnel could excavate and locate the leak. The acting supervisor could see a portion of the pulled gas service line above ground and said that he suspected that the gas service line was severed at some point. Though the acting supervisor could hear the gas blowing and see the gas bubbling from the water in the excavated ditch, he did not know the direction in which the gas was blowing. He told investigators that he "was hoping" that the line was pulled off at the main and that the gas was blowing up into the air. He added that he believed the leak was routine and the situation was safe. The Utilities Board employees did not check for gas migrating underground or accumulating in buildings and did not stop the flow of gas. After the acting supervisor turned off the water, a Utilities Board employee started digging to remove water and soil from the trench with a backhoe.

Shortly after the Utilities Board backhoe operator started digging, the building at 406 Alabama Avenue exploded. The Alabama State Fire Marshals Office determined that the likely source of ignition for the accumulated natural gas was a gas-fired heater at 406 Alabama Avenue, which had an active pilot light at the time of the explosion.³ The Superintendent of the Utilities Board estimated that within 5 to 10 minutes after the explosion he had closed two valves on the 4-inch natural gas main feeding the natural gas to the broken service line.

The Utilities Board's written emergency procedures in effect at the time of the January 22, 1999, accident instruct service personnel to " ... evaluate the extent of the emergency, request assistance as needed, and inform the manager if necessary." The procedures further direct service personnel to:

Evacuate and secure the area if necessary. Actions should be directed towards protecting people first and then property.

... If, in the opinion of the person in charge, the emergency is so severe that immediate shutdown is imperative, he may do so without clearance from the Manager.

However, the procedures do not instruct employees responding to a reported leak to consider the possibility of multiple leaks, check for gas accumulation in nearby buildings, and, if necessary, to take steps to promptly stop the flow of gas.

During its annual inspections of the Utilities Board, the Alabama Public Service Commission did not identify any deficiencies in the Utility Board's emergency procedures. Since the accident, the emergency procedures have been changed only to update the names, addresses, and phone numbers of contact persons and employees.

³ Although the gas line had separated underground, the compacted earth surrounding the line would have provided a path that allowed continued gas flow sufficient to have fueled the pilot light.

The Safety Board made recommendations on July 18, 2000,⁴ to RSPA, the Occupational Safety and Health Administration, and five utility trade organizations about raising the awareness of utility workers to call 911 or other local emergency number immediately if damage results in a gas leak. The Safety Board concludes the Bridgeport accident illustrates that pipeline operators may also need improved procedures to inform utility workers about the dangers of multiple leaks and of the underground migration of gas from excavation sites into nearby buildings. The Safety Board understands that RSPA is now revising the audit forms used to evaluate the State utility commissions to include such procedures. To ensure that procedures for responding to gas leaks are appropriately reviewed, the Safety Board recommends that the Research and Special Programs Administration:

Inform natural gas pipeline operators of the circumstances of the January 22, 1999, accident in Bridgeport, Alabama. Further, advise operators to review their emergency plans and procedures for responding to gas pipeline emergencies and modify them as necessary. The review should determine whether the procedures prompt the appropriate actions for gas leaks caused by excavation damage near buildings and whether the procedures adequately address the possibility of multiple leaks and the underground migration of gas into nearby buildings. (P-00-20)

Evaluate, during annual inspections of utilities, the adequacy of operator emergency plans and written procedures for responding to gas pipeline emergencies, paying particular attention to procedures that address the possible migration of gas from excavation sites into nearby buildings. If warranted, require that operators modify the procedures. (P-00-21)

The Safety Board also issued safety recommendations to the Alabama Public Service Commission, Alabama One Call, the Utilities Board of the City of Bridgeport, and R&B Construction. Please refer to Safety Recommendations P-00-20 and -21 in your reply. If you need additional information, you may call (202) 314-6170.

Acting Chairman HALL and Members HAMMERSCHMIDT, GOGLIA, BLACK, and CARMODY concurred in these recommendations.

Original Signed

By: Jim Hall
Acting Chairman

⁴ For additional information, read Pipeline Accident Report Natural Gas Pipeline Rupture and Subsequent Explosion in St. Cloud, Minnesota, December 11, 1998(NTSB/PAR-00/01).

Advisory Bulletin ADB-01-02

May 16, 2001

[Notices][Page 28027]

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

Pipeline Safety: Emergency Plans and Procedures for Responding to Multiple Gas Leaks and Migration of Gas Into Buildings

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice; issuance of an advisory bulletin.

SUMMARY: The Office of Pipeline Safety (OPS) is issuing this advisory to owners and operators of gas pipeline distribution systems. Owners and operators should review their emergency plans and procedures to determine whether the procedures prompt the appropriate actions for gas leaks caused by excavation damage near buildings, and whether the procedures adequately address the possibility of multiple leaks and the underground migration of gas into nearby buildings.

FOR FURTHER INFORMATION CONTACT: Marvin Fell, (202) 366-6205, or by e-mail, marvin.fell@rspa.dot.gov. This document can be viewed at the OPS home page at <http://ops.dot.gov>.

SUPPLEMENTARY INFORMATION:

I. Background

On January 22, 1999, while excavating a trench behind a building in the downtown area of Bridgeport, Alabama, a backhoe operator damaged a natural gas service line. This resulted in two leaks on the natural gas service line, which was operating at a pressure of 35 pounds per square inch (psig). One leak occurred where the backhoe bucket contacted the gas service line and pulled it aboveground. Although the second leak was not visible, the ensuing investigation revealed that the natural gas service line was separated at an underground joint near the gas meter, and close to a building. As a result, natural gas migrated into the building. The gas ignited, destroying three downtown buildings in a two square block area. The incident resulted in four fatalities and five injuries.

The National Transportation Safety Board (NTSB) investigated this incident and determined that the probable cause of the accident was (1) the failure of the construction contractor to establish and follow safe procedures for excavation activities, resulting in damage to the 3/4-inch steel natural gas service line and (2) the failure of the operator to provide appropriate emergency response to the subsequent natural gas leak.

The operator's written emergency procedures in effect at the time of the accident instructed service

personnel to"* * * evaluate the extent of the emergency, request assistance as needed, and to inform the manager if necessary." However, the procedures did not instruct employees responding to a reported leak to consider the possibility of multiple leaks, check for gas accumulation in nearby buildings, and, if necessary, take steps to promptly stop the flow of gas.

II. Advisory Bulletin (ADB-01-02)

To: Owners and Operators of Gas Distribution Systems.

Subject: Emergency Plans and Procedures for Responding to Multiple
Gas Leaks and Migration of Gas into Buildings

Purpose: To advise owners and operators of gas distribution pipeline systems to review their emergency plans and procedures to determine whether the procedures prompt the appropriate actions for gas

leaks caused by excavation damage near buildings, and whether the procedures adequately address the possibility of multiple leaks and the underground migration of gas into nearby buildings.

Advisory: Owners and operators of gas distribution systems should ensure that their emergency plans and procedures require employees who respond to gas leaks to consider the possibility of multiple leaks, to check for gas accumulation in nearby buildings, and, if necessary, to take steps to promptly stop the flow of gas. These procedures should be communicated to both employee and contractor personnel who are responsible for emergency response to pipeline incidents.

Issued in Washington, DC on May 16, 2001.

Jeffrey D. Wiese,

Manager, Program Development, Office of Pipeline Safety.

[FR Doc. 01-12717 Filed 5-18-01; 8:45 am]

BILLING CODE 4910-60-P

**NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20594**

Pipeline Accident Brief No. DCA90FP001

System Type:	Distribution	6AUG 1991
Accident Type:	Explosion and Fire	
Location:	421-423 North Fifth Street Allentown, Pennsylvania	
Date:	August 29, 1990	
Time:	0513 local daylight time	
Owner/Operator:	UGI Corporation (UGI)	
Property Damage:	\$300,000	
Injuries:	1 Fatal 9 Nonfatal	
Material Released:	Natural Gas	
Pressure:	0.32 psig. (9 inches water column)	
Type Failure:	Overstress	
Component Affected:	Cast-Iron Main	

Description of the Accident

A. natural gas explosion and fire destroyed two row houses at 421-423 North Fifth Street and damaged two adjacent houses and three parked cars in Allentown, Pennsylvania. Two of the injured were fire fighters,

Three hours before the accident, a police officer advised the Allentown after-hours dispatcher that water was leaking through pavement cracks in front of 421 North Fifth Street. The officer said that he believed that repairs could be deferred until the next day. Minutes after 5 a.m., a North Fifth Street resident notified the city of a gas odor in the area of 421 North Fifth Street and at 5:09 p.m., police and fire personnel arrived at the location. Four minutes later, the explosion occurred. Fire fighters and police evacuated residents from houses in the danger zone, and to eliminate potential gas leaks from piping in adjacent residences, they entered houses to close the gas valves at inside meter sets. When UGI employees arrived at 5:30 a.m., they began searching for leaking gas and discovered that several gas valves had not been turned off. They then shut off gas to the residences at the key-operated curb valves and then at meters where valves had not previously been closed. The UGI employees then continued their search for the source of the gas leak and discovered a broken cast-iron main beneath the street.

Investigation disclosed that water leaking from a cracked 6-inch cast-iron municipal water main had eroded the soil foundation beneath a 4-inch cast-iron UGI gas main. The gas main subsequently cracked due soil loads from above, releasing natural gas beneath the pavement. The gas migrated

through the soil and into the basement of 423 North Fifth Street, where it was ignited, exploded, and burned. (

Excavation after the accident revealed that both the 6-inch cast-iron municipal water main and the 4-inch cast-iron UGI gas pipeline had cracked circumferentially. Sections of each of the pipelines were sent to the Safety Board's laboratory for metallurgical analysis. Analysis revealed that both mains contained areas of significant graphitic corrosion that weakened them. The failure of the gas pipe was inevitable even had the water not eroded its soil foundation because one area of the gas pipe wall was fully graphitized.

Numerous factors, individually and/or synergistic ly, have contributed to the integrity reduction and failure of Allentown, Pennsylvania's cast-iron gas and water mains, most of which were installed in the late 1800s and early 1900s. These include: leaks from storm and sewer lines, water migrating or percolating through the soil, karst development, sinkholes, graphitization, shifting and cracking pavement, increased traffic load, and overburden stress.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the natural gas explosion and subsequent fire, involving the overstress fracture of an undermined and weakened segment of cast-iron gas main, was the failure of the UGI Corporation to adequately monitor the condition of its gas system and to timely replace cast-iron segments weakened by graphitic corrosion.

Recommendations

As a result of its investigation, the National Transportation Safety Board made the following recommendations:

--to the Research and Special Programs Administration:

Require each gas operator to implement a program, based on factors such as age, pipe diameter, operating pressure, soil corrosiveness, existing graphitic damage, leak history, burial depth, and external loading, to identify and replace in a planned, timely manner cast-iron piping systems that may threaten public safety. (Class II, Priority Action)(P-91-12)

--to the UGI Corporation:

Provide initial and recurrent training to local government emergency response personnel on how to control natural gas in emergency situations, including how to locate, identify, and operate outside key-operated shutoff valves. (Class II, Priority Action) (P-91-13)

Implement a comprehensive gas system surveillance program that: (1) identifies the type of data to be collected on gas system failures, gas leakage *surveys*, changes in corrosion protection levels, and abnormal operating and maintenance conditions; (2) establishes the type and frequency of analyses to be performed for identifying potentially unsafe conditions; and (3) specifies the corrective action to be taken. (Class II, Priority Action)(P-91-14)

Implement a cast-iron pipe replacement program, based on factors such as age, pipe diameter, operating pressure, soil corrosiveness, existing graphitic damage, leak history, burial depth, and external loading, to identify and replace in a planned, timely manner cast-iron piping systems that may threaten public safety. (Class II, Priority Action)(P-91-15)

Document the location of underground voids discovered during excavations and coordinate with the City of Allentown to develop systematic procedures for centrally reporting, documenting, and exchanging information on the location of underground voids. Class II, Priority Action)(P-91-16)

--to the National Association of Regulatory Utility Commissioners:

Encourage its member states to require that each gas operator implement a program, based on factors such as age, pipe diameter, operating pressure, soil corrosiveness, existing graphitic damage, leak history, burial depth, and external loading, to identify and replace in a planned, timely manner cast-iron piping systems that may threaten public safety. (Class II, Priority Action)(P-91-17)

--to the City of Allentown:

Coordinate with the UGI Corporation to obtain initial and recurrent training for emergency response personnel on controlling natural gas in emergency situations, including how to locate, identify, and operate outside key-operated shutoff valves. (Class II, Priority Action)(P-91-18)

Coordinate with known underground facility operators in the immediate Allentown vicinity to develop systematic procedures for centrally reporting, documenting, and exchanging information on the location of underground voids discovered through excavations or other means. (Class II, Priority Action)(P-91-19)



National Transportation Safety Board

Washington, D.C. 20594

Pipeline Accident Brief

Accident No.:	DCA-97-FP-005
Type of System:	Transmission pipeline
Type of Accident:	Rupture and fire
Location:	Indianapolis, Indiana
Date and Time:	July 21, 1997; 2:33 p.m. CST
Owner/Operator:	Citizens Gas & Coke Utility
Property Damage and Losses:	In excess of \$2 million
Fatalities:	1
Injuries:	1
Evacuated:	75
Material Released:	Natural gas
Pressure:	310 psig
Type of Failure:	Excavation damage
Component Affected:	20-inch-diameter buried steel transmission pipeline

The Accident

About 2:33 p.m. on July 21, 1997, a 20-inch-diameter steel natural gas transmission pipeline owned and operated by Citizens Gas & Coke Utility Company (Citizens Gas) ruptured and released natural gas near an intersection adjoining the Charter Pointe subdivision in Indianapolis, Indiana. The gas ignited and burned, killing one resident and injuring another. About 75 residents required temporary shelter. Six homes were destroyed, and about 65 others sustained damage significant enough to be documented by the local investigation team.

The pipeline had not been under full internal pressure since March 31, 1997, when the pressure was reduced to approximately 30 pounds per square inch gauge (psig) in anticipation of road construction work in the area.¹ On May 19, 1997, a directional drilling operation had been performed to install an 8-inch-diameter steel natural gas distribution main parallel to the transmission pipeline. About 1 hour and 40 minutes before the rupture, Citizens Gas had begun to return the 20-inch transmission pipeline to full service.

¹ The road construction work required that Citizens Gas relocate an adjacent section of its 20-inch transmission pipeline. In view of the reduced seasonal demand for natural gas, the company decided to reduce the pressure on the pipeline and discontinue using it to transport gas during the period of construction.

Postaccident Inspections

On-site inspection of the ruptured pipe revealed a near-longitudinal gaping fracture about 5.8 feet long. Along the entire length of the longitudinal fracture, the newly installed 8-inch distribution main was within approximately 4 inches of the 20-inch transmission pipeline. (See figure 1.)

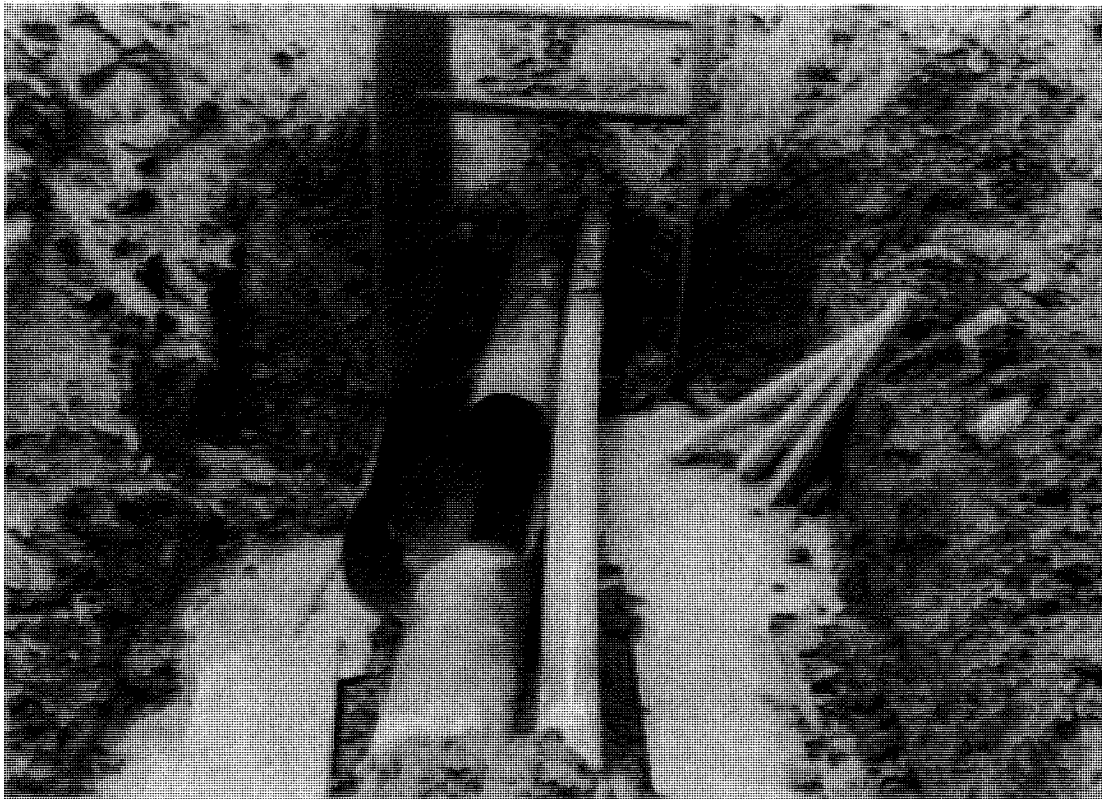


Figure 1. Postaccident excavation revealing relative positions of 8-inch distribution main and 20-inch transmission pipeline at site of rupture

The ruptured segment of the 20-inch pipe was removed and sent to the National Transportation Safety Board's Materials Laboratory for examination. Safety Board examination revealed that the pipeline fractures contained features typical of overstress separation. The fractures contained no arrest marks, which is consistent with a crack in the pipe that, once initiated, propagated continuously. The exterior pipeline surface along the entire length of the longitudinal fracture contained circumferential gouge marks that intersected both halves of the fracture. The gouge marks typically measured approximately 4 inches long in the circumferential direction. Wall thicknesses in the deepest area of two gouge marks adjacent to the longitudinal fracture were 0.168 inch and 0.175 inch, which were 60 and 62 percent, respectively, of the original 0.281-inch wall thickness.

Safety Board investigators obtained a tooth from the reaming tool that was used in the drilling operation to install the 8-inch distribution main. Direct comparisons of the tooth with the gouge marks revealed that the size and shape of the tooth tip were

consistent with the size and shape of the gouge marks in the vicinity of the rupture. (See figure 2.)

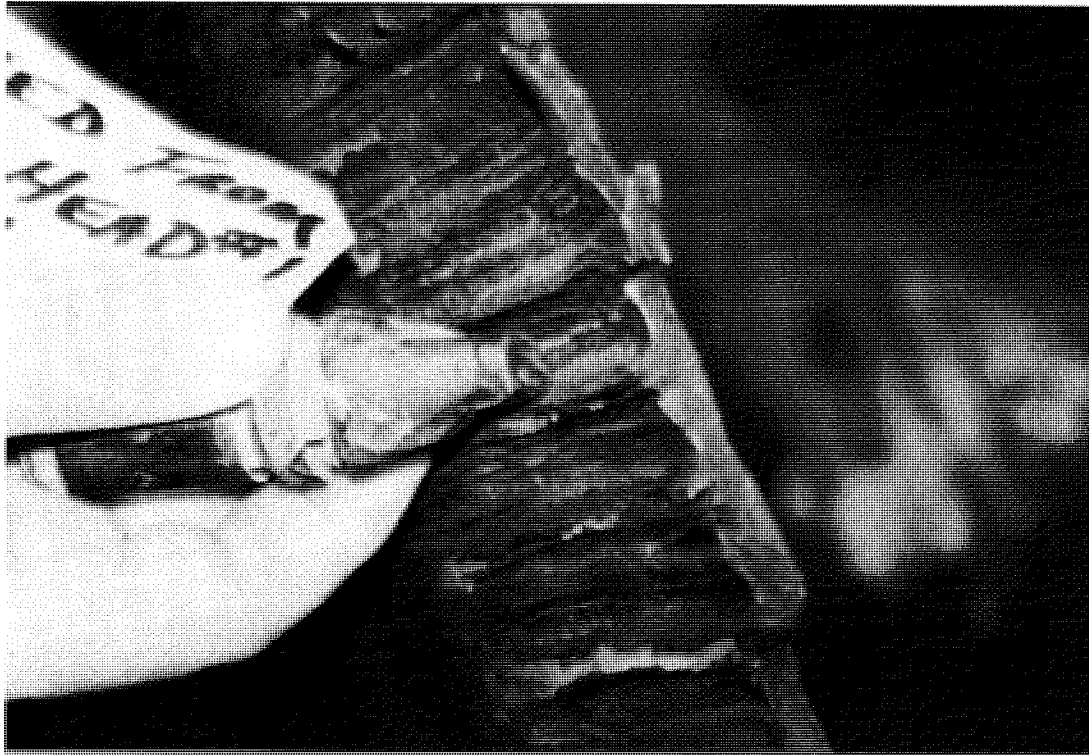


Figure 2. Comparison of cutting tool tooth with gouges found at rupture site

Preaccident Pipeline Installation Project

To minimize damage to the roadway and to some adjoining landscaping features, Citizens Gas decided to use directional drilling² to install an approximately 200-foot-long section of new 8-inch distribution main parallel to the 20-inch transmission pipeline. Citizens Gas contracted with Miller Pipeline Corporation (Miller), which carried out the directional drilling operation on May 19, 1997.

Citizens Gas construction plans called for the 8-inch distribution main to be installed parallel to the 20-inch pipeline with a horizontal centerline-to-centerline separation of approximately 5 feet along most of its length. Before drilling began, Citizens Gas personnel used paint to mark the approximate location of the 20-inch pipeline at intervals of 15 to 20 feet.³ Two excavations, one to verify the location of some utility

² *Directional drilling*, also referred to as *boring*, is a pipeline construction technique in which a roughly horizontal hole is drilled at the intended pipeline location and the pipeline is then pulled through it. Normally, a relatively small pilot hole is drilled first. When the pilot drill reaches the exit location, the pilot head is removed, and a larger reaming tool is attached. In this case, the pipeline was pulled back through the hole during this back-reaming process.

³ Indiana State Code (IC 8-1-26-2) defines *approximate location* as "a strip of land at least four (4) feet wide but not wider than the width of the facility plus two (2) feet on either side of the outer limits of the physical plant." See *Safety Study-Protecting Public Safety Through Excavation Damage Prevention*

cable crossings and another to serve as an exit pit for the directional drilling operation, exposed the 20-inch transmission pipeline and thus verified its location.

Miller drilling personnel stated that field measurements indicated that they could maintain an approximate 5- to 7-foot horizontal separation between the new installation and the paint marks used to indicate the location of the existing 20-inch transmission pipeline. The drilling crew intended to maintain this separation throughout the bore except for one location near the termination of the bore where, in order to avoid an underground telephone duct, the pipeline separation would need to be reduced to an edge-to-edge horizontal distance of about 1 foot.⁴

The Miller crew consisted of two persons, a foreman and a machine operator, utilizing a Vermeer directional drilling rig with a 5-inch-diameter drill head and a 14-inch-diameter reaming tool. The foreman said that throughout the directional drilling operation, he monitored the location and alignment of the pilot drill head every 5 to 10 feet with a "walkover" detector. He said he marked the drill head's location at these intervals as the boring operation progressed to the east. If course corrections were needed, the foreman said, he relayed instructions to the machine operator via a headset radio. The Miller personnel reported that, because of the terrain at the entry point, the initial entry of the drill head was angled slightly toward the 20-inch natural gas transmission pipeline and that minor steering corrections were performed in the beginning portion of the drilling operation. Miller personnel did not report any difficulty in performing the drilling operation, nor did they note any other unplanned deviations from a straight line path.

During the back-reaming process, the location of the reaming tool was not tracked as it was during drilling. The presence of rocks, the characteristics of the soil, the alignment of the pilot hole, and the stiffness of the pipe material being pulled back through the hole are some factors that can affect the accuracy with which the back-reaming process follows the path of the pilot hole.

Actual Pipeline Locations

After the accident, the two pipelines were excavated at points along the bore path to determine the exact horizontal centerline-to-centerline separation between the pipelines and the depth of cover over each one. These excavations revealed that the 8-inch distribution main was located at a horizontal centerline-to-centerline distance of 5.5 feet north of the 20-inch transmission pipeline at the entrance point of the bore (west end). Progressing eastward, the 8-inch distribution main veered sharply toward the 20-inch transmission pipeline. Approximately 40 feet east of the entrance point of the bore, the 8-inch distribution main was within a few inches of the existing 20-inch transmission pipeline. At the rupture site, approximately 68 feet east of the entrance point of the bore, the two pipelines were about 4 inches apart. As the 8-inch pipeline continued toward the

(NTSB/SS-97/01) for further discussion.

⁴ The actual separation would be greater than 1 foot, since the pipelines were to be at different depths at this particular location.

east, it veered away from the 20-inch pipeline to a horizontal centerline-to-centerline separation of 3.3 feet about 113 feet east of the entrance point of the bore. From this point eastward, the horizontal centerline-to-centerline separation ranged from 4 to 6 feet until the 8-inch distribution main angled toward the 20-inch transmission pipeline at the east end of the bore, as originally planned. (See figure 3.)

During the postaccident excavations conducted to determine the locations of the pipelines, rocks were discovered east of the rupture site. One rock, located directly beneath the 8-inch distribution main, had been scored in a manner consistent with having been struck by the reaming tool.

Regulatory Requirements

Title 49 *Code of Federal Regulations (CFR)* Part 192.614⁵ requires gas pipeline operators to develop and follow a written program to prevent damage to their pipelines from excavation activities. Excavation activities includes boring operations. Paragraph (c)(6) specifically requires operators, whenever they have reason to believe their pipelines could be damaged by excavation activities, to provide for inspections of those pipelines as frequently as necessary during and after the excavation to verify the integrity of the pipelines.

The Gas Piping Technology Committee (GPTC) publishes the *GPTC Guide for Gas Transmission and Distribution Piping Systems* to provide guidance for natural gas operators to follow to help ensure regulatory compliance.⁶ The GPTC has informed the Safety Board that it is in the process of adding material to the guide to address safety issues specific to directional drilling and other trenchless technologies.

Actions Taken Since the Accident

Citizens Gas had procedures in place at the time of the accident that were applicable to general construction activities in proximity to its pipelines, but it did not have procedures specific to directional drilling operations. Citizens Gas has provided to the Safety Board copies of procedures that it has now adopted that are specific to directional drilling in proximity to existing pipelines. These procedures include a requirement that, whenever directional drilling operations are carried out parallel to and within 10 feet of an existing transmission pipeline, spot holes will be excavated at 25-foot intervals so that the exact location of the drill head can be visually determined. These spot holes will also allow personnel to verify pipe alignment as the pipe is installed during the back-reaming process.

⁵ Title 49 CFR Part 195.442 contains similar provisions for operators of pipelines transporting hazardous liquids.

⁶ The GPTC is an American National Standards Institute technical committee made up of technical specialists from both industry and government.

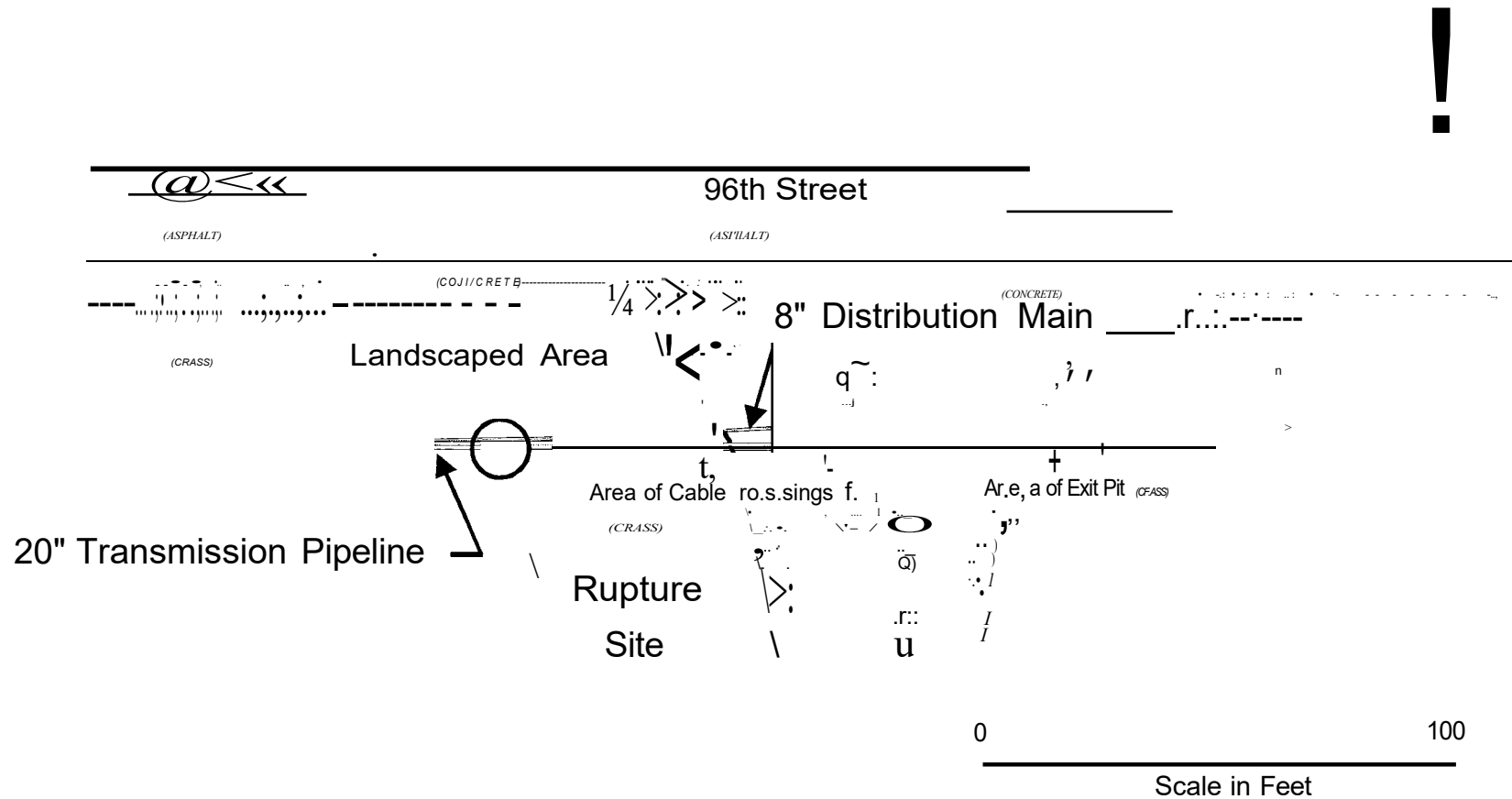


Figure 3. Relative locations of new 8-inch and existing 20-inch pipelines

Miller has also provided the Safety Board with procedures it has adopted to provide additional protection for existing facilities during the company's directional drilling operations.

Probable Cause

The National Transportation Safety Board determines that the probable cause of this accident was the failure of Citizens Gas & Coke Utility and Miller Pipeline Corporation to have adequate controls in place to ensure that directional drilling operations carried out in the proximity of existing underground facilities would not cause damage to those facilities.

Adopted: April 20, 1999



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: APR 28 1999

In reply refer to: P-99-1

Honorable Kelley S. Coyner
Administrator
Research and Special Programs Administration
400 Seventh Street, **S.W.**
Washington, **D.C.** 20590

About 2:33 p.m. on July 21, 1997, a 20-inch-diameter steel natural gas transmission pipeline owned and operated by Citizens Gas & Coke Utility Company (Citizens Gas) ruptured and released natural gas near an intersection adjoining the Charter Pointe subdivision in Indianapolis, Indiana. The gas ignited and burned, killing one resident and injuring another. About 75 residents required temporary shelter. Six homes were destroyed, and about 65 others sustained damage significant enough to be documented by the local investigation team.

The pipeline had not been under full internal pressure since March 31, 1997, when the pressure was reduced to approximately 30 pounds per square inch gauge (psig) in anticipation of road construction work in the area.¹ On May 19, 1997, Miller Pipeline Corporation (Miller), under contract to Citizens Gas, had performed a directional drilling operation to install an 8-inch-diameter natural gas distribution main parallel to the transmission pipeline. About 1 hour and 40 minutes before the rupture, Citizens Gas had begun to return the 20-inch transmission pipeline to full service.

The National Transportation Safety Board determined that the probable cause of this accident was the failure of Citizens Gas and Miller to have adequate controls in place to ensure that directional drilling operations carried out in the proximity of existing underground facilities would not cause damage to those facilities.

On-site inspection of the ruptured pipe revealed a near-longitudinal gaping fracture about 5.8 feet long. Along the entire length of the longitudinal fracture, the newly installed 8-inch steel distribution main was located within approximately 4 inches of the 20-inch transmission pipeline.

Safety Board examination of the ruptured segment of the 20-inch pipe revealed that the pipeline fractures contained features typical of overstress separation. The exterior pipeline surface along the entire length of the longitudinal fracture contained circumferential gouge marks that

¹ The road construction work required that Citizens Gas relocate an adjacent section of its 20-inch transmission pipeline. In view of the reduced seasonal demand for natural gas, the company decided to reduce the pressure on the pipeline and discontinue using it to transport gas during the period of construction.

intersected both halves of the fracture. The gouge marks typically measured approximately 4 inches long in the circumferential direction. Wall thicknesses in the deepest area of two gouge marks adjacent to the longitudinal fracture were 0.168 inch and 0.175 inch, which were 60 and 62 percent, respectively, of the original 0.281-inch wall thickness.

Safety Board investigators obtained a tooth from the reaming tool that was used in the drilling operation to install the 8-inch distribution main in the vicinity of the rupture. Direct comparisons of the tooth with the gouge marks revealed that the size and shape of the tooth tip were consistent with the size and shape of the gouge marks in the vicinity of the rupture.

Citizens Gas construction plans called for an approximately 200-foot-long section of new 8-inch distribution main to be installed parallel to the 20-inch pipeline with a horizontal centerline-to-centerline separation of approximately 5 feet along most of its length. Before drilling began, Citizens Gas personnel used paint to mark the approximate location of the 20-inch pipeline at intervals of 15 to 20 feet.² Two excavations, one to verify the location of some utility cable crossings and another to serve as an exit pit for the directional drilling operation, exposed the 20-inch transmission pipeline and thus verified its location.

Miller drilling personnel stated that field measurements indicated that they could maintain an approximate 5- to 7-foot horizontal separation between the new installation and the paint marks used to indicate the location of the existing 20-inch transmission pipeline. The drilling crew intended to maintain this separation throughout the bore except for one location near the termination of the bore where, in order to avoid an underground telephone duct, the pipeline separation would need to be reduced to an edge-to-edge horizontal distance of about 1 foot.³

The Miller crew consisted of two persons, a foreman and a machine operator, utilizing a Vermeer directional drilling rig with a 5-inch-diameter drill head and a 14-inch-diameter reaming tool. The foreman said that throughout the directional drilling operation, he monitored the location and alignment of the pilot drill head every 5 to 10 feet with a "walkover" detector. He said he marked the drill head's location at these intervals as the boring operation progressed to the east. If course corrections were needed, the foreman said, he relayed instructions back to the machine operator via a headset radio. Miller personnel did not report any difficulty in performing the drilling operation, nor did they note any other unplanned deviations from a straight line path. During the back-reaming process, the location of the reaming tool was not tracked as it was during drilling.

After the accident, the two pipelines were excavated at points along the bore path to determine the exact horizontal centerline-to-centerline separation between the pipelines and the depth of cover over each one. These excavations revealed that the 8-inch distribution main was located at a horizontal centerline-to-centerline distance of 5.5 feet north of the 20-inch

² Indiana State Code (IC 8-1-26-2) defines *approximate location* as "a strip of land at least four (4) feet wide but not wider than the width of the facility plus two (2) feet on either side of the outer limits of the physical plant." See *Safety Study-Protecting Public Safety Through Excavation Damage Prevention* (NTSB/SS-97/01) for further discussion.

³ The actual separation would be greater than 1 foot, since the pipelines were to be at different depths at this particular location.

transmission pipeline at the entrance point of the bore (west end). Progressing eastward, the location of the 8-inch distribution main veered sharply toward the 20-inch transmission pipeline. Approximately 40 feet east of the entrance point of the bore, the 8-inch distribution main was within a few inches of the existing 20-inch transmission pipeline. At the rupture site, approximately 68 feet east of the entrance point of the bore, the two pipelines were about 4 inches apart. As the 8-inch pipeline continued toward the east, it veered away from the 20-inch pipeline to a horizontal centerline-to-centerline separation of 3.3 feet about 113 feet east of the entrance point of the bore. From this point eastward, the horizontal centerline-to-centerline separation ranged from 4 to 6 feet until the 8-inch distribution main angled toward the 20-inch transmission pipeline at the east end of the bore, as originally planned.

Citizens Gas had procedures in place at the time of the accident that were applicable to general construction activities in proximity to its pipelines, but it did not have procedures specific to directional drilling operations. Citizens Gas has provided to the Safety Board copies of procedures that it has now adopted that are specific to directional drilling in proximity to existing pipelines. These procedures include a requirement that, whenever directional drilling operations are carried out parallel to and within 10 feet of an existing transmission pipeline, spot holes will be excavated at 25-foot intervals so that the exact location of the drill head can be visually determined. These spot holes will also allow personnel to verify pipe alignment as the pipe is installed during the back-reaming process.

Miller has also provided the Safety Board with procedures it has adopted to provide additional protection for existing facilities during the company's directional drilling operations.

Title 49 *Code of Federal Regulations* (CFR) Part 192.614⁴ requires gas pipeline operators to develop and follow a written program to prevent damage to their pipelines from excavation activities. Excavation activities include boring operations. In light of the ever-increasing use of horizontal directional drilling, the Safety Board is concerned that accidents similar to the one in Indianapolis may occur in the future unless operators take precautions to protect their facilities. To address this concern, the National Transportation Safety Board makes the following safety recommendation to the Research and Special Programs Administration:

When reviewing pipeline operator safety programs, ensure that the operators' damage prevention programs include actions to protect their facilities when directional drilling operations are conducted in proximity to those facilities.

(P-99-1)

Also, the Safety Board issued Safety Recommendations P-99-2 to the American Society of Mechanical Engineers, P-99-3 to the American Gas Association, P-99-4 to the American Public Gas Association, P-99-5 to the Interstate Natural Gas Association of America, P-99-6 to the American Petroleum Institute, P-99-7 to the Association of Oil Pipe Lines, P-99-8 to the Distribution Contractors Association, P-99-9 to the Directional Crossing Contractors Association,

⁴ Title 49 CFR Part 195.442 contains similar provisions for operators of pipelines transporting hazardous liquids.

P-99-10 to the North American Society for Trenchless Technology, and P-99-11 to the National Utility Contractors Association.

Please refer to Safety Recommendation P-99-1 in your reply. If you need additional information, you may call (202) 314-6201.

Chairman HALL, Vice Chairman FRANCIS, and Members HAMMERSCHMIDT, GOGLIA, and BLACK concurred in this recommendation.

Original Signed

By: Jim Hall
Chairman

national security goal seeks the improvement of the capacity and operation of the highway system to support defense mobilization.

The assistance program envisioned would be an annual program under which awards would be made on a competitive basis, predicated on merit review, typically for a period of three years. Funding beyond the first year would be based on an annual evaluation of documented progress, availability of funds, and the amount of funds reported as unexpended by the awardee at the end of each year's period of performance. A preliminary estimate of total award amounts would be approximately \$100,000 on an annual basis.

The HBCUs and the MIHE that are interested in participating in such an assistance program are invited to submit an "Expression of Interest." Your submission should include:

1. Full name and address of school/university, point of contact, phone number, fax number and E-Mail address,
2. Specific FHWA goal(s) that your institution would be interested in participating under and your actual recent (past three years) experience in the area,
3. A list of your institution's current curriculum/majors as they relate to the FHWA strategic goals,
4. Any laboratories/research facilities that you currently have access to, and
5. Any specific future plans you have for expanding your curriculum and or research facilities.

Provided that a sufficient number of relevant "Expressions of Interest" are received in response to this notice, the FHWA would issue a program-based solicitation calling for submission of applications. The application process would be open to all HBCUs and MIHE and is not dependent upon submitting an initial "Expression of Interest." Applications would be assessed according to specific criteria that relate to the goals of the FHWA's National Strategic Plan and would be awarded to a limited number of applicants according to the merit of the application and the availability of funds in each fiscal year. The target elate for initial awards would be FY 2000.

Authority: 23 U.S.C. 307 and 403; E.O. No. 12876, 58 FR 58735, 3 CFR, 1994 Comp., p. 671; E.O. No. 13021, 61 FR 54929, 3 CFR, 1997 Comp., p. 221; 49 CFR 1.48.

Issued on August 18, 1999.

Gloria J. Jeff,

Federal Highway Deputy Administrator.

[FR Doc. 99-22289 Filed 8-26-99; 8:45 am]

BILLING CODE 4910-22-P

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

Directional Drilling and Other Trenchless Technology Operations Conducted in Proximity to Underground Pipeline Facilities

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice; issuance of advisory bulletin.

SUMMARY: RSPA is issuing this advisory bulletin to owners and operators of natural gas and hazardous liquid pipeline systems to advise them to review, and amend if necessary, their written damage prevention program to minimize the risks associated with directional drilling and other trenchless technology operations near buried pipelines. This action follows several pipeline incidents involving trenchless technology operations which resulted in loss of life, injuries, and significant property damage. It also corresponds to National Transportation Safety Board (NTSB) Safety Recommendation P-99-1, which suggests that RSPA

- • • ensure that the operators' damage prevention programs include actions to protect their facilities when directional drilling operations are conducted in proximity to those facilities.

This advisory bulletin emphasizes the importance of having procedures to mitigate the risks of directional drilling and other trenchless technology.

ADDRESSES: This document can be viewed at the Office of Pipeline Safety (OPS) home page at: <http://ops.dot.gov>.

FOR FURTHER INFORMATION CONTACT: Eben M. Wyman, (202) 366-0918, or by email at eben.wyman@rspa.dot.gov.

SUPPLEMENTARY INFORMATION:

I. Background

RSPA revised its inspection form for hazardous liquid pipelines to examine how operators monitor directional drilling and other trenchless technology operations in the vicinity of underground pipelines. The pipeline safety regulations require pipeline operators to carry out a written damage prevention program for buried pipelines. The revised inspection form considers whether a pipeline operator's damage prevention program includes actions to protect their facilities when directional drilling operations are conducted in proximity to the pipeline. RSPA will make similar changes to the natural gas pipeline inspection form in its next revision. In light of recent accidents involving trenchless

technology operations, RSPA is encouraging operators to carefully review their damage prevention program and make modifications as appropriate. RSPA also notes the importance of accurately locating underground piping and ensuring the qualifications of personnel performing this work.

Additionally, NTSB Safety Recommendation P-99-1 (April 28, 1999) directs that RSPA

When reviewing pipeline operator safety programs, ensure that the operators' damage prevention programs include actions to protect their facilities when directional drilling operations are conducted in proximity to those facilities.

This recommendation reflects NTSB's investigation into the rupture of a natural gas pipeline near Indianapolis, Indiana. The ignition of the escaping gas caused a fatality and an injury. NTSB determined that the probable cause was the failure of the pipeline operator to ensure that safe directional drilling operations were conducted in proximity to underground facilities.

RSPA believes that this Advisory Bulletin will encourage operators to recognize the dangers associated with directional drilling and other trenchless technology operations and to take appropriate action to ensure that underground facilities are adequately located and protected when these activities take place near pipeline these facilities.

II. Advisory Bulletin (ADB-99-04)

To: Owners and Operators of Hazardous Liquid and Natural Gas Pipelines

Subject: Directional Drilling and Other Trenchless Technology Operations Conducted in Proximity to Underground Pipeline Facilities.

Purpose: To ensure that pipeline operators take actions to recognize the dangers associated with directional drilling and other trenchless technology operations, and to ensure that underground pipeline facilities are adequately located and protected from inadvertent damage.

Advisory: RSPA urges all owners and operators of gas and hazardous liquid pipelines to review their operations, maintenance, and damage prevention programs to include effective actions to protect their underground facilities from the dangers posed by directional drilling and other trenchless technology operations. Operators should take actions to ensure that both company and contractor personnel are following safe practices.

Trenchless technologies, including directional drilling, are effective

excavating practices that can reduce the threat of third-party damage to gas and hazardous liquid pipelines. They can also mitigate environmental and other concerns associated with traditional trenching methods of pipe and cable installation.

However, the potential exists for trenchless technology operations to damage underground facilities, sometimes with catastrophic results. Directional drilling and other trenchless technology operations employ a variety of cutting, jetting, boring, reaming, and jacking techniques. These techniques can result in rupture or damage to existing underground facilities, including oil and gas pipelines, electric cables and ducts, water and sewer pipes, telecommunications ducts, fiber optic cables, and cable television facilities.

Usually, the exact depth of existing underground facilities is not known, even if the facilities are accurately located before directional drilling commences. In addition, many facilities are buried deeper than the minimums required by law and regulation. This can be caused by changes in the surface contours due to agricultural activities, landscaping, and road building.

Damage to underground facilities can occur without any immediate indication to the operator. Sometimes a damaged underground facility will not fail for years after the completion of trenchless technology operations. Drilling equipment does not need to fully rupture a facility to create a hazardous situation. Damage to coatings and other corrosion prevention systems can increase the risk of a delayed corrosion failure. Escaping and migrating gas can create a safety issue for people living and working near these facilities long after the completion of directional drilling and other trenchless technology operations. Leakage from a damaged or ruptured hazardous liquid pipeline can create environmental and safety issues.

The primary safety concern is ensuring that trenchless technology operations do not accidentally contact existing underground facilities. This can be averted by knowing the precise locations of all underground facilities in proximity to trenchless technology operations. In addition to full compliance with the one-call notification process, the operator should also consider thorough site surveys of the area of a proposed directional drilling or trenchless technology project to locate potential conflicts with underground facilities.

Information on the safe conduct of trenchless technology operations is available from various trade associations

and technical publications. In addition, the Gas Piping Technology Committee, a standards committee composed of experts on gas piping issues, publishes guidelines for planning and designing trenchless technology pipe installations in its Guide for Gas Transmission and Distribution Piping Systems, which is available from the American Gas Association.

Issued in Washington, D.C. on August 23, 1999.

Richard B. Felder,

Associate Administrator for Pipeline Safety.
[FR Doc. 99-22331 Filed 8-26-99; 8:45 am]
BILLING CODE 4910-60--P

DEPARTMENT OF TRANSPORTATION

Surface Transportation Board

[STB Finance Docket Nos. 33788 and 33789]

Norfolk Southern Railway Company- Trackage Rights Exemption-Over North Carolina Railroad Company; Atlantic and East Carolina Railway Company-Trackage Rights Exemption-Line of North Carolina Railroad Company Operated Under Trackage Rights by Norfolk Southern Railway Company

In STB Finance Docket No. 33788, North Carolina Railroad Company (NCR) has agreed to grant to Norfolk Southern Railway Company (NSR) exclusive local and overhead freight trackage rights over its entire line of railroad between Charlotte and Morehead City, NC.¹ The line extends between mileposts EC-0.0± and EC-94.7±; mileposts H-0.0± and H-129.5±; and mileposts 284.0± and 376.5±, a distance of approximately 317.2 miles in Alamance, Cabarrus, Carteret, Craven, Davidson, Durham, Guilford, Johnston, Jones, Lenoir, Mecklenburg, Orange, Randolph, Rowan, Wake, and Wayne Counties, NC.

Under the agreement, NSR is permitted to grant trackage rights to its subsidiaries. Accordingly, in STB Finance Docket No. 33789, NSR has agreed to grant to its wholly owned subsidiary, Atlantic and East Carolina Railway Company (AECR), local and overhead trackage rights over a portion of NCR's line between Goldsboro, NC, and Morehead City. That portion extends between mileposts EC-0.0± and EC-94.7±, a distance of approximately

94.7 miles in Carteret, Craven, Jones, Lenoir, and Wayne Counties.

The exemption was effective on August 19, 1999, and the trackage rights operations are scheduled to begin on September 1, 1999.

The purpose of the trackage rights is to allow NSR and AECR to continue as the providers of local and overhead freight service on the NCR lines, as they have previously done under now-expired leases.²

As a condition to these exemptions, any employees affected by the trackage rights will be protected by the conditions imposed in *Norfolk and Western Ry. Co.-Trackage Rights-EN*, 354 I.C.C. 605 (1978), as modified in *Mendocino Coast Ry., Inc.-Lease and Operate*, 360 I.C.C. 653 (1980).

These notices are filed under 49 CFR 1180.2(d)(7). If either contains false or misleading information, both exemptions are void *ab initio*. Petitions to revoke the exemptions under 49 U.S.C. 10502(c) may be filed at any time. The filing of a petition to revoke will not automatically stay the transaction.³

An original and 10 copies of all pleadings, referring to STB Finance Docket No. 33788, STB Finance Docket No. 33789, or both (as applicable) must be filed with the Surface Transportation Board, Office of the Secretary, Case Control Unit, 1925 K Street, N.W., Washington, DC 20423-0001. In addition, a copy of each pleading must be served on G. Paul Moates, Esq., Sidley & Austin, 1722 Eye Street, N.W., Washington, DC 20006.

Board decisions and notices are available on our website at "WWW.STE.DOT.GOV."

Decided: August 23, 1999.

By the Board, David M. Konschnik,
Director, Office of Proceedings.

Vernon A. Williams,
Secretary

[FR Doc. 99-22340 Filed 8-26-99; 8:45 am]
BILLING CODE 4915-00-P

² See *North Carolina Railroad Company-Petition to Set Trackage Compensation and Other Terms and Conditions-Norfolk Southern Railway Company, Norfolk & Western Railway Company, and Atlantic and East Carolina Railway Company*. STB Finance Docket No. 33134 (STB served May 29, 1997) (*NCR Compensation*).

³ In a pending motion in *NCR Compensation*, intervenor Walker F. Rucker seeks an order that he and the State of North Carolina be allowed and directed to participate in the negotiations for the trackage rights agreements that are the subject of this notice of exemption. The parties hereto replied, and Mr. Rucker responded to their replies. That collateral dispute provides no basis for rejection of the notice of exemption in this proceeding.

¹ NSR is permitted to continue in effect existing and certain future agreements pertaining to passenger operations by the National Railroad Passenger Corporation (Amtrak) over the line. The Board's jurisdiction is not implicated as to this provision of the agreement.


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ADB-99-01

Sep 1, 1999

Billing Code: 4910-60-P
DEPARTMENT OF TRANSPORTATION
Pipeline and Hazardous Materials Safety Administration

Potential Failure Due to Brittle-Like Cracking Certain Polyethylene Plastic Pipe Manufactured by Century Utility Products Inc.

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice; issuance of advisory bulletin on Century polyethylene gas pipe to owners and operators of natural gas distribution systems.

SUMMARY: This advisory bulletin is directed at owners and operators of natural gas distribution systems that have installed plastic pipe extruded by Century Utility Products Inc. from Union Carbide Corporation's DHDA 2077 Tan medium density polyethylene resin (Century pipe). Pipe manufactured between 1970 and 1973 may fail in service due to its poor resistance to brittle-like cracking. Operators with Century pipe in their systems should closely monitor this pipe for leaks with increased leak survey frequency. Century pipe that may be improperly installed, repaired, or operating in an environment that impairs pipe strength should be replaced.

ADDRESS: This document can be viewed on the Office of Pipeline Safety (OPS) home page at: <http://ops.dot.gov>.

FOR FURTHER INFORMATION CONTACT: Gopala (Krishna) Vinjamuri at (202) 366- 4503, or by E-mail at vinjamuri@PHMSA.dot.gov.

SUPPLEMENTARY INFORMATION:

I. Background

The National Transportation Safety Board (NTSB) recently published the results of a special investigation into accidents that involved plastic pipe currently in use to deliver natural gas to residential and business use. The report, Brittle-Like Cracking in Plastic Pipe for Gas Service (NTSB/SIR-98/01; April 23, 1998) suggested that "[d]espite the general acceptance of plastic piping as a safe and economical alternative to piping made of steel and other materials, [a] number of pipeline accidents investigated have involved plastic piping that cracked in a brittle-like manner." Copies of this report may be obtained from NTSB Public Inquiry Office by calling 202-314-6551.

The phenomenon of brittle-like cracking in plastic pipe as described in the NTSB report and generally understood within the plastic pipeline industry relates to a part-through crack initiation in the pipe wall followed by stable crack growth at stress levels much lower than the stress required for yielding, resulting in a very tight slit-like opening and gas leak. This failure mode is difficult to detect until significant amount of gas leaks out of the pipe, and potentially migrates into closed space such as basements of dwellings. Premature brittle-like cracking requires relatively high localized stress intensification that may be a result from geometrical discontinuities, excessive bending, improper fitting assemblies, and/or dents and gouges. Because this failure mode exhibits no evidence of gross yielding at the failure location, the term brittle-like cracking is used. This phenomenon is different from brittle fracture, in which the failure results in

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fragmentation of the pipe.

NTSB also alleged that the guidance provided by manufacturers and industry standards for the installation of plastic pipe is inadequate for limiting stress intensification, particularly at plastic service connections to steel mains, many of these connections may have been installed without adequate protection from shear and bending forces that may result in brittle-like cracking.



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Century pipe

Between 1970 and 1973, Century Utility Products Inc. (a/k/a AMDEVCO), now defunct, marketed medium density polyethylene plastic pipe and fittings (Century pipe) in sizes ranging from ½ inch to 4 inches for use in natural gas distribution. These plastic pipes and fittings were manufactured by extrusion from Union Carbide Corporation's DHDA 2077 Tan resin, and was marked PE 2306 in accordance with American Society for Testing and Materials (ASTM) standards. Following investigation of a series of incidents, including the December 2, 1979, explosion in a residence in Tuscola, Illinois, and the October 17, 1994, accident in Waterloo, Iowa, that resulted in several fatalities, it was established that the Union Carbide's DHDA 2077 Tan resin lacks adequate resistance to brittle-like cracking and is prone to relatively short life when subjected to high local stress concentration. The pipe in the Tuscola, Illinois, accident failed in less than 8 years, and the pipe in the Waterloo, Iowa, accident failed within 23 years in service. It has been established that Century pipe exhibited significantly higher leak rate in comparison with other polyethylene, steel, and cast iron pipe used in natural gas distribution systems.



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Following the Waterloo, Iowa, accident, PHMSA has taken number of actions, including gathering Century pipe installation data. Also, remedial action has been taken by various operators in mid-western states where much of the Century pipe produced was known to have been installed. It is PHMSA's understanding that the operators having Century pipe in their systems have initiated close monitoring and some have replacement program in progress.

NTSB recommended that PHMSA notify owners and operators of natural gas systems who continue to use Century pipe of the potential for premature failures by brittle-like cracking and the need to "[d]evelop a plan to closely monitor the performance of and to identify and replace, in a timely manner, any piping that indicates poor performance based on such evaluation factors as installation, operating and environmental conditions, piping failure characteristics and leak history."

II. Advisory Bulletin (ADB-99-01)

To: Owners and Operators of Natural Gas Distribution Pipeline Systems

Subject: Susceptibility of certain polyethylene pipe manufactured by Century Utility Products Inc. to premature failure due to brittle-like cracking.

Purpose: To advise natural gas distribution pipeline owners and operators of the need to closely monitor and replace as necessary polyethylene natural gas pipe manufactured by Century Utility Products Inc. between 1970 and 1973 that is susceptible to brittle-like cracking.

Advisory: All owners and operators of natural gas distribution systems who have installed and continue to use polyethylene pipe extruded by Century Utility Products Inc. (now defunct) from the resin DHDA 2077 Tan resin manufactured by Union Carbide Corporation during the period 1970 to 1973 (Century pipe) are advised that this pipe may be susceptible to premature failure due to brittle-like cracking. Premature failures by brittle-like cracking of Century pipe is known to occur due to poor resin characteristics, excessive local stress intensification caused by improper joints, improper installation, and environments detrimental to pipe long-term strength. All distribution systems containing Century pipe should be monitored to identify pipe subject to brittle-like cracking. Remedial action, including replacement, should be taken to protect system integrity and public safety.

In addition, in light of the potential susceptibility of Century pipe to brittle-like cracking, PHMSA recommends that each natural gas distribution system operator with Century pipe revise their plastic pipe repair procedure(s) to exclude pipe pinching for isolating sections of Century pipe. Additionally, PHMSA recommends replacement of any Century pipe segment that has a significant leak history or which for any reason is of suspect integrity.

(49 U.S.C. Chapter 601; 49 CFR 1.53)

Issued in Washington, D.C. on _____

Richard B. Felder

Associate Administrator for Pipeline Safety

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Building Explosion and Fire
Silver Spring, Maryland
August 10, 2016



Accident Report

NTSB/PAR-19/01
PB2019-100722



National
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Pipeline Accident Report

Building Explosion and Fire
Silver Spring, Maryland
August 10, 2016



National
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490 L'Enfant Plaza,
S.W. Washington, D.C.

National Transportation Safety Board. 2019. *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*. NTSB/PAR-19/01. Washington, DC.

Abstract: On August 10, 2016, at 11:51 p.m. eastern daylight time, a 14-unit apartment building, located at 8701 Arliss Street, in Silver Spring, Montgomery County, Maryland, partially collapsed due to a natural gas-fueled explosion and fire. The explosion and fire also heavily damaged an adjacent apartment building which shared a common wall with building 8701. As a result of this accident, 7 residents died, 65 residents were transported to the hospital, and 3 firefighters were treated and released from the hospital. The investigation focused on the following safety issues: the location and inspection of service regulators within a structure; the inspection of the gas meter assembly; the notification of the natural gas odor to Washington Gas Light Company; and the detection of natural gas through odorants and methane. As a result of this investigation, the National Transportation Safety Board (NTSB) makes new safety recommendations to the Pipeline and Hazardous Materials Safety Administration; the Public Service Commission of Maryland, the Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation, and the Public Service Commission of the District of Columbia; the International Academies of Emergency Dispatch; the International Code Council; the National Fire Protection Association; the Gas Technology Institute; and Washington Gas Light Company.

The National Transportation Safety Board (NTSB) is an independent federal agency dedicated to promoting aviation, railroad, highway, marine, and pipeline safety. Established in 1967, the agency is mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person.” 49 C.F.R. § 831.4. Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. 49 U.S.C. § 1154(b).

For more detailed background information on this report, visit <http://www.nts.gov/investigations/dms.html> and search for NTSB accident ID DCA16FP003. Recent publications are available in their entirety on the Internet at <http://www.nts.gov>. Other information about available publications also may be obtained from the website or by contacting:

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Abbreviations and Acronyms

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ATF	US Bureau of Alcohol, Tobacco, Firearms and Explosives
BSI	British Standards Institution
CFD	computational fluid dynamics
CFH	cubic feet per hour
CFR	<i>Code of Federal Regulations</i>
COMAR	<i>Code of Maryland Regulations</i>
DOT	US Department of Transportation
ECC	Montgomery County Emergency Communication Center
EPA	US Environmental Protection Agency
GAO	US Government Accountability Office
GTI	Gas Technology Institute
IAED	International Academies of Emergency Dispatch
ICC	International Code Council
IFGC	<i>International Fuel Gas Code</i>
LEL	lower explosive limit
LP	liquified petroleum
MAOP	maximum allowable operating pressure
MCFRS	Montgomery County Fire and Rescue Service
MCPD	Montgomery County Police Department
NCSL	National Conference of State Legislatures
NFPA	National Fire Protection Association

NFPA 54	<i>National Fuel Gas Code</i>
NPS	nominal pipe size
NTSB	National Transportation Safety Board
OTD	Operations Technology Development
PHMSA	Pipeline and Hazardous Materials Safety Administration
PSC	Public Service Commission of Maryland
psig	pounds per square inch, gauge
RMD	residential methane detectors
RSPA	Research and Special Programs Administration
SCFH	standard cubic feet per hour
UEL	upper explosive limit
UL	Underwriter's Laboratories
WC	water column
WG	Washington Gas Light Company
WSSC	Washington Suburban Sanitary Commission

Executive Summary

On August 10, 2016, at 11:51 p.m., eastern daylight time, a 14-unit apartment building, located at 8701 Arliss Street, in the unincorporated community of Silver Spring, in Montgomery County, Maryland, partially collapsed due to a natural gas-fueled explosion and fire.

The explosion and fire also heavily damaged an adjacent apartment building, 8703 Arliss Street, which shared a common wall with building 8701.

As a result of this accident, 7 residents died, 65 residents were transported to the hospital, and 3 firefighters were treated and released from the hospital. The damage from the accident exceeded \$1 million.

The following are safety issues in this accident:

- the location and inspection of service regulators within a structure
- the inspection of the gas meter assembly
- the notification of the natural gas odor to Washington Gas Light Company
- the detection of natural gas through odorants and methane

The National Transportation Safety Board determines that the probable cause of the explosion in building 8701 of the Flower Branch apartment complex was the failure of an indoor mercury service regulator with an unconnected vent line that allowed natural gas into the meter room where it accumulated and ignited from an unknown ignition source. Contributing to the accident was the location of the mercury service regulators where leak detection by odor was not readily available.

1. Factual Information and Analysis

1.1 The Accident

On August 10, 2016, at 11:51 p.m., eastern daylight time, a 14-unit apartment building, located at 8701 Arliss Street, in the unincorporated community of Silver Spring, in Montgomery County, Maryland, partially collapsed due to a natural gas-fueled explosion and fire.¹ (See figure 1.)



Figure 1. The accident location, 8701 Arliss Street, before the August 10, 2016, explosion. (Photograph from Google Earth, dated November 2015.)

The explosion and fire also heavily damaged an adjacent apartment building, 8703 Arliss Street, which shared a common wall with building 8701. (See figure 2.)

¹ All times mentioned in this report are eastern daylight time, unless otherwise specified.



Figure 2. Buildings 8701 (right-center) and 8703 (left) Arliss Street, Silver Spring, Maryland, after the explosion and fire. (Photograph provided by the Public Service Commission of Maryland.)

As a result of this accident, 7 residents died, 65 residents were transported to the hospital, and 3 firefighters were treated and released from the hospital.² The damage from the accident exceeded \$1 million.

1.2 Accident Site and Property Description

Buildings 8701 and 8703 Arliss Street were part of the Flower Branch Apartments, a 26-building complex that was constructed in 1955. (See figure 3.) The apartment complex was managed by Kay Management, a real estate management and development company.

² Some of the injuries reported included respiratory problems from smoke inhalation and injuries from falling or burns.

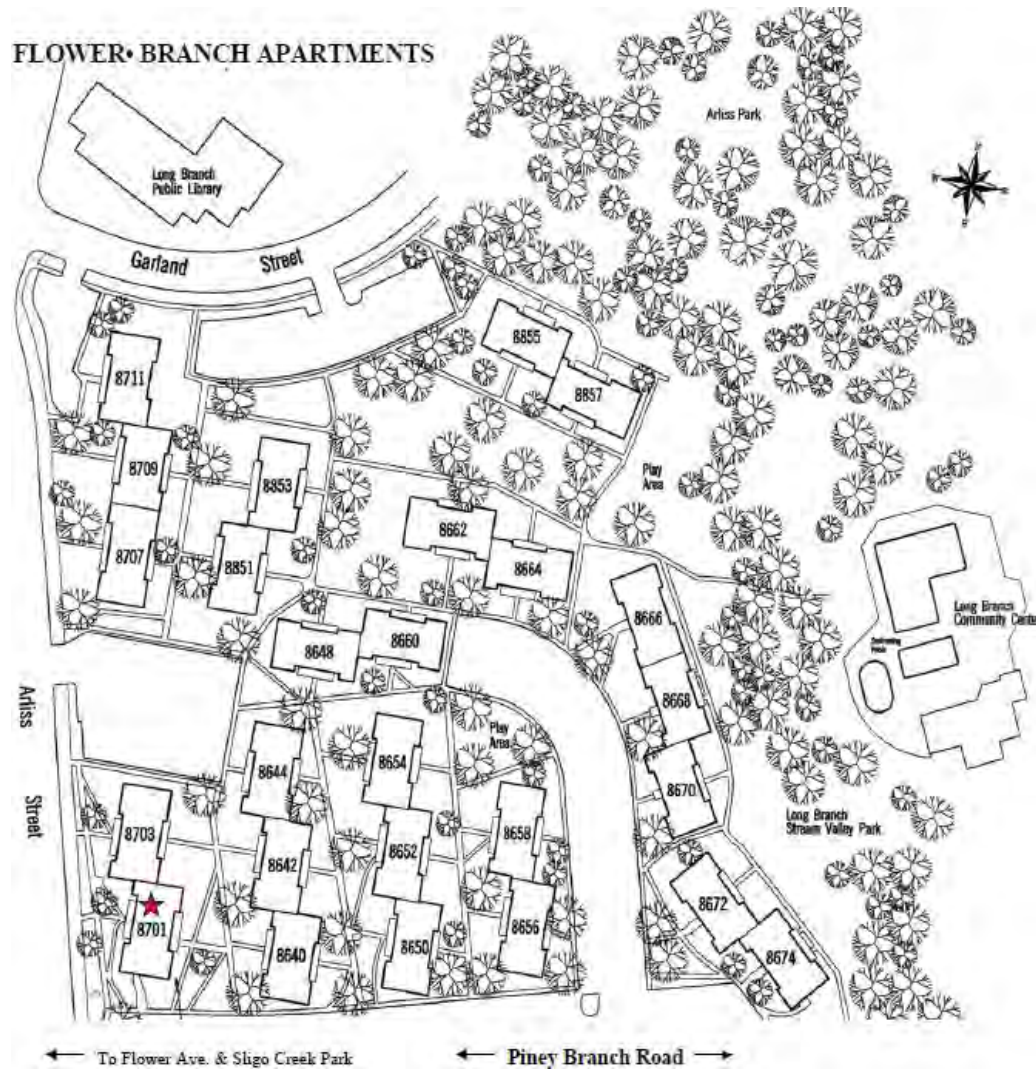


Figure 3. Layout of the Flower Branch apartment complex. Building 8701 is identified by a red star. (Graphic provided by Kay Management.)

Building 8701 Arliss Street was a four-level structure with a basement and three floors. Four apartments were located on each of the upper three levels. The basement/terrace level consisted of one apartment, a meter room, a storage room, and a property management and rental office. (See figure 4.)

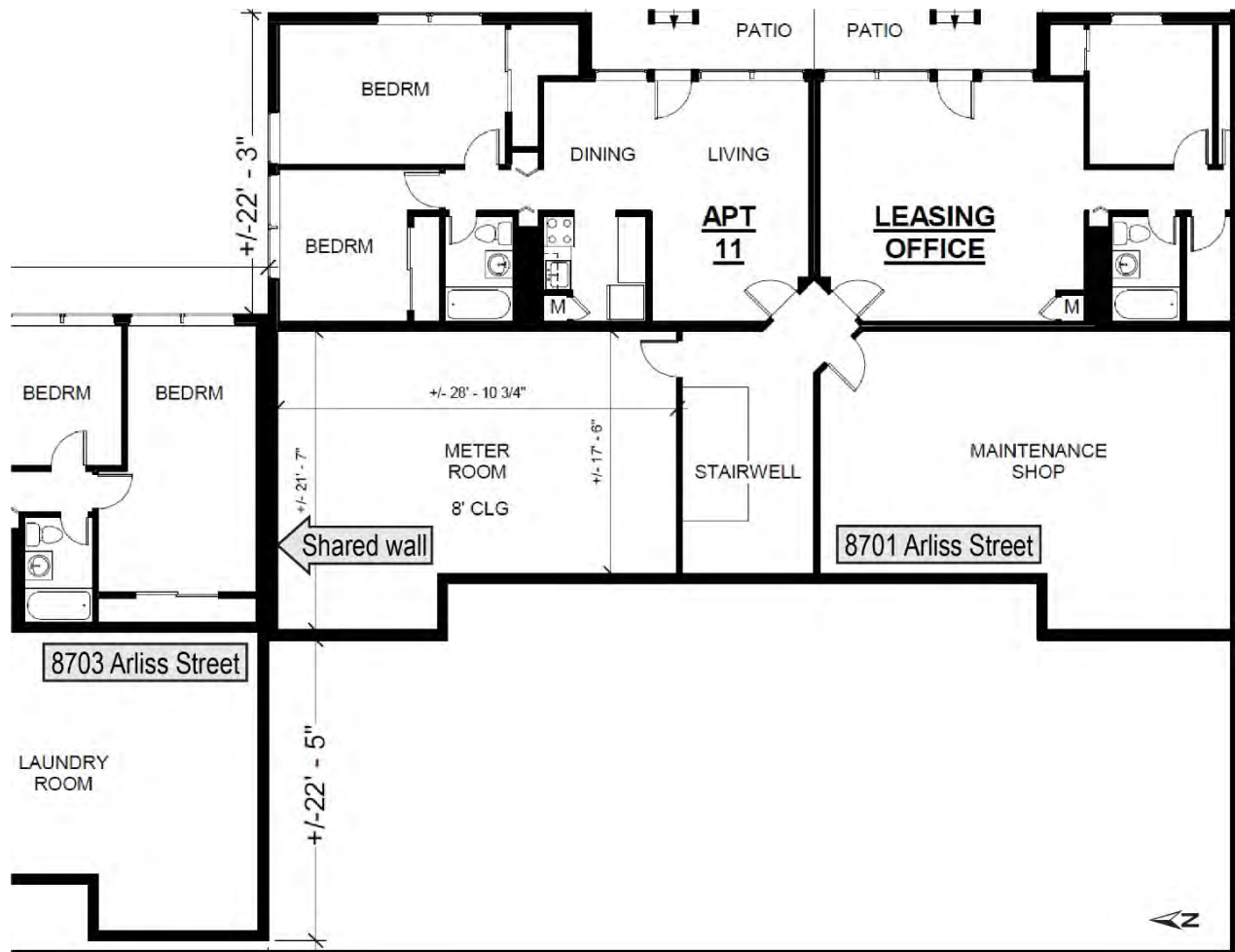


Figure 4. A plan for the basement/terrace floor for 8701 Arliss Street and the shared-wall portion of 8703 Arliss Street. (Graphic provided by Kay Management.)

According to Washington Gas Light Company's (WG) construction and service records for 8701 Arliss Street, between the years of 1955 and 1969 the natural gas main along Piney Branch Road that supplied this address was a medium-pressure main constructed of 6-inch inside diameter wrapped steel. The service line from the main that supplied 8701 Arliss Street was 2-inch nominal pipe size (NPS) wrapped steel, connected to a 1-inch NPS inlet pipe and a 1-inch outlet pipe after the service regulators.³ The main had a maximum allowable operating pressure (MAOP) of 25 pounds per square inch, gauge (psig) and the operating pressure at the time of the explosion was between 20 and 22 psig.⁴ This line had been servicing the address for over 60 years until the explosion on August 10, which severed a portion of the service line. The service line construction was completed on May 31, 1955, and the installation of the natural gas meters and regulators was completed on June 15, 1955. The gas main and service line were buried about 3 feet below the surface. The 2-inch service line ran along the front of the apartment buildings, including 8701 Arliss Street. On September 25, 1969, the service line was relocated about 80 feet and disconnected

³ NPS is nominal pipe size as defined the American Society of Mechanical Engineers (ASME) B36-10M-2018 standards for wrought steel pipe (ASME 2018).

⁴ MAOP refers to how much pressure the walls of the pipeline may safely hold in normal operations.

from the 6-inch medium-pressure wrapped steel main on Piney Branch Road. The service line was then connected to a 4-inch medium-pressure wrapped steel main that ran along Arliss Street.

1.2.1 Gas Meter/Utility Room

The gas meters were located in the meter room in the basement of 8701 Arliss Street on the north facing wall. The gas meter assembly included 15 meters that served 13 apartments, and maintenance and management offices.⁵ The electric meter panel and a commercial-grade gas water heater were positioned about 6 feet away from the gas meter assembly. The room was also used for equipment and supply storage. At the time of the accident, it contained supplies and equipment needed for maintenance.⁶

The meter room had restricted access and only two windows: one enclosed with glass and the other covered with a piece of wood with two small holes for ventilation. The room was secured by a knob lock, a vertical deadbolt lock, and was armed with an alarm system.⁷ Only Kay Management staff and Montgomery County Fire and Rescue Service (MCFRS) responders were authorized access to the meter room. In February 2016, the lock to the meter room was changed; however, Kay Management had not placed a copy of the new key in the MCFRS Knox Box, located on the premises.⁸

1.3 The Investigation

1.3.1 Gas Odor Leak Calls

Prior to the accident, several residents of buildings 8701 and 8703 reported to investigators that they smelled gas in the weeks and months leading up to the explosion. One resident reported that he smelled natural gas after returning from work around 11:30 p.m. on August 10. While he was taking out the trash, around 11:50 p.m., he smelled a gas odor in the stairwell and walked down to the basement to locate the source. He told National Transportation Safety Board (NTSB) investigators that he found the odor became stronger as he walked into the basement and he could hear a hissing noise from behind the locked doors of the meter room. He said that he planned to call 9-1-1 to report the gas odor after he finished taking out the trash. However, before he could report the leak, as he walked back from the community trash containers about 120 feet away, the explosion occurred.⁹

⁵ The management office was an apartment converted for business purposes.

⁶ Kay Management provided an inventory list for the meter room in 8701 Arliss Street.

⁷ According to the US Bureau of Alcohol, Tobacco, Firearms and Explosions (ATF) Origin and Cause report, the knob lock was locked, and the vertical dead bolt was not locked, prior to the explosion. For more information, see “ATF Report” in NTSB Docket DCA16FP003.

⁸ A *Knox Box* system is an access box for fire departments to use in the event of an emergency to enter structures or areas that are deemed difficult. This is required under National Fire Protection Association (NFPA) 1, which is a comprehensive fire code that the State of Maryland has adopted by reference in its Fire Prevention Code.

⁹ For more information, see “Interview transcript with Resident A” in NTSB Docket DCA16FP003.

1.3.2 Previous Gas Odor Calls

Between September 2015 and June 2016, Kay Management received six gas odor calls from residents of 8701 Arliss Street.¹⁰ Members of its maintenance staff said that when they investigated, they either did not detect gas through their gas-detection equipment or would report that the painting of apartments was causing the smell. MCFRS fire personnel responded to an odor call at building 8701 on July 25, 2016. According to interviews with Flower Branch residents and employees from Kay Management, residents in the building typically called either the management company or 9-1-1 to report gas odors. WG has no record of responding to or receiving any notifications of gas odor calls from 8701 Arliss Street in the 5 years prior to the accident.

The same resident who detected the natural gas odor on the night of the explosion had called 9-1-1 on July 25, 2016, to report a strong smell of natural gas both outside and inside of building 8701. The resident told the 9-1-1 operator that the strongest smell of natural gas was detected on the first level of the apartment building. The 9-1-1 operator told the resident not to turn on anything that could create an ignition source, and to evacuate himself and others out of the building. Neither the resident nor the 9-1-1 operator contacted the gas company.

On July 25, 2016, MCFRS fire personnel arrived at building 8701 around 10:20 p.m. They approached the building using a calibrated four-gas multimeter.¹¹ Residents directed the fire personnel to the main hallway of the first floor, where no combustible gas readings or natural gas odors were detected. Although one responder reported smelling “something,” it did not register on his detection equipment. The fire personnel proceeded through the apartment building, checking inside occupied apartments and underneath doors of unoccupied apartments. The fire personnel moved to the basement to test the storage and meter rooms but were unable to gain access to the meter room because the locks had recently been changed and the new key was unavailable. The fire personnel wedged the top of the doors open but detected no gas. MCFRS departed at 10:33 p.m. because they did not detect any gas readings throughout the building.¹² The Kay Management property manager was not notified of the odor leak call and only learned of it after a conversation with a resident days later.¹³ There are no records of additional conversation between Kay Management and MCFRS regarding the July 25 odor complaint.

1.3.3 Emergency Response

On August 10, 2016, at 11:52 p.m., the MCFRS Emergency Communication Center received a 9-1-1 call reporting the explosion and fire. Buildings 8701 and 8703 Arliss Street were evacuated by two Montgomery County Police Officers who were within 1,000 feet from them

¹⁰ For more information, see “Operations – Kay Management (All Work Orders 08-01-15 thru 08-25-16)” in NTSB Docket DCA16FP003.

¹¹ *Four-gas multimeters* are devices that measure the atmosphere for the following four parameters: oxygen concentration (in percentage O₂), flammability (in percentage of lower explosive limit [LEL]), carbon monoxide concentration (in parts per million), and hydrogen sulfide concentration (in parts per million).

¹² For more information, see “Reg. Oversight – MCFRS Statements on July 25, 2016, incident” and “Interview of Montgomery County Fire and Rescue Lieutenant” in NTSB Docket DCA16FP003.

¹³ For more information, see “Interview of Manager of Flower Branch Apartments-Errata” in NTSB Docket DCA16FP003.

when the explosion occurred. MCFRS dispatched units to the accident scene at 11:54 p.m., and the first unit arrived at 11:58 p.m. to begin rescue and fire suppression efforts.¹⁴ Residents of nearby apartment buildings within the complex voluntarily evacuated themselves.

The MCFRS Emergency Communication Center called WG at 12:08 a.m. on August 11, 2016. Within an hour of the initial notification, WG personnel arrived on scene and shut off the 4-inch diameter main supplying gas to the five apartment buildings along Arliss Street, and the MCFRS responders extinguished the fire shortly thereafter.

The NTSB concludes that the postexplosion responses by both MCFRS and WG were prompt and adequate.

1.3.4 Postaccident Gas Leak Surveys and Odorant Testing

NTSB investigators arrived on scene the morning of August 11, 2016. WG pressure tested the main, which held pressure, indicating there was no leak.¹⁵ Soil bar hole tests were conducted within 3 hours of the accident in areas adjacent to the main and the 2-inch service lines in the front and back of buildings 8701 and 8703 detected no gas readings.¹⁶ Building 8701's gas regulator vent line, which is a pipe that directs the natural gas away from the building and into the atmosphere in case of an over-pressure scenario, was also tested and showed no obstruction in the vent line.

Overseen by the Public Service Commission of Maryland (PSC), WG performed postaccident odorant testing at two different regulator stations in Silver Spring, Maryland, and odorant levels were found compliant with Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations that require natural gas to be odorized and detected at 1/5th (or 20 percent) of the lower explosive limit (LEL).¹⁷ This safety feature is required for all distribution lines. The State of Maryland has a more stringent requirement for odorant levels, which must be detectable at 1/10th (10 percent) of the LEL.¹⁸ The testing indicated that the levels also complied with the *Code of Maryland Regulations (COMAR)* requirement. At the Flower Branch complex, the natural gas service lines were also tested for odorant levels and met the regulatory limits.¹⁹

¹⁴ For more information, see "Survival Factors" in NTSB Docket DCA16FP003 for detailed event chronology and emergency response activities.

¹⁵ The operating pressure of the gas line that feeds into apartment buildings 8701 through 8711 Arliss Street was measured to be 20 psig.

¹⁶ (a) *Soil bar hole* tests measure the amount of odorant in soil. (b) For more information, see "PSC Pipeline Incident Investigation Report" in NTSB Docket DCA16FP003.

¹⁷ *Odorant tests* measure the amount of substances that have been added to gas provide a distinctive smell to ensure regulatory safety requirements are met.

¹⁸ Title 49 *Code of Federal Regulations (CFR)* 192.625 and *Code of Maryland Regulations (COMAR)* 20.55.09.06.

¹⁹ For more information, see "Operations–DCA16FP003-OPS-Odorant Monitoring-1" in NTSB Docket DCA16FP003.

1.3.5 Fire and Arson Investigations

During the incident, MCFRS requested the assistance of the US Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). The ATF National Response Team responded to investigate the source of the explosion and assist in locating the tenants of buildings 8701 and 8703. ATF conducted several interviews with residents in the days immediately following the explosion. Both agencies concluded their field investigation on August 17, 2016. They found no data to support the presence of explosives or a clandestine drug laboratory. In its report, ATF concluded that the explosion was caused by a release of natural gas in the meter room of 8701 Arliss Street and excluded all other potential causes.²⁰

The meter room of building 8701 had several potential natural gas ignition sources, including open-flame ignition sources, such as burners on the water heater. Furthermore, electrical equipment installed in the room could have produced electrical arcing (NFPA 2014).

1.3.6 Explosion Damage and Evidence

ATF documented and collected data to analyze the migration of the debris that projected from the explosion. Debris from building 8701 was found as far as a parking lot 300 feet away. The surrounding walls of the meter room on the north, south, and east sides were blown out and into other apartments or adjacent rooms. The west wall of the meter room, which was below ground level and backed by soil outside the building, did not appear to have any damage. The subsonic pressure wave from the explosion also blew out windows from the apartment in the basement of building 8701. Vehicles parked within the line of sight of the front entrance to building 8701 were severely damaged due to explosion debris. Vehicles parked farther away from building 8701 were found with significantly less or no damage.

The stairwell/hallway door to the meter room was the only door to have blown away from its respective room, compared with the other stairway/hallway doors in building 8701 that had separated from the frame and blown into their respective rooms. Also, according to the ATF report, the concrete floor that separated the meter room and the above first-floor apartments had blown upward and flipped over onto itself, which eliminated the scenario that an explosion could have occurred above the meter room.²¹ Fire, heat, and structural damage in building 8703 was most severe along the shared wall of the northwest quadrant of building 8701 and decreased in severity farther away from the meter room. The shared north wall of the meter room blew away from the meter room and into an apartment in building 8703. During the field inspection of the meter room, an unconnected union of the vent line to the lower mercury service regulator was also found.

The victims of the explosion were found in the apartments closest to the meter room in buildings 8701 and 8703. Autopsy reports identified the cause of death for each of the victims from either impact from the explosion or from exposure from the intense heat. Based on the pattern

²⁰ (a) ATF referred to the natural gas as “fugitive” in its report. (b) For more information, see “ATF Report” in NTSB Docket DCA16FP003.

²¹ For more information, see “ATF Report” in NTSB Docket DCA16FP003.

of debris and the location of the victims, the NTSB concludes that the explosion radiated from the meter room, where the gas meter assembly was located.

1.3.7 Gas Service to the Flower Branch Apartment Complex

Building 8701 received natural gas from a distribution system owned and operated by WG, that also delivers natural gas to more than 1 million residential, commercial, and industrial customers throughout Washington DC, and surrounding regions in Maryland and Virginia.²² WG is required to comply with regulations from the US Department of Transportation (DOT), Title 49 *Code of Federal Regulations (CFR)* Part 192, and *COMAR* Title 20, Subtitle 55. In Maryland, WG is periodically audited and inspected by the PSC to monitor compliance with both federal and state regulations.

WG is required to service and maintain gas lines up to the outlet of the meter, also known as “jurisdictional piping.” All piping past the meter outlet to the appliances in the apartment, or “house lines,” are the responsibility of the property owners or the owners’ designee, such as Kay Management, who install, operate, and maintain those lines in accordance with county regulations. The local authority over Flower Branch Apartments is Montgomery County, which used the 2015 edition of the *International Fuel Gas Code*, as well as the 2015 *Plumbing and Fuel Gas Code* of the Washington Suburban Sanitary Commission (WSSC) at the time of the incident (ICC 2015) (WSSC 2015).²³

²² For more information, see <https://www.washingtongas.com/about/company-profile>. (Accessed August 26, 2016).

²³ Washington Suburban Sanitary Commission is a water and wastewater utility that oversees water and sewer pipelines in Prince George’s and Montgomery counties in Maryland.

2 Safety Issues

2.1 Introduction

The NTSB identified the following safety issues in the investigation of this accident: (1) use of natural gas service regulators; (2) inspection of the gas meter assembly; (3) notification of the gas odor to Kay Management, WG, and MCFRS; and (4) detection of natural gas through odorants and methane.

2.2 Gas Meter Assembly Inspection

NTSB focused on the gas service equipment and appliances in the meter room because the ATF's investigation ruled out all other potential fuel sources in the room and the evidence indicates that the explosion originated in the meter room. During the inspection of the basement level of building 8701, NTSB investigators found burned and damaged components of the gas meter assembly, which included the mercury service regulators. A detailed inspection revealed that the vent line connection to the upper mercury service regulator was fractured below the coupling/union assembly, and the lower mercury pressure regulator was not connected to the regulator vent line at the coupling/union assembly, as shown in figure 5.²⁴

²⁴ A union assembly is similar to a coupling and serves as an attachment between two external threaded pipes and nipples. For more information, see "Materials Laboratory Factual Report No. 16-097" in NTSB Docket DCA16FP003.

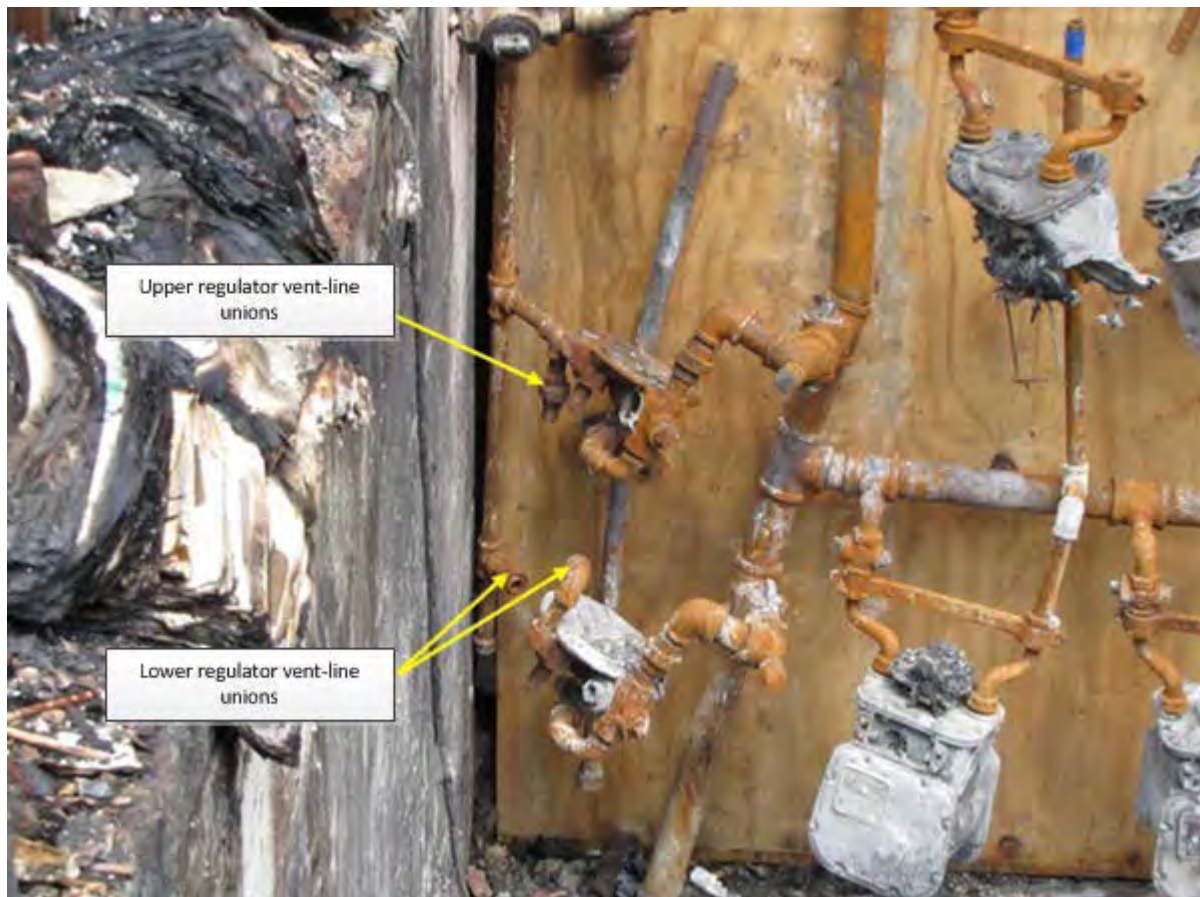


Figure 5. Portions of mercury service regulators and gas meters in building 8701 showing heat/fire/explosion damage and the unconnected lower regulator vent line.

ATF reconstructed the natural gas meter rack, piping, electric meters, and water heater. The gas meters on the upper row of the meter rack near the regulators showed significant fire and heat damage, particularly when compared with the gas meters farther away from the point of the explosion at the west wall. (See figure 6.) The water heater showed significant fire and heat damage and was found in the northeast quadrant of the meter room, about 6 feet from the nearest customer gas meter. The water heater was placed by ATF at its pre-explosion location.

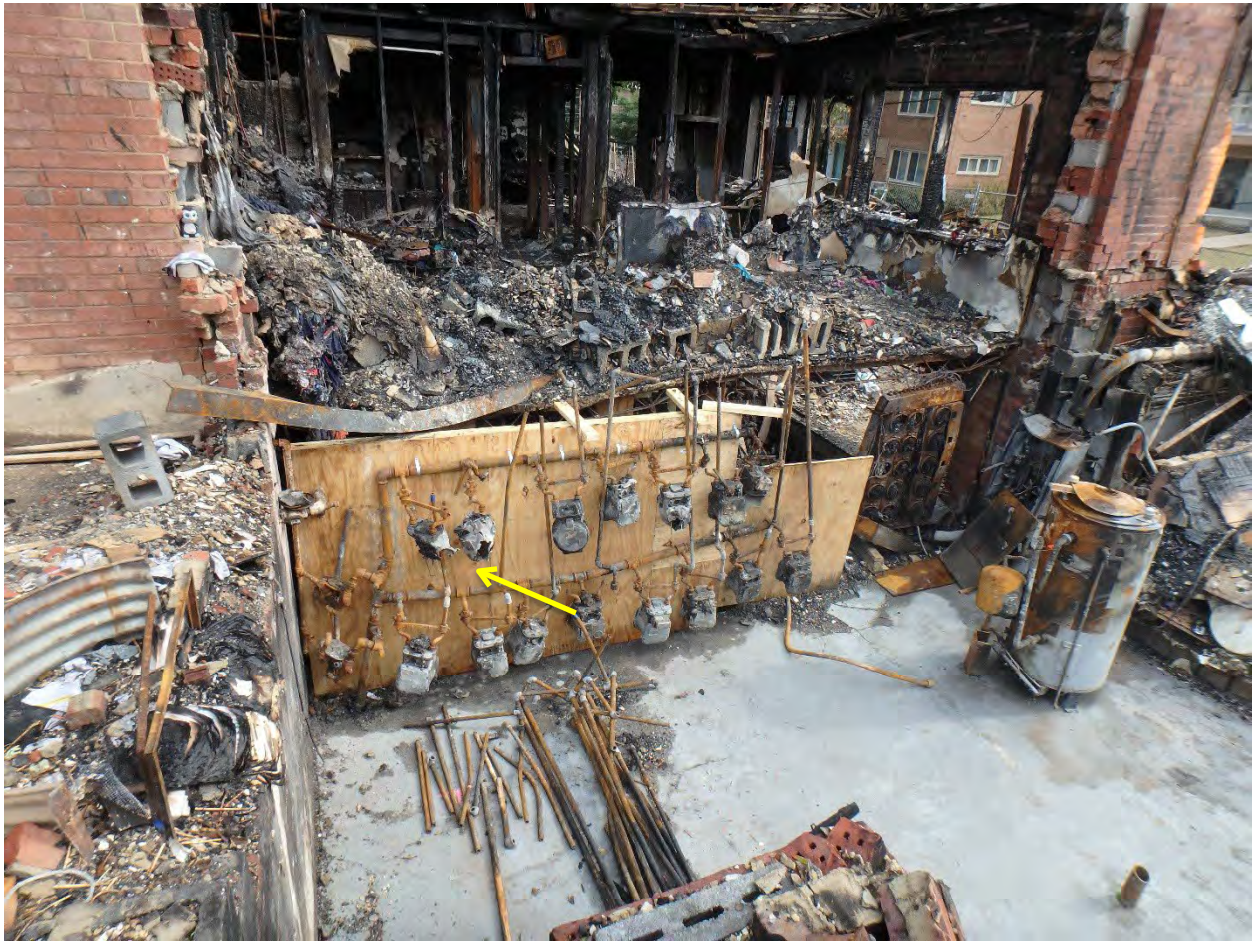


Figure 6. Building 8701 after debris removal and ATF reconstruction. The first two gas meters (designated with a yellow arrow) show substantially more heat/fire damage than other meters. (Photograph provided by ATF.)

2.3 Service Regulators

2.3.1 Service Regulator Overview

Service regulators are installed to a meter inlet to control the gas pressure into a building. They reduce the high pressure used to transport natural gas through the delivery system to the lower pressures used in homes and businesses. As a safety feature, regulators include a relief valve that opens if the pressure of the regulated gas exceeds a specified pressure and the excess gas is vented to the outside atmosphere.

Until the mid-1970s, some natural gas regulators included a reservoir, which is a cup-like feature, filled with mercury. In such regulators, the mercury, which remains liquid at room temperature, would serve as a liquid trap on the relief valve. If the gas pressure in the system was too high, it would push the mercury aside, enabling the gas to pass through a vent and escape safely outside of the building. In nonmercury service regulators, a spring mechanism with a diaphragm is used as the safety relief valve.

According to WG, the regulators installed in building 8701 were also installed in all 26 buildings of the Flower Branch apartment complex between 1955-1956.²⁵ The two mercury service regulators and their associated piping in building 8701 will be referred to in this report as the “upper” and “lower” service regulators. Based on similar installations in other nearby Flower Branch apartments, it appears the lower regulator was installed about 2 feet above the floor, as seen in figure 7.

²⁵ (a) For more information, see “Operations – DCA16FP003 – Mercury Regulator Removal and Replacements” in NTSB Docket DCA16FP003. (b) In the 1940s and 1950s, WG installed mercury service regulators manufactured by Reynolds Gas Regulator Company, which is no longer in business. (c) The gas regulators from building 8701 were marked “I-M-30,” which, according to WG, indicated they were a Reynolds Model 30, and were equipped with a 1/4-inch orifice. The same regulators also contained a metal tag indicating a 1955 manufacture date. (d) Although some of these regulators were in the buildings in the Flower Branch apartment complex in 2016, they have all now been removed and replaced.

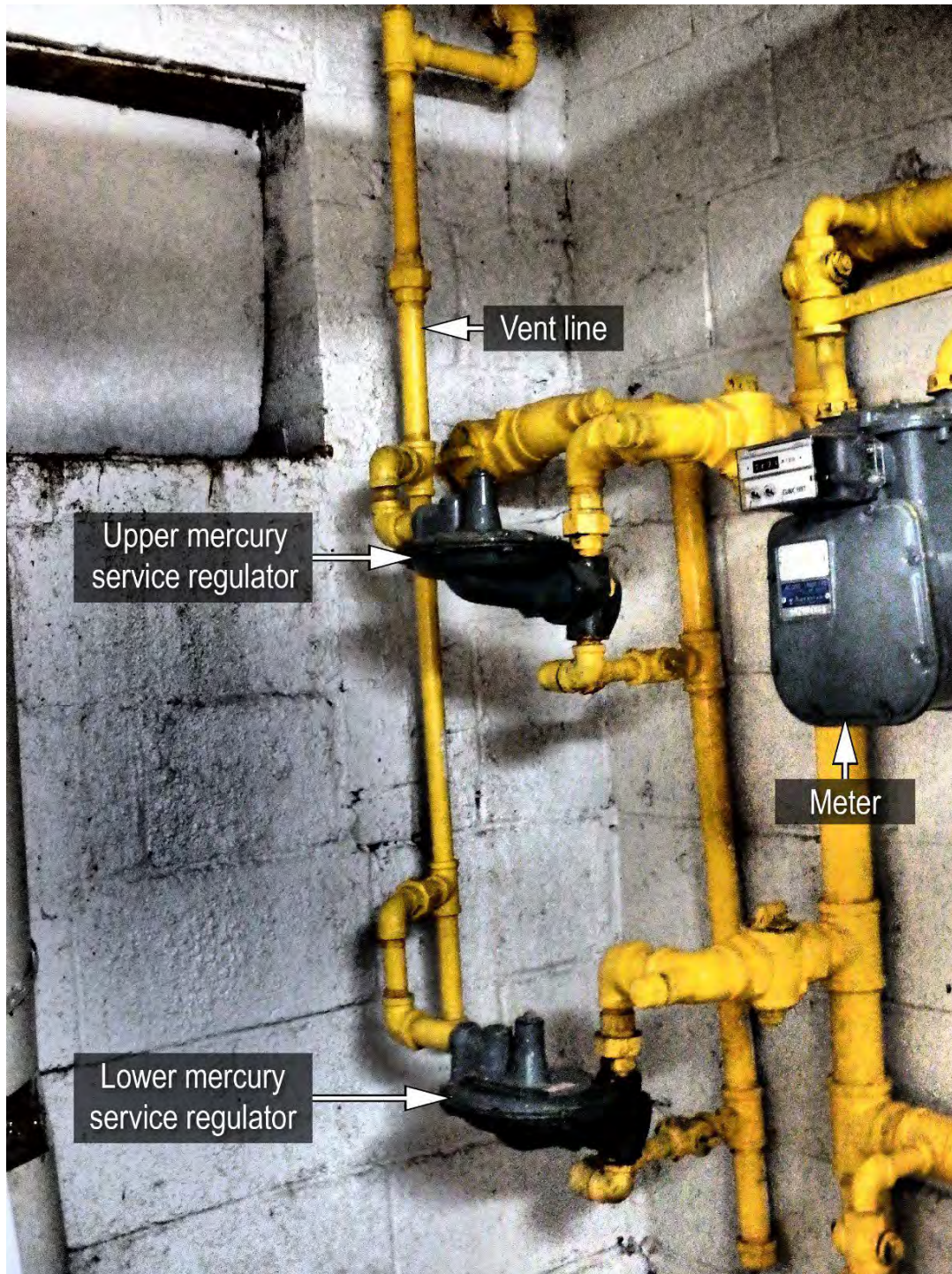


Figure 7. Exemplar configuration of a mercury service regulator assembly in a similar Flower Branch apartment building.

Figure 8 shows a close-up photograph of an exemplar mercury-filled service regulator.

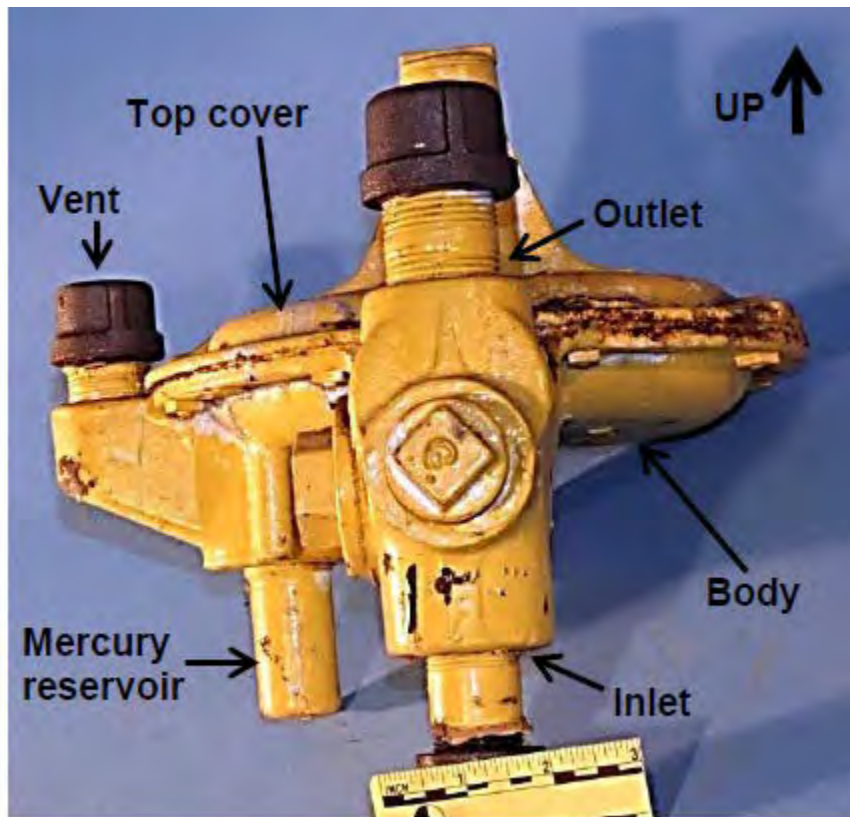


Figure 8. Exemplar mercury service regulator taken from a nearby Flower Branch apartment building.

Figure 9 shows a cross sectional image of the same regulator. A mercury service regulator consists of the following moving internal parts:

1. Spring used to adjust the natural gas delivery pressure.
2. Leather diaphragm and metal diaphragm plate serve as the pressure-sensing elements and translate pressure into a force to counterbalance the force of the spring.
3. Valve seat (also referred to as a disc) provides a positive shutoff under no-flow conditions.
4. Linkage that transmits the motion of the diaphragm to the valve seat.
5. Orifice is the passageway where pressure is reduced as distribution gas flows.
6. Mercury cup to store a specified amount of mercury for overpressure protection.

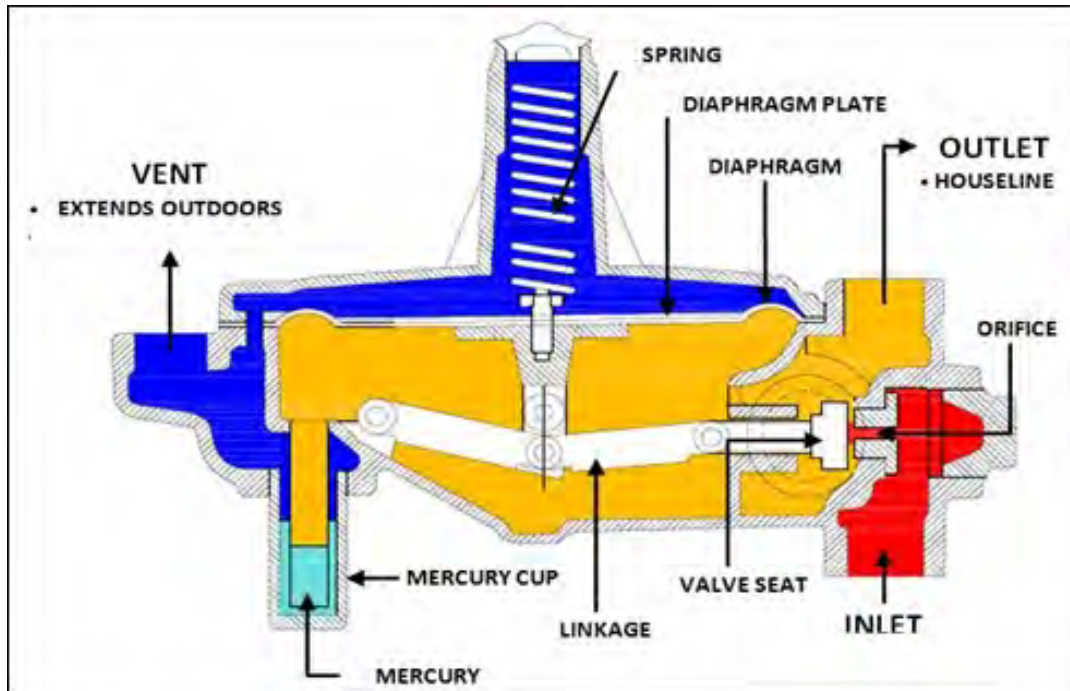


Figure 9. Cross sectional image of a mercury service regulator. (Diagram provided by WG.)

In general, the gas regulator assembly operates as shown in figure 9. Under normal operations, gas enters the regulator through the inlet and flows out of the outlet to the gas meter and customer line. The size of the gap between the orifice and valve seat determines the amount of gas that passes through the outlet. The size of the orifice also has a bearing on the outlet pressure, but the size is predetermined prior to installation and remains fixed throughout the service life.

When there is no downstream demand for gas, the valve seat presses against the orifice, and gas does not flow downstream. When downstream demand for gas increases (such as when customer gas appliances are turned on), the pressure under the diaphragm decreases. This action causes the diaphragm to move downward and the linkage to pivot so that the valve seat moves away from the orifice, resulting in the gap between the orifice and valve seat.

As the valve seat moves away from the orifice, gas flow into the regulator increases. Eventually, the downstream demand will decrease (fewer appliances are used or decreased usage), and the pressure under the diaphragm will increase. This causes the valve seat to move closer to the orifice and results in a reduced gas flow. The inlet pressure for the Flower Branch gas service was 20 psig and the pressure downstream of the mercury service regulator ranged between 5 and 7 inches of water column (.20 -.25 psig).²⁶

Mercury service regulators operate at a predetermined pressure set point. When the pressure in the regulator exceeds its pressure set point, excess gas will flow through the mercury and exit to the vent, which is often referred to as an overpressure or venting event. Gas vents outside the building into the atmosphere through a vent line. As gas exits the vent line, the houseline pressure stabilizes. A malfunctioning valve seat and orifice seal, a perforated diaphragm,

²⁶ *Inches of water column* is a unit of pressure measurement for gas appliances.

and insufficient mercury can all lead to a venting event. Section 2.3.7 will discuss the rate of gas flowing out of the vent under these three failure scenarios.

2.3.2 NTSB Materials Laboratory Examination of the Mercury Service Regulators

NTSB investigators recovered the gas regulator assembly from the basement of 8701 Arliss Street and sent it to the NTSB Materials Laboratory in Washington, DC, for an examination.²⁷

Figure 10 is a photograph of an approximate reconstruction of the preaccident configuration of the service regulators, service line, pipeline to the meters, and vent line. The white and yellow arrows pictured show the direction of the gas flow through the service line during normal operation; the blue arrows show the direction of the gas flow under an over-pressure scenario through the vent line.

²⁷ For more information, see “Materials Laboratory Factual Report 16-097” in NTSB Docket DCA16FP003.

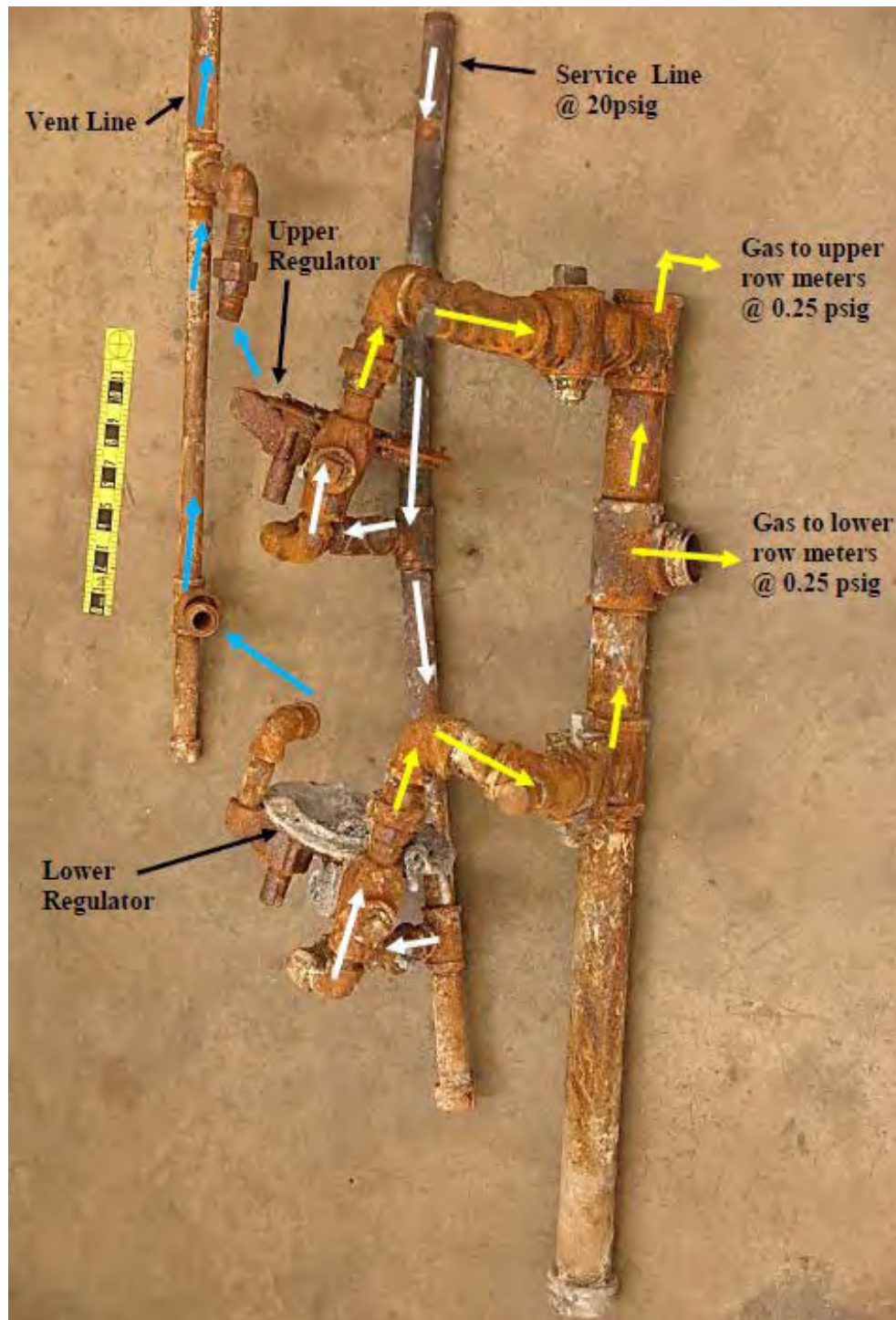


Figure 10. Mercury service regulators, service line, jurisdictional pipeline, and vent line after the accident.

Investigators from the NTSB Materials Laboratory performed a compositional alloy analysis on the mercury service regulators from the affected buildings and determined that the body was made from a ferrous alloy, and the top cover and metal tags were made from an aluminum alloy. The melting temperature of a typical aluminum alloy is about 1,220°F

(Moses 1978). The top cover and 2-inch diameter plug for the upper and lower gas regulator assemblies were both melted from exposure to heat from the fire.²⁸ Based on this observation, the temperature in the general area of the gas regulator assemblies reached at least 1,220°F. This also explains why mercury was not found in the reservoir cups of the upper and lower gas regulator assemblies. Mercury exists as a liquid at room temperature and has a boiling point of about 674°F, where it evaporates. The mercury most likely evaporated as a result of heat exposure from the fire.

The two regulators that serviced building 8701 were connected to one vent line, but each regulator had its own union assembly. A union assembly is made up of three components: an internal threaded nut, an insert, and a mating external threaded socket. Figure 11 shows a photograph of the lower regulator union assembly parts before cleaning. The separation was between the internal threaded nut (on the left) and the external threaded socket (on the right) of the lower assembly.

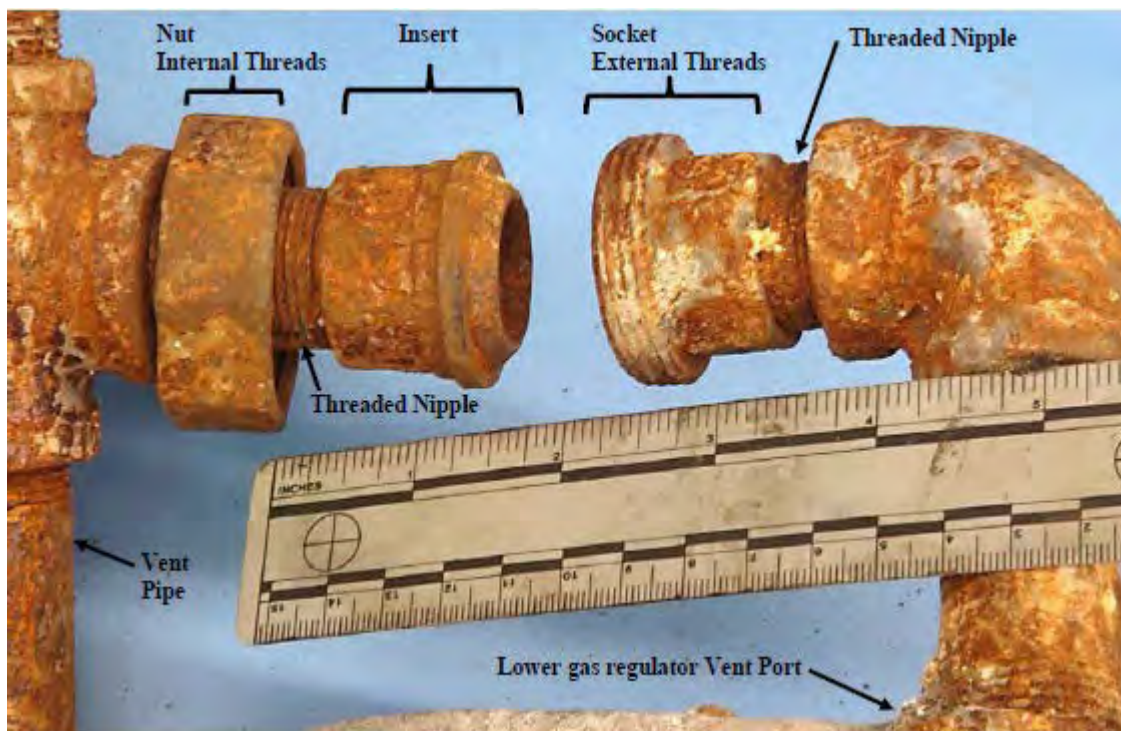


Figure 11. Photograph of the lower regulator union assembly parts (before cleaning).

2.3.3 Upper Regulator Union Assembly

The vent port of the upper regulator contained internal threads. (See figure 12-C.) An external threaded nipple and union assembly were separated from the vent port of the upper regulator and the bottom end of the threaded nipple showed evidence of bending deformation relative to the length of its axis. (See figure 12.) The bending deformation was in the general direction as indicated by the arrow in figure 12-A. The first four internal threads on the vent port,

²⁸ Plug is an access panel that allows for the service or inspection of the orifice and disc (valve seat). It is located on one side of the regulator.

as shown in figure 12-C, showed thread damage that coincided with the damage observed on the nipple. (See figure 12-B.) The observed damage is consistent with the damage that could occur if the threaded nipple was forcefully pulled out of the mating regulator vent port.

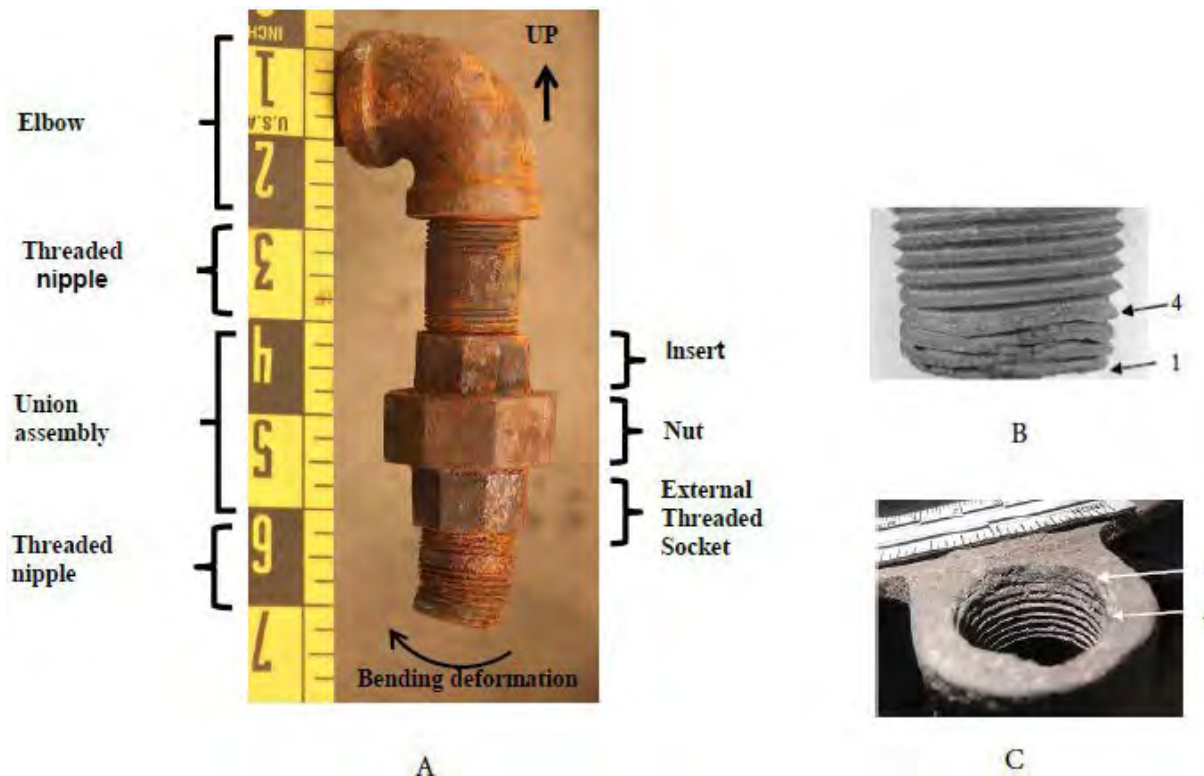


Figure 12. A photograph of the exposed external threaded nipple from the upper regulator union assembly.

NTSB investigators felt a slight looseness between the nut and insert portion when trying to disconnect the union assembly between the nut and the external threaded socket; however, the union assembly could not be rotated by hand. (See figure 12-A.) This indicated that the hermetic seal between the ball portion of the union external socket and the nut was broken.²⁹ This was confirmed by a pressure test of the union assembly, which showed a leak at the nut and external thread on the socket. The damage to the hermetic seal likely occurred from the force of the explosion or intense heat exposure from the fire.

Therefore, the NTSB concludes that the upper mercury service regulator was most likely connected to the vent line through the threaded nipple and union assembly prior to the explosion in building 8701 and the regulator likely became separated from the vent line due to forces of the explosion or from the building collapse.

²⁹ *Hermetic seal* refers to something so tightly closed that no air or gas can enter or escape.

2.3.4 Lower Regulator Union Assembly

The separation of the union assembly for the lower regulator was between the external threaded socket and internal threaded nut. The external threaded socket was attached to the regulator vent port by an elbow and threaded nipple; and the mechanical connections between them were firm. The union insert was connected to the vent line by a threaded nipple and a pipe tee; and the mechanical connections between them were also firm.

Figure 13 shows the union assembly components after cleaning. The external threads of the socket contained two dents; and the crown portion of the first two full external threads of the socket showed minor deformation.³⁰ The external threaded socket showed no evidence of major deformation. On one side of the nut, the crown portion of the first three internal threads showed evidence of minor metal flow deformation; and NTSB investigators observed similar deformation on an isolated area of only one thread on the diametrically opposite side. When mating threads are pulled apart by force, fracture or deformation by shear of the threads can also be expected.³¹ However, NTSB investigators observed no evidence of deformation or fracture of the threads in the nut and corresponding mating threads on the socket (compare figures 12 and 13 for thread damage). Had the force of the explosion, falling debris, or a building collapse caused the disconnection of the lower union assembly, there would be evidence of mechanical damage or deformation through a significant portion of the engaged threads, as seen with the threaded nipple for the upper regulator union assembly.

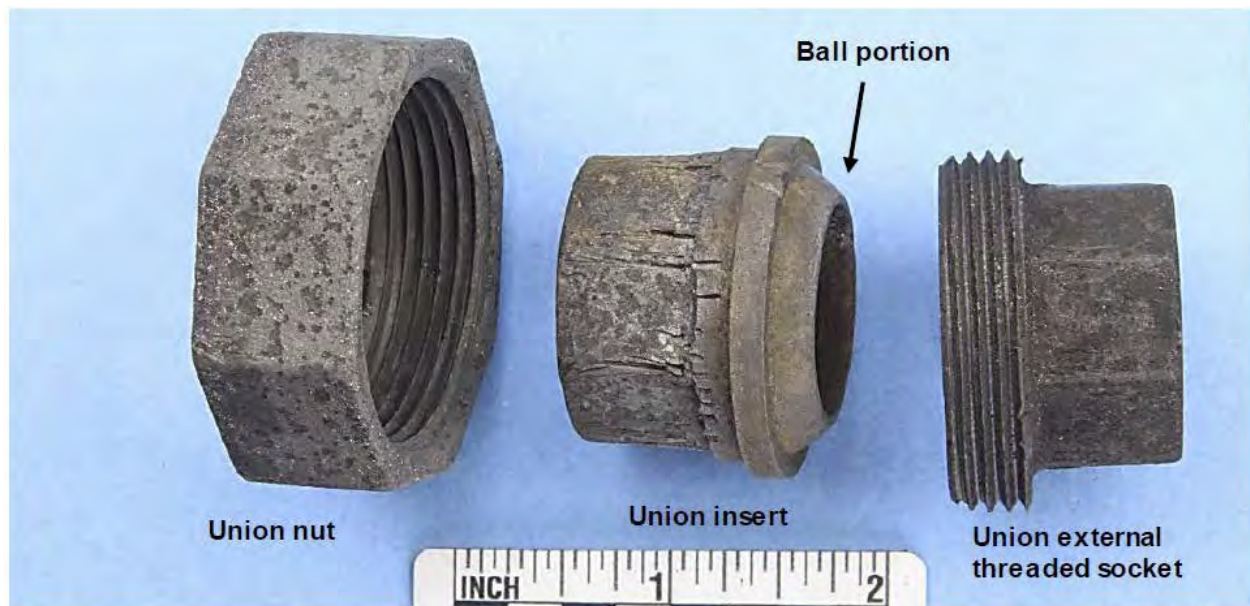


Figure 13. Photograph of the disassembled union assembly for the accident lower gas regulator after cleaning.

³⁰ *Crown* is the tip portion of a thread.

³¹ *Shear stress* occurs in mechanical components when coplanar forces are applied.

Therefore, the NTSB concludes that the external threaded socket of the lower mercury service regulator union most likely was not threaded to the nut and, therefore, the lower mercury service regulator was not connected to the vent line prior to the explosion.

2.3.5 Vent Line Inspection Practices

Records for the 5 years prior to the accident show that WG gas technicians had visited the meter room at 8701 Arliss Street for different service calls on six occasions.³² In that time, WG gas technicians visited the building twice to turn on gas service, which includes inspecting the mercury regulator.³³

WG written procedures required that a mercury service regulator be tested each time the associated meter was set, reset, or changed. This procedure called to ensure that the vent line was clear of debris and could appropriately direct the gas to the atmosphere during an overpressure event. Part of the procedure for this test included disconnecting the vent line at the union, but did not include verifying the line was reconnected. Although this procedure made no distinction between single-family and multifamily structures, WG technicians told NTSB investigators that this testing was, in practice, generally performed only on single-family homes. For multifamily structures, such as apartment buildings, WG technicians only performed visual tests for debris and the outdoor venting of lines.³⁴ They did not check whether or not lines were connected properly.

The NTSB concludes that without a requirement that technicians verify the connection of vent lines for indoor service regulators, such vent lines could inadvertently be left open following service work. Therefore, the NTSB recommends that WG revise its procedures and field forms to require technicians to verify the integrity of vent lines following the testing of indoor service regulators throughout the WG network.

2.3.6 Examination and Exclusion of Gas Appliances in the Meter Room

The only gas appliance in the meter room of building 8701 was the 81-gallon, natural gas-fueled water heater that was installed on July 2, 2012.³⁵ Kay Management maintenance staff visually examined it every Monday to ensure it functioned properly through one on-off cycle. A Kay Management maintenance engineer last inspected the water heater 2 days prior to the explosion and found it to be in working order.

The water heater had an electronic pilot-light ignition. The main burner and pilot gases would cut off during the off cycle when the tank water reached the preset temperature setting on the thermostat. The main burner would not ignite if the pilot sensor did not first sense stable pilot ignition. Changes in inlet gas pressure, negative air pressure into the ignition control module, and the presence of a corrosive material/environment are all conditions that could activate the pilot sensor and cause the pilot not to ignite. However, the pilot sensor could not detect flammable

³² WG records for meter room activity for 8701 Arliss Street.

³³ WG turned on gas service for 8701 Arliss Street on September 27, 2012, and July 7, 2014.

³⁴ For more information, see “Interview of Williams Meter Employee” in Docket DCA16FP003.

³⁵ The water heater was State Water Heaters model SBD81-199-NE.

vapors and, therefore, it would allow the water heater to initiate operation and continue to operate in the presence of flammable vapors.

In a postaccident examination, NTSB investigators observed that nearly half of the water heater was covered with a U-shaped pattern of thermal damage. Visual examination of the water heater by investigators showed no evidence of bulging or significant body deformation.³⁶ (See figure 14.)



Figure 14. Hot water heater at the accident scene after the explosion. (Photograph provided by ATF.)

In addition, a length of gas piping, which included the gas shut-off valve, was still attached to the water heater. All the recovered piping associated with the water heater was heavily oxidized, consistent with heat exposure, and all piping connections were found to be attached and threaded completely. The recovered gas piping to the water heater had a full-diameter, through-thickness fracture at the end of the section where the piping connected to the inlet on the gas control valve assembly, near the bottom of the water heater. Figure 15 shows the main burner assembly and pipe segment that separated from the gas control valve assembly. The fractured end of the pipe segment

³⁶ For more information, see “Materials Laboratory Report 16-100 Hot Water Heater” in NTSB Docket DCA16FP003.

showed evidence consistent with an overstress separation.³⁷ Therefore, the NTSB concludes that the gas piping to the water heater was most likely separated at the control valve due to overstress forces resulting from the explosion. Furthermore, the NTSB concludes that the water heater did not fail prior to the explosion and was not the source of the natural gas release in the meter room.

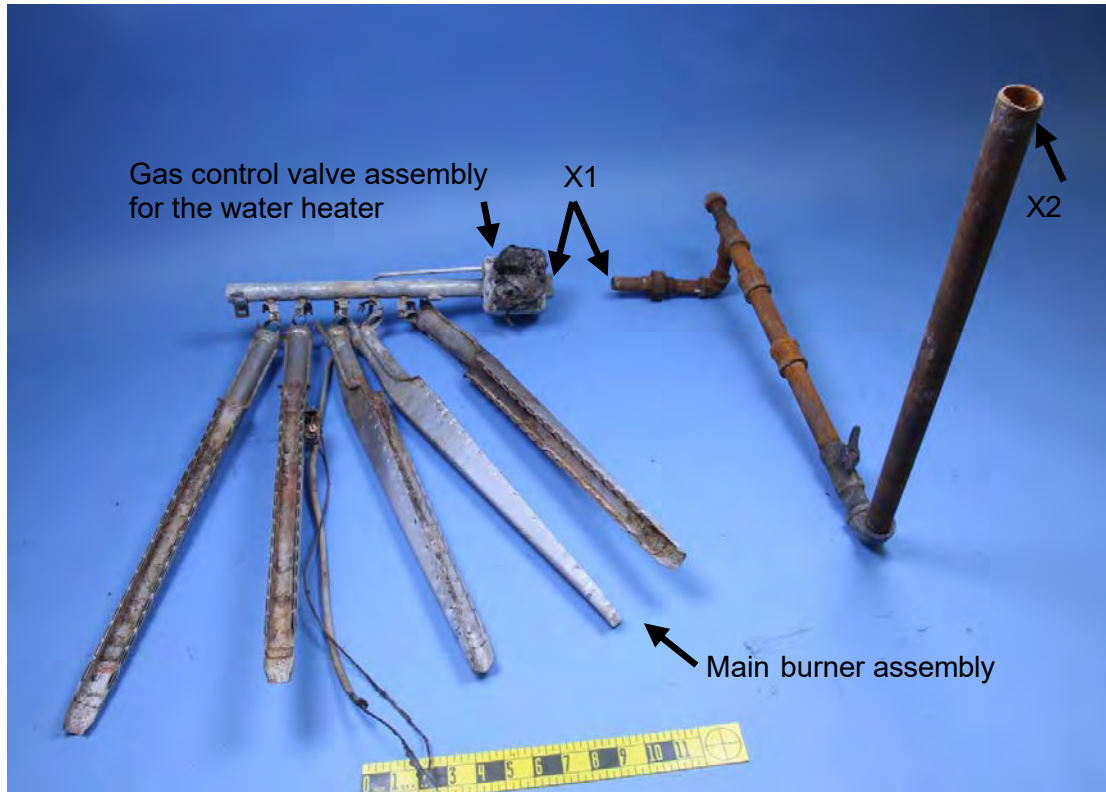


Figure 15. The main burner assembly, including the separated pipe and the gas control valve assembly. The arrows labeled X1 and X2 indicate the pipe segment fractures at the threaded portion.

2.3.7 Mercury Service Regulator Testing

The mercury service regulators sustained significant damage in the accident and could not be functionally tested. Instead, the NTSB field tested mercury service regulators similar to the ones damaged in the accident at the WG facility in Springfield, Virginia.³⁸ The testing included regulator failure scenarios such as a complete loss of mercury in the reservoir, a malfunctioning valve seat and orifice seal (valve seat obstruction), and a perforated diaphragm.³⁹ The flowrates of

³⁷ For more information, see “NTSB Materials Laboratory Factual Report No. 18-008” in NTSB Docket DCA16FP003.

³⁸ Detailed information on the testing can be found in “Washington Gas NTSB Party Submission re Building Explosion Fire” in NTSB Docket DCA16FP003.

³⁹ The exemplar gas regulator assembly was disassembled from another residence in the Flower Branch apartment complex.

the mercury service regulators were measured under different loads, such as no houseline demand and low-load houseline demand, and failure modes.

Valve seat obstruction failure testing was performed to measure the venting that followed a small disruption at the regulator seal between the valve seat and the orifice seal. Table 1 shows the results.

Table 1. Valve seat obstruction failure test data.

Houseline Demand	Relief or Houseline Pressure (w.c.)	Relief Flowrate through Vent Line (CFH)
No houseline demand	8 – 8.5 inches	165
Low-load houseline demand	7 – 7.5 inches	51

Investigators also tested the response of the regulator system to a diaphragm tear, a “wide-open” failure where the valve seat pulled away from the orifice, allowing gas to freely flow around the seat, into the houseline, and out of the vent line. During the testing, the vent lines were metered with AC-250 diaphragm meters, which were necessary for flowrate determination. (See table 2.) However, the meters did act as a slight restriction within the vent line. Meters are never present on vent lines within an actual installation; with them removed, the houseline pressure within a shut-in system dropped to 1.5 psig.⁴⁰

Table 2. Diaphragm tear failure test data for a torn upper regulator.

Houseline Demand	Houseline Pressure (psig)	Relief Flowrate Top Vent (SCFH) ^a	Relief Flowrate Bottom Vent (SCFH) ^a	Combined Flowrate (SCFH)
No houseline demand	1.75	1,170	1,020	2,190
Low-load houseline demand	1.6	1,020	900	1,920

^a The vent lines were metered with AC-250 diaphragm meters. These meters were necessary for flowrate determination; however, they did act as a slight restriction within the vent line. Meters are never present on vent lines within an actual installation. With the meters removed, the houseline pressure within a shut-in system dropped to 1.5 psig.

Investigators found through testing where mercury was completely removed from the reservoir, the average mercury service regulator leakage rate through the vent piping was 331 standard cubic feet per hour (SCFH). This calculated average leakage rate was for testing exemplar regulators 1, 2, and 3, and excluded exemplar regulator 4.⁴¹ Table 3 shows details on the loss of mercury failure testing for each exemplar service regulator.

⁴⁰ *Houseline pressure* is the natural gas pressure of the gas line leading into the home that connects the gas appliances.

⁴¹ Exemplar regulators 1, 2, and 3 were Reynolds Model 30 mercury service regulators and exemplar regulator 4 was a Schlumberger Model B-39 nonmercury service regulator.

Table 3. Loss of mercury failure test data.

Exemplar Regulator	System Pressure (psig)	Ambient Temperature (°F)	Leakage through Vent, observed Q_{obs} (CFH)	Pressure Downstream of Rotameter, P_{act} (psig)	Flow through Vent corrected Q_{corr} (SCFH)
1	20.1	61	197	11.8	344
2	20.5	64	163	18.9	320
3	20.5	65	184	13.4	330
4	20.4	65	260	2.4 ^a	360

^a A B-39 regulator seat was removed during testing, representing a system failure mode not expected in the field.

In addition, investigators pumped gas into the exemplar mercury service regulators at 20 psig—the same inlet pressure of the Flower Branch apartment complex—and observed how they functioned under different load demands of gas. During the field testing, NTSB investigators heard gas forcefully exiting the vent. This corroborated interview statements of a resident who heard a “weeping” or hissing noise outside the basement on the day of the accident, and WG and contractor service technicians who reported that when a mercury service regulator begins to fail and venting gas, that type of noise is heard and a gas odor can be detected. The NTSB concludes that the audible hissing noise heard by a resident, the evidence of past mercury service regulator failures, the pre-existing unconnected vent line union, and the lack of evidence of any pre-existing anomalies in the gas piping or gas appliances indicate that a failed mercury service regulator was the most likely source of the natural gas release in the meter room of building 8701. Discussion of past mercury service regulator failures is found in section 2.3.9.

2.3.8 Natural Gas Accumulation in the Meter Room of Building 8701

Natural gas is composed mostly of methane, with lesser amounts of nitrogen, ethane, and propane, and traces of butane, pentane, hexane, carbon dioxide, and oxygen.⁴² Gas companies add an odorant, such as methyl mercaptan, as a safety measure so it can be easily detected by smell if there is a leak.⁴³ The flammability range for natural gas has an LEL of 3.9 percent to 4.5 percent, and an upper explosive limit (UEL) of 14.5 percent to 15 percent. Natural gas can be explosive if it is in a confined area, if the concentration of gas is between the LEL and UEL, and an ignition source is present (NFPA 2017).

The NTSB completed a study report using a computational fluid dynamics (CFD) model to estimate the time for natural gas released from a failed mercury service regulator to create an atmosphere in the meter room with a concentration sufficient to support an explosive event (NTSB 2018a). The mercury service regulator failure mode selected for the model was the “valve seat obstruction,” as described in section 2.3.8. The CFD model simulated two different cases using the data from the valve seat obstruction failure testing. (See table 1.) One case assumed that there was no demand for gas by the building appliances (no house load) and, therefore, the service regulator had a constant vent leakage rate of 165 SCFH. The other case assumed a 165 SCFH leakage rate and periodic demand for gas by the water heater, during which time the service

⁴² For more information on the composition of the gas at the Flower Branch Complex, see “Gas Composition on

August 10, 2016 to Flower Branch Complex (Silver Spring, MD)” in NTSB Docket DCA16FP003.

⁴³ *Methyl mercaptan* is a colorless gas with a strong odor similar to that of rotten eggs.

regulator vent leak would reduce to zero. The water heater was assumed to be active 20 minutes of every hour. WG provided gas composition analysis and the concentration for LEL for the gas being delivered to the Flower Branch apartments on the day of the accident. The LEL was reported to be 4.78 percent, which was used in the model. The general configuration of the meter room can be seen in figure 16.

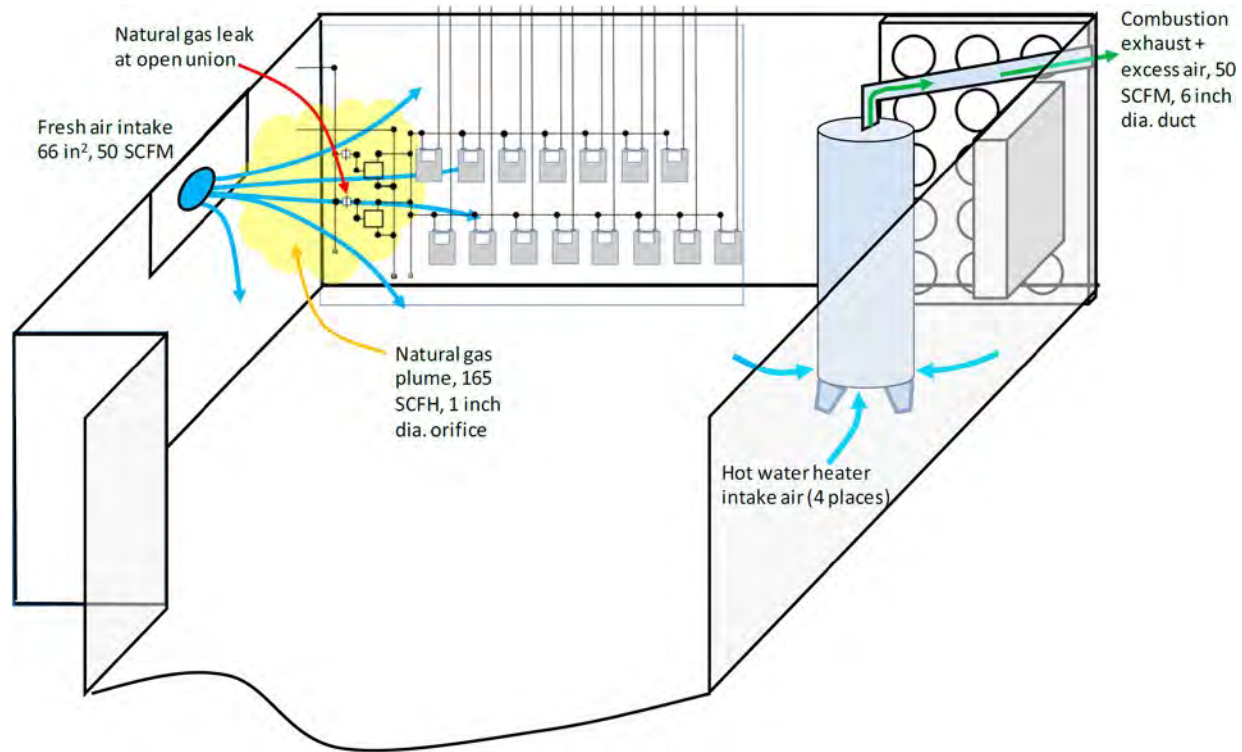


Figure 16. Three-dimensional visualization of the meter room.

According to the time stamp of the alarm records, the last maintenance person locked the meter room at 8:42 p.m., and the explosion occurred at 11:51 p.m. There were no reports of gas odors by residents or maintenance crew at or before 8:42 p.m. The next person to detect a gas odor was a resident of building 8701 who arrived home about 30 minutes before the explosion. Therefore, the natural gas had about 3 hours to accumulate to its explosive range.

Both cases of the scenario representing the valve seat obstruction failure of the mercury service regulator yielded a buoyant natural gas leak that began filling the meter room from the top down. In the case where the gas leak was continuous, a gas concentration greater than LEL formed between the ceiling and 48 inches above the floor within the first hour. In the low-leakage rate case where the gas leak was interrupted by the water heater's operation, a gas concentration greater than LEL formed between the ceiling and 48 inches above the floor within the first hour and a half.⁴⁴ The mercury service regulator failure scenario for the low leakage rate case reached LEL

⁴⁴ The average concentration of the gas in the room, from the ceiling to the floor, measured at about 12-inch increments, reached LEL in 1 hour and 54 minutes when the leak was continuous and 2 hours 40 minutes when the leak was being interrupted.

in the timeframe established in the investigation, and the other failure modes with higher leakage rates would result in shorter time frames to support an explosive event.

Therefore, the NTSB concludes that a low leakage rate of venting natural gas from a mercury service regulator with an obstructed orifice, and other regulator failure scenarios with higher leakage rates, could have allowed the gas concentration to build up to an explosive atmosphere in the meter room between 8:42 p.m. and the time of the explosion at 11:51 p.m.

2.3.9 Mercury Service Regulator Replacement

As of December 2018, WG has replaced about 175,000 mercury service regulators in total and has about 125,000 mercury service regulators still in service throughout its system.

Within WG's *Operations and Maintenance Manual* were specific procedures for mercury service regulators. In addition, it specified conditions which required the mercury service regulators to be replaced:

- The regulator has “blown” or is weeping gas through the vent.
- The regulator is being tested and fails the functional and lock-up test, or malfunctions.⁴⁵
- The system is being uprated to a MAOP above 25 psig.
- The service is being replaced.
- The connecting piping is being altered or replaced, making it practical to change the regulator.
- The regulator is scheduled for removal (WG 2016).

Mercury is a metal that is toxic to human health when exposed through inhalation or ingestion. When released into the environment, mercury may evaporate and become an invisible, odorless, toxic vapor. Between October 2011 and September 2016, WG replaced 12,174 mercury service regulators in their system. Of those, 11,182 mercury service regulators were replaced to mitigate potential environmental risks. The US Environmental Protection Agency (EPA) issued a recommended management practice for the safe removal of mercury containing devices, such as mercury service regulators in May 2011 (EPA 2011). The design of mercury service regulators include materials such as leather diaphragms and rubber valve seats that are subject to age-related deterioration. The remaining 992 regulators were replaced due to performance failure identified by service technicians.⁴⁶ Of those, 631 were caused by venting and 293 were caused by mercury leaking out of the reservoir. Venting or a leaking body connection was found to be the cause of failure in 63 percent of the mercury service regulators and mercury blew out of the reservoir in about 30 percent of the failed mercury service regulators. Although WG identified a leaking or

⁴⁵ These tests examine the functionality of the service regulators to ensure it does not exceed its set pressure or leak gas.

⁴⁶ In this report, WG technicians include both permanent WG and contract employees.

torn diaphragm as another possible failure, it was not recorded for any of the mercury service regulator failures found in their system.

Furthermore, while reviewing WG field records for 8701 Arliss Street, NTSB investigators discovered erroneous entries identifying mercury service regulators as nonmercury service regulators.⁴⁷ WG did not review field entry forms to ensure data entry accuracy and did not have a system-wide master list identifying the location of each mercury service regulator. The NTSB concludes that WG relied on unvalidated information to determine the location and condition of mercury service regulators. Therefore, the NTSB recommends that throughout the WG network, WG implement an audit program to verify the data on the service forms used to determine the location and condition of mercury service regulators to ensure the accuracy of this safety-critical data. In addition, the NTSB recommends that following WG's successful completion of Safety Recommendation P-19-009, PSC, the Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation, and the Public Service Commission of the District of Columbia audit and verify the performance of WG's mercury service regulator replacement program, including its recordkeeping.

2.3.10 Location of Natural Gas Service Regulators

Mercury service regulators, along with all types of natural gas service regulators, must comply with 49 *CFR* Part 192, which is under the authority of PHMSA. In the regulation, they are classified as "service regulators" and defined as a "device on a service line that controls the pressure of gas delivered from a higher pressure to the pressure provided to the customer. A service regulator may serve one customer or multiple customers through a meter head or manifold."⁴⁸

PHMSA regulations include minimum requirements for the location, protection, and installation of service regulators. Service regulators must be installed in a "readily accessible location and be protected from corrosion and other damage" and be located "as near as practical to the point of service line entrance."⁴⁹ Service regulators must have vents that "terminate outdoors" and vent "into the atmosphere and away from any opening into the building." If located outside, the regulators also must be protected from damage from flood or vehicle traffic.⁵⁰

The service regulators in building 8701 were located inside the basement and were connected to an outside vent line. When the mercury service regulator failed on August 10, the excess natural gas flow was not properly vented to the outside because of the unconnected union assembly from the lower service regulator. The natural gas accumulated in the basement until it reached its explosive range and ignited from one of the many possible ignition sources in the room.

The NTSB concludes that the failure of a service regulator, combined with an unconnected vent line, poses a significant threat to people and property with little warning. In particular, the risk of mercury service regulator failure is increased because of their age. Therefore, the NTSB recommends that WG establish a time frame with specific dates and milestones for the replacement

⁴⁷ WG 5-year service records from October 2011 to September 2016 for 8701 Arliss Street.

⁴⁸ Title 49 *CFR* 192.3, "Definitions."

⁴⁹ Title 49 *CFR* 192.353, "Customer meters and regulators: Location."

⁵⁰ Title 49 *CFR* 192.355, "Customer meters and regulators: Protection from damage."

of its mercury service regulators throughout the WG network that recognizes the need to expedite this program and that prioritizes multifamily dwellings where mercury service regulators are located inside the property. In addition, the NTSB recommends that the PSC, the Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation and the Public Service Commission of the District of Columbia oversee the replacement process for the mercury service regulators that WG has in service.

Many dwellings that use natural gas have meters and service regulators outdoors, so that should a regulator fail, the gas release is directed into the atmosphere and does not accumulate to explosive levels inside a structure. However, in many multifamily structures, including the buildings of Flower Branch apartments, service regulators are indoors, but isolated and inaccessible to residents. The NTSB concludes that had service regulators been located outside building 8701, the explosion would not have occurred because gas would have vented to the atmosphere and dissipated. The NTSB recommends that PHMSA require that all new service regulators be installed outside occupied structures. Additionally, the NTSB recommends that PHMSA require existing interior service regulators be relocated outside occupied structures whenever the gas service line, meter, or regulator is replaced. In addition, multifamily structures should be prioritized over single-family dwellings. In addition, the NTSB recommends that WG install all new service regulators outside occupied structures. Further, the NTSB recommends that WG relocate existing interior service regulators outside occupied structures whenever the gas service line, meter, or regulator is replaced. In addition, multifamily structures should be prioritized over single-family dwellings.

2.4 Natural Gas Odor Notification

2.4.1 Kay Management

Kay Management staff reported that when residents applied for a rental apartment, they would provide a “move-in package” to the new tenants. This included documents such as a copy of their application, parking rules, permits, an amenity sheet, and floor plan. Residents were verbally told that if they had any problems, such as a gas odor or an appliance that is not working, to call the 24-hour emergency number for Kay Management. Residents were provided a telephone number for WG, but only for starting new gas service for their apartment. The package did not provide any written guidance on how to report a gas odor to WG.

Kay Management provided in-house training to its maintenance staff to detect a gas leak in an apartment. They were instructed to use a TIF gas detector to search for a leak after receiving a gas odor call from a resident.⁵¹ If staff members did not find a leak, they would continue to test other apartments and rooms within the building. If gas was detected in the apartment, staff members were instructed to check to see if they could make a quick repair, such as replacing a knob on a gas stove or relighting the pilot light. The staff members may also do a soap test, if

⁵¹ TIF Instruments is an electronics company that develops leak detection instruments and lab technology for field service technicians.

needed, to determine the source of the leak.⁵² If they were unable to do the repair, they would schedule an appointment with a plumbing contractor who was certified to repair house lines. If the plumbing contractor determined that the issue was not because of the house line, but a jurisdictional line, the plumbing contractor would report the issue to Kay Management that would then call WG.⁵³

2.4.2 Washington Gas

WG is required by PHMSA to have a public awareness plan to keep the public and local emergency responders aware of pipeline operations and related safety issues in the event of a gas leak or fire.⁵⁴ Specifically, the company periodically mails information to its customers, such as a pamphlet sent with monthly billing statements. In the event of a gas leak, the WG website directs individuals to first call 9-1-1 and then WG. In addition, the company maintains a Gas Operations Dispatch Center, staffed by trained personnel, that receives notification of gas-related emergencies and immediately dispatches the closest service technician to the reported leak site. WG procedures require that leaks and emergency orders be given priority over nonemergency work and calls off-duty employees to perform additional work if the emergency exceeds the capacity of personnel on duty.

WG technicians have expertise with gas infrastructure and are generally equipped with instruments and detection methods that could identify methane at lower concentrations. WG procedures require that when an odor complaint is received, technicians conduct a leak investigation. When that occurs, the technician will not leave the area until the potential leak is “investigated, graded, and/or repaired, or until confirming that there is not a gas leak.” If the technician cannot gain access to the area of the suspected inside leak, the gas is required to be turned off and a reasonable effort made to obtain access. If this cannot be accomplished, the technician is to leave a contact card for the customer and notify dispatch that the gas is turned off (WG 2016).

Had WG been notified of the July 25 odor complaint, they likely would have investigated further to confirm a natural gas leak and take steps to stop it if one occurred.

2.4.3 Montgomery County Fire and Rescue Services

MCFRS has a specific policy and procedure for responding to natural gas incidents. The procedure states that after a rescue unit is dispatched to a natural gas incident, a unit officer confirms there is a gas leak and classifies it as either a “major” or “minor” leak, based on its severity.⁵⁵ Examples of a major leak would be one that has migrated throughout an occupied structure, health care facility, or high occupancy structure with high life-hazard risks or a leak from

⁵² (a) A *soap test* is a method in which a soap solution is used to detect leaks. It is commonly used in the gas industry. (b) For more information, see interview transcripts of maintenance personnel for the Flower Branch apartment complex for Kay Management employees in NTSB Docket DCA16FP003.

⁵³ For more information, see the interview transcript of the president of Kay Management in NTSB Docket DCA16FP003.

⁵⁴ Title 49 *CFR* 192.616, “Public awareness.”

⁵⁵ According to MCFRS, a *major leak* is “a natural gas leak with an imminent threat of life safety,” and a *minor*

leak is “a leak not believed to pose an imminent threat of life safety,” and that does not involve a fire.

a transmission (nonodorized) supply pipeline. Under MCFRS guidelines, the incident commander is then required to establish a Level II Command and “request additional resources as needed.” In addition, the guidelines state that gas personnel are to be considered the “expert natural gas resource officer (MCFRC 1996).”

When a leak is confirmed, the incident commander sets up a hot zone and restricts the area to fire service personnel in full protective turnout equipment and eliminates all ignition sources within that zone. Fire personnel then checks all occupancies in the immediate vicinity for the presence of natural gas and, if present, evacuates the occupants and ventilates the structure. The minor gas leak procedure includes a provision for the gas company technician to report to the incident commander upon arrival.

However, the MCFRS policy and procedure did not specify how and when to notify the gas company. The NTSB believes the applicable gas company should be notified after responders have been notified whenever a member of the public calls 9-1-1 to report a gas odor or a gas leak. In this particular situation, those calls were received by the Montgomery County Emergency Communication Center (ECC), which used specific protocols for their dispatchers. The ECC used *Protocol-60 Gas Leak/Gas Odor (Natural and LP [liquefied petroleum] Gases)* when receiving a 9-1-1 call for a gas odor/leak (IAED 2014). The ECC purchased its protocols from Priority Dispatch, a research company that provided products and training for emergency call-taking centers. Priority Dispatch worked in conjunction with the International Academies of Emergency Dispatch (IAED), who authored the *Protocol-60 Gas Leak/Gas Odor (Natural and LP Gases)* protocol. However, *Protocol-60 Gas Leak/Gas Odor (Natural and LP Gases)* did not direct the dispatcher to contact the gas company during a gas odor/leak call. The NTSB concludes that had WG been notified of the gas odor call on July 25, 2016, a service technician may have had the opportunity to enter the meter room of building 8701, identify the unconnected vent line, and remedy the situation, potentially preventing the gas release and explosion that occurred on August 10, 2016. Therefore, the NTSB recommends that the IAED revise *Protocol-60 Gas Leak/Gas Odor (Natural and LP Gases)* to direct dispatchers to notify the gas company when any odor call is received.

2.5 Odorant and Methane Detection of Natural Gas

2.5.1 Odorant Detection

Natural gas regulations that have required the addition of odorant to natural gas distribution pipelines were first promulgated by DOT in 1970 (*Federal Register*, 1970, 13247). Because these gas systems are situated primarily in populated areas, the odorant can act as an early warning of a gas release to prevent an explosion and fire. In the United States, all odorants contained sulfur because of its unique odor that when detected could be associated with natural gas. Pipeline operators selected a blend of a sulfur-based odorants that were the most appropriate for their pipeline network. Odorant was the primary safety feature that members of the public relied upon to detect a natural gas release (GAO 2018).

However, soon after the odorant regulations were issued, the Research and Special Programs Administration (RSPA) observed problems with the odorization practices, the

effectiveness of commercial odorants in use, as well as odorant fading, and commissioned a study by the Institute of Gas Technology to study these issues.⁵⁶ RSPA was particularly concerned about odor fading because a number of uncontrolled releases of natural gas went undetected, leading to explosions and fires that caused severe injury, death, and extensive property damage (RSPA 1975). The study noted that odorant could be stripped from natural gas through the adsorption or absorption on pipeline walls, particularly new main pipelines; oxidation by the presence of iron oxide and traces of oxygen; and adsorption through the soil.⁵⁷ The study recommended a solution for odorant fade in new pipelines by applying coatings to the internal surface of gas mains to prevent odorant adsorption. However, the study did not find a solution to address odorant adsorption through soil, and the study recommended “research efforts for developing an odorant blend that will have better soil penetration characteristics.”

In subsequent years since the RSPA study was published, government, industry, and academia have researched the issue of odorant fade. In 1998, the DOT Transportation Safety Institute recommended that gas companies develop odorization programs which would consist of odorant selection criteria, method of injection, and verification of odor intensity (Bull 1998). That same year, a chemical company, Elf Atochem North America, Inc., proposed that companies use different mercaptans blended with sulfide components as an alternate odorant with effective soil penetrability. Additionally, various odorant blends have been studied and distinguished by their physical and chemical properties, which reflect their resistance to oxidation and ability to pass through soil (Usher 1999). Despite these proposed solutions, PHMSA regulations do not address methods for mitigating odorant fade when natural gas migrates through soil. Furthermore, NTSB continues to recognize odorant fade as a contributing factor in many gas pipeline accidents.

Appendix B contains examples of 20 accidents between 1971 and 2018 where natural gas had either migrated from an outside leak or within a structure and accumulated to dangerous concentrations leading to explosions, fires, fatalities, injuries, and severe property damage. NTSB identified within those investigations whether gas odorant played a significant role in warning the occupants about the presence of gas in buildings. In some cases, the occupants smelled gas but failed to report the odor due to a lack of awareness about the dangers of natural gas. In some cases, gas odor was not detected by the occupants of the building in time for them to evacuate before the explosion occurred, despite the odorant levels being compliant with regulatory requirements. In several of these cases, the NTSB cited odorant fade due to soil adsorption as a contributing factor.

Since the Pipeline Safety Improvement Act of 2002 was signed into law, gas companies have been required to educate the public through public information programs on the hazards of natural gas and specifically outline steps for public safety in the event of a pipeline release.⁵⁸

⁵⁶ (a) Before PHMSA was created in 2004, RSPA was the entity within the DOT responsible for regulating the pipeline industry. (b) The Institute of Gas Technology was founded in 1941 at the Illinois Institute of Technology. In 2000, the Institute combined with the Gas Research Institute to form the Gas Technology Institute.

⁵⁷ *Adsorption* is the process by which a material such as a gas, liquid, or solute, adheres to the surface of another material that is a solid or liquid. *Absorption* is the process in which a material is dissolved by another material, such as a liquid or solid.

⁵⁸ Section 5 of the Pipeline Safety Improvement Act of 2002 requires gas companies to have a public education program to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.

However, as illustrated in this accident, as well as some of the accidents discussed in appendix B, public awareness programs do not guarantee that gas odors will be appropriately reported.

Kay Management and WG staff provided information to residents of the Flower Branch apartment complex on what to do if they detect gas odors. They were supposed to contact both WG and the fire department. However, only one call was made to authorities—the call was made only to the fire department—regarding the odor, despite several residents attesting to noticing the odor for several weeks prior to the accident.

While olfactory senses can provide warning of a gas leak, they cannot be relied upon in every situation as a primary means of detecting the presence of hazardous gas concentrations. As illustrated in a 2016 document from the British Standards Institution (BSI), the European standard for combustible gas detectors, EN 50244, states that most people may be able to detect gas odors at very low levels of 2 percent LEL or less; however, this can depend on an individual's sensitivity to the odor, medical conditions, and the phenomena of olfactory fatigue (BSI 2016).⁵⁹ Although in many cases, gas odorants effectively warn about the presence of gas leaks, too often personal decisions to report gas leaks and evacuate buildings are connected to the intensity by which individuals are able to smell gas odors. PHMSA odorant requirements rely on a person with a "normal sense of smell" and assumes that when the odor is detected, there is adequate time to evacuate, identify, and resolve the leak before the gas accumulates to explosive levels.⁶⁰ However, as demonstrated by many NTSB investigations, gas odorant does not always provide sufficient warning of gas leaks and hazardous conditions and, under certain conditions, a gas leak can go undetected. For instance, in many multifamily structures gas regulators are located in locked rooms, basements, or other areas that are not readily accessible to residents. Therefore, the NTSB concludes that the use of gas odorants alone does not effectively mitigate the risk of death and injuries caused by gas system leaks, such as the undetected leak that occurred at the Flower Branch apartment complex.

2.5.2 Methane Detection

The seven fatalities in the August 10 explosion were residents located in apartments in buildings 8701 and 8703, closest to the basement meter room. Had there been an alarm to warn of a natural gas release, residents, especially those closest to the meter room, could have been notified earlier to evacuate to a safe place away from the building, without relying on someone to smell gas odors to identify the hazard. The NTSB concludes that had methane detectors been installed at the Flower Branch apartment complex, an alarm would have alerted residents to a gas release on either July 25, 2016, or August 10, 2016, reducing the potential and consequences of a natural gas explosion.

The NTSB has recommended previously that "gas detectors" be required to provide early warning of gas leaks in buildings. NTSB first issued this recommendation as a result of an investigation into a gas explosion that occurred in a commercial building in New York City,

⁵⁹ *Olfactory fatigue* is when a person's sense of smell adapts to an odor after prolonged exposure and is unable to recognize the smell temporarily.

⁶⁰ According to 49 *CFR* 192.625 (a), "Odorization of gas," "a combustible gas in a distribution line must contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit, the gas is readily detectable by a person with a normal sense of smell."

New York, on April 22, 1974 (NTSB 1976). Building personnel had smelled gas odors in the basement, but the explosion occurred before the gas could be shut off, injuring 70 people. The report noted that many commercial buildings were required to have smoke or heat detectors placed in strategic interior locations; therefore, it seemed logical for similar requirements to be adopted for installing gas detectors. As a result of this investigation, the NTSB recommended the US Department of Housing and Urban Development (HUD) to:

Investigate the practicality and the availability of gas vapor detection instruments for installation at strategic locations in buildings. Based on the results of this investigation, recommend guidelines to appropriate State and local government agencies for regulations for the installation of gas detection instruments in buildings. (P-76-12)

HUD responded that gas detectors were technically possible, but the agency did not believe they were practical at the time. HUD responded that it would continue to review developments in the field and would reevaluate their position “when a practical, cost effective natural gas detection system is developed.”

NTSB made a similar safety recommendation from the investigation of a gas explosion and fire that occurred in a retirement home in Allentown, Pennsylvania, on June 9, 1994 (NTSB 1996). Workers hit a gas service line while performing excavation work; gas entered the home and ignited. Although workers and residents inside the home smelled gas and reported it to the gas company, they did not evacuate before the explosion occurred. The NTSB investigation found that the performance and cost-effectiveness of gas detectors had improved in the 20 years since Safety Recommendation P-76-12 was issued. Therefore, the NTSB recommended in Safety Recommendation P-96-16 that HUD:

Evaluate the safety benefits of using gas detectors in buildings approved by the Department for Federal rent subsidies as a means of providing building occupants and local emergency-response agencies with early notice of released natural gas within buildings; require that gas detectors be used in buildings in which the Department has determined that a gas detector would be cost effective and beneficial. (P-96-16)

For 5 years, HUD did not respond to this safety recommendation. In July 2001, HUD declined to implement the recommendation because it claimed that it did not have the statutory authority and that gas detection should be required in the National Fire Code.⁶¹ The NTSB classified this safety recommendation as *Closed—Unacceptable Action*.

Currently, methane gas or combustible gas alarms are not required by federal or state regulations, nor are they required in building or fire codes for residential occupancies. While smoke and carbon monoxide alarm requirements have been incorporated into many state regulations, methane detection alarms have not been widely adopted due to initial reservations regarding the reliability of the technology (NCSL 2018). Although some states and cities have considered requiring the use of this technology because of their own major natural gas incidents,

⁶¹ Letter from HUD to NTSB, July 19, 2001.

the proposed bills or state regulations have not been implemented. It is unlikely that these proposals will be enacted until the devices perform more reliably and there is adequate industry guidance for both performance and installation. For example, legislation has been proposed in the New York Assembly that would require all temporary and permanent dwellings in the state to install an operable combustible gas detector. Further, it would require that the detector be wirelessly connected to the gas company. This legislation, A 2913, also requires gas companies to annually publish a report of gas leaks broken down by county. A 2913 has been referred to the Assembly Governmental Operations Committee, but the committee has not taken any action on the proposal.⁶² New York City went further and enacted a local law that revised its housing maintenance and building codes to require the installation of natural gas detection devices once an industry standard has been developed.⁶³

Operations Technology Development (OTD), a membership-controlled partnership of natural gas distribution companies that studies new technologies, is currently researching methane detection technology in residential occupancies (OTD 2018).⁶⁴ OTD initiated the Residential Methane Detectors (RMD) program, which is currently being overseen by one of its members, the Gas Technology Institute (GTI). Other members, such as WG, are also providing funding for the program. The program began in 2014 and involves researching and testing commercially available methane detectors, evaluating consumer behavior for adoption of the technology, and reviewing and developing industry standards for the installation and maintenance of methane detectors.

OTD presented the RMD program at a PHMSA Research and Development forum in November 2016 (Wiley 2016). At these forums, representatives from academia or industry proposes projects and PHMSA will follow with a solicitation for projects that aligns with its research interests. However, PHMSA rejected the proposal and did not follow with a solicitation for research on residential methane detection after the OTD program was presented. Therefore, the RMD program has remained an industry-funded effort.

The RMD program evaluated commercially available metal oxide semiconductor methane detectors that sound an alarm when gas concentrations exceed a specified set-point. In December 2017, the RMD program completed its pilot testing phase of various commercially available methane detectors using a nationally recognized testing laboratory (OSHA 2018).⁶⁵ As documented in a GTI report, the devices were tested under different conditions such as extreme temperatures and humidity, exposure to multiple chemicals, different detection limits for methane (5 percent, 10 percent, and 25 percent LEL), and reduced voltage supply (GTI 2017). The program found many commercially available methane detectors are not reliable and may be subject to false alarms because of interference with household chemicals or exposure to extreme temperatures and

⁶² New York State Senate Bill A2913, <https://www.nysenate.gov/legislation/bills/2019/A2913>, Accessed April 9, 2019.

⁶³ New York City Council, Local Law 157, Int 1100-2016, <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=2576426&GUID=D9EE7190-AF91-411D-A017-8305FF6D6F0D&Options=Advanced&Search>. Accessed November 5, 2018.

⁶⁴ OTD is a member-driven, not-for-profit organization that identifies, selects funds, and oversees research projects that are intended to improve safety, reliability, and operational efficiency in the gas utility industry.

⁶⁵ OSHA certifies a private-sector organization that meets the legal requirements under 29 *CFR* 1210.7 to perform testing and certification of procedures using consensus-based testing standards.

humidity. The next stages in the RMD program involve additional testing that is expected to be completed in 2018, and also a placement study to develop a scientific rationale for recommendations on where to best locate the residential methane detectors inside buildings.

One natural gas company, Consolidated Edison Company of New York, is participating with a consortium of gas companies in the testing phase of the RMD program.⁶⁶ The company officially began a pilot program to install 9,000 units in New York City in November 2018.⁶⁷ The detectors trigger an alarm when a leak is detected at 10 percent LEL and communicates directly to the gas company's emergency response center, that dispatches a technician and notifies the local fire department. The alarm also has a voice-activated message that alerts residents to evacuate and to call 9-1-1.

To address methane detector reliability, the RMD program has identified an existing industry standard, the American National Standards Institute (ANSI)-approved, product standard by the Underwriter's Laboratories, UL 1484 *Safety for Residential Gas Detectors*, which covers electrically operated gas detectors that detect both propane and methane in residential occupancies and recreational vehicles (UL 2016). This standard currently permits alarms to operate at a detection limit of 25 percent of the LEL for methane, or 5 percent volume of air, which is the limit where most commercially available alarms are set. The RMD program advocates lowering this detection limit to 10 percent LEL for methane so that the alarms will provide earlier notification of a gas release. Industry standards in other countries, such as Great Britain, have established lower detection limits for natural gas detection alarms to provide early notification. The British standard sets visual indicators and audible alarms for combustible gases to operate at "a volume ratio above 3 percent LEL and below 20 percent LEL (BSI 2009)."

The RMD program's ongoing research and development of new and existing technology is intended to resolve the uncertainties with methane detection. However, once the technology is established, standards will need to be developed to ensure the proper installation, maintenance, and testing requirements, including effective and safe detection limits. The NTSB concludes that the development of a national code that establishes methane-detection performance criteria and requires the technology to be installed in residential and commercial buildings with natural gas service would provide a redundant means of leak detection to supplement the use of odorants.

In the United States, the National Fire Protection Association (NFPA) and the International Code Council (ICC) are nationally recognized standard-setting bodies for both building and fire codes, as well fuel gas codes such as the *International Fuel Gas Code (IFGC)* (ICC 2015) and the *National Fuel Gas Code (NFPA 54)* (NFPA 2018). The *IFGC* and *NFPA 54* provide minimum safety requirements for the design and installation of fuel gas piping systems in homes and other nonindustrial buildings, though, neither of them requires methane detection alarms. These codes are adopted across the nation and incorporated either in state or local regulations. They also apply

⁶⁶ As a result of the natural gas-fueled building explosion and fire in East Harlem, New York City on March 12, 2014, the New York State Public Service Commission agreed as part of the settlement to the Consolidated Edison Company that the company provide improvements for detection and response to gas leaks, which included remote methane detection equipment.(NTSB 2015).

⁶⁷ (a) Letters from Consolidated Edison Company to the New York State Public Service Commission, January 3, 2017, and July 2, 2018; (b) "PSC Announces \$25.5 Million East Harlem Settlement," press release, July 12, 2018.

to gas service pipelines entering structures, which is under the jurisdiction of the local authority and the responsibility of the owner to implement. For example, at the Flower Branch apartment complex, the gas service piping after the gas meter is regulated by Montgomery County, which has adopted the WSSC Code that incorporates by reference the 2015 International Fuel Gas Code.⁶⁸

The NTSB concludes that the scope of *NFPA 54*, *IFGC*, and their widespread adoption by local authorities appear to be the most appropriate standards for requiring methane detector alarms, with local jurisdictions enforcing the requirements and making them feasible. Therefore, the NTSB recommends that, in coordination with NFPA and ICC, the GTI work to develop standards for methane detection systems for all types of residential occupancies in both the *IFGC* and the *National Fuel Gas Code*, *NFPA 54*. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. Further, the NTSB recommends that, in coordination with GTI and ICC, the NFPA revise the *National Fuel Gas Code*, *NFPA 54* to require methane detection systems for all types of residential occupancies with gas service. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. Lastly, the NTSB recommends that, in coordination with GTI and NFPA, the ICC incorporate provisions in the *IFGC* that requires methane detection systems for all types of residential occupancies with gas service. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements.

⁶⁸ Currently, the WSSC Plumbing and Fuel Gas Board is considering a proposal to adopt the 2018 *IFGC*.

3 Postaccident Actions

Since the explosion, WG has taken a number of initiatives involving safety messaging when a release of natural gas is suspected, including:

- Distributing 10,000 door-hanging signs in multiple languages communicating the importance of calling the gas company upon smelling natural gas to multifamily buildings in Montgomery County, Maryland, that have gas service.
- Continuing to work closely with local fire departments in the Washington, DC, region on improving communications to ensure WG is alerted each time the jurisdiction received notice of a possible odor of natural gas.
- Developing a plan for a coordinated response with local first responders when a possible odor of natural gas is detected.

In addition, WG is planning equipment improvements, including:

- Installing new service regulators to the exterior of 8701 Arliss Street and any new multifamily dwelling construction projects in the Flower Branch apartment complex, reducing the risk of high gas flow releasing into the interior of the buildings.
- Simultaneously replacing all legacy multimeter sets with old service lines and moving them to the exterior of the building.

Furthermore, WG has installed thermal safety valves in all new and replaced metered facilities, which shut off the flow of gas in the event of a structure fire, reducing further damage from an incident.⁶⁹

⁶⁹ Detailed information on the testing can be found in “Washington Gas NTSB Party Submission re Building Explosion Fire” in NTSB Docket DCA16FP003.

4 Conclusions

4.1 Findings

1. The postexplosion responses by both Montgomery County Fire and Rescue Service and Washington Gas Light Company were prompt and adequate.
2. Based on the pattern of debris and the location of the victims, the explosion radiated from the meter room, where the gas meter assembly was located.
3. The upper mercury service regulator was most likely connected to the vent line through the threaded nipple and union assembly prior to the explosion in building 8701 and the regulator likely became separated from the vent line due to forces of the explosion or from the building collapse.
4. The external threaded socket of the lower mercury service regulator union most likely was not threaded to the nut and, therefore, the lower mercury service regulator was not connected to the vent line prior to the explosion.
5. Without a requirement that technicians verify the connection of vent lines for indoor service regulators, such vent lines could inadvertently be left open following service work.
6. The gas piping to the water heater was most likely separated at the control valve due to overstress forces resulting from the explosion.
7. The water heater did not fail prior to the explosion and was not the source of the natural gas release in the meter room.
8. The audible hissing noises heard by a resident, the evidence of past mercury service regulator failures, the pre-existing unconnected vent line union, and the lack of evidence of any pre-existing anomalies in the gas piping or gas appliances indicate that a failed mercury service regulator was the most likely source of the natural gas release in the meter room of building 8701.
9. A low leakage rate of venting natural gas from a mercury service regulator with an obstructed orifice, and other regulator failure scenarios with higher leakage rates, could have allowed the gas concentration to build up to an explosive atmosphere in the meter room between 8:42 p.m. and the time of the explosion at 11:51 p.m.
10. Washington Gas Light Company relied on unvalidated information to determine the location and condition of mercury service regulators.
11. The failure of a service regulator, combined with an unconnected vent line, poses a significant threat to people and property with little warning.

12. Had service regulators been located outside building 8701, the explosion would not have occurred because gas would have vented to the atmosphere and dissipated.
13. Had Washington Gas Light Company been notified of the gas odor call on July 25, a service technician may have had the opportunity to enter the meter room of building 8701, identify the unconnected vent line, and remedy the situation, potentially preventing the gas release and explosion that occurred on August 10.
14. The use of gas odorants alone does not effectively mitigate the risk of death and injuries caused by gas system leaks, such as the undetected leak that occurred at the Flower Branch apartment complex.
15. Had methane detectors been installed at the Flower Branch apartment complex, an alarm would have alerted residents to a gas release on either July 25, 2016, or August 10, 2016, reducing the potential and consequences of a natural gas explosion.
16. The development of a national code that establishes methane-detection performance criteria and requires the technology to be installed in residential and commercial buildings with natural gas service would provide a redundant means of leak detection to supplement the use of odorants.
17. The scope of *National Fire Protection Association 54, International Fuel Gas Code*, and their widespread adoption by local authorities appear to be the most appropriate standards for requiring methane detector alarms with local jurisdictions enforcing the requirements and making them feasible.

4.2 Probable Cause

The National Transportation Safety Board determines that the probable cause of the explosion in building 8701 of the Flower Branch apartment complex was the failure of an indoor mercury service regulator with an unconnected vent line that allowed natural gas into the meter room where it accumulated and ignited from an unknown ignition source. Contributing to the accident was the location of the mercury service regulators where leak detection by odor was not readily available.

5 Recommendations

As a result of this investigation, the National Transportation Safety Board makes the following new safety recommendations:

To the Pipeline and Hazardous Materials Safety Administration:

Require that all new service regulators be installed outside occupied structures. (P-19-001)

Require existing interior service regulators be relocated outside occupied structures whenever the gas service line, meter, or regulator is replaced. In addition, multifamily structures should be prioritized over single-family dwellings. (P-19-002)

To the Public Service Commission of Maryland, the Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation, and the Public Service Commission of the District of Columbia:

Following Washington Gas's successful completion of Safety Recommendation P-19-009, audit and verify the performance of Washington Gas's mercury service regulator replacement program, including its recordkeeping. (P-19-003)

Oversee the replacement process for the mercury service regulators that Washington Gas has in service. (P-19-004)

To the International Academies of Emergency Dispatch:

Revise *Protocol-60 Gas Leak/Gas Odor (Natural and Liquefied Petroleum Gases)* to direct dispatchers to notify the gas company when any odor call is received. (P-19-005)

To the International Code Council:

In coordination with the Gas Technology Institute and the National Fire Protection Association, incorporate provisions in the *International Fuel Gas Code* that requires methane detection systems for all types of residential occupancies with gas service. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. (P-19-006)

To the National Fire Protection Association:

In coordination with the Gas Technology Institute and the International Code Council, revise the *National Fuel Gas Code*, *National Fire Protection Association 54* to require methane detection systems for all types of residential occupancies with gas service. At a minimum, the provisions should cover the

installation, maintenance, placement of the detectors, and testing requirements. (P-19-007)

To the Gas Technology Institute:

In coordination with the National Fire Protection Association and the International Code Council, work to develop standards for methane detection systems for all types of residential occupancies in both the *International Fuel Gas Code* and the *National Fuel Gas Code, National Fire Protection Association 54*. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. (P-19-008)

To Washington Gas Light Company:

Throughout the Washington Gas network, implement an audit program to verify the data on the service forms used to determine the location and condition of mercury service regulators to ensure the accuracy of this safety-critical data. (P-19-009)

Revise your procedures and field forms to require technicians to verify the integrity of vent lines following the testing of indoor service regulators throughout the Washington Gas network. (P-19-010)

Establish a time frame with specific dates and milestones for the replacement of mercury service regulators throughout the Washington Gas network that recognizes the need to expedite this program and that prioritizes multifamily dwellings where mercury service regulators are located inside the property. (P-19-011)

Install all new service regulators outside occupied structures. (P-19-012)

Relocate existing interior service regulators outside occupied structures whenever the gas service line, meter, or regulator is replaced. In addition, multifamily structures should be prioritized over single-family dwellings. (P-19-013)

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

ROBERT L. SUMWALT, III
Chairman

EARL F. WEENER
Member

BRUCE LANDSBERG
Vice Chairman

JENNIFER HOMENDY
Member

Report Date: April 24, 2019

Vice Chairman Bruce Landsburg filed the following concurring statement.

Board Member Statement

Vice Chairman Bruce Landsberg filed the following concurring statement on April 25, 2019. Chairman Robert L. Sumwalt, III and Member Earl Weener joined in this statement.

While concurring with the report, I believe there is an education opportunity for first responders, property owners, and code enforcement personnel. This tragedy might have been prevented had the Montgomery [County] Fire Department had access to the meter service room on July 25th, as required by the fire code.

Because Kay Management had changed the lock in February 2016, and failed to provide a key to the fire department, the first responders were unable to gain access, despite the report of gas odor. They pried the top of door partially open to insert a gas detector probe but no gas was noted and they decided not to pursue it further. Neither Washington Gas nor Kay Management was notified.

As noted in the Board meeting, the concentration of gas mixtures, air currents, odorant concentration, and sensitivity of various measuring devices all affect the ability to detect the presence of gas. From the NTSB Report, “Between September 2015 and June 2016, Kay Management received six gas odor calls from residents of 8701 Arliss Street. Members of its maintenance staff said that when they investigated, they either did not detect gas through their gas-detection equipment or would report that the painting of apartments was causing the smell. During this period, MCFRS fire personnel responded to an odor call at building 8701 on July 25, 2016. According to interviews with Flower Branch residents and employees from Kay Management, residents in the building routinely called either the management company or 9-1-1 to report gas odors.”

As a result, perhaps several opportunities to prevent the explosion were missed. While the Board declined to make a recommendation, the various trade associations and publications should offer a case study of this accident to code enforcement, first responder, and building management organizations. Maintaining access to rooms having gas meters or appliances is not only required by code, it is essential to safety. Likewise building management and maintenance personnel should understand the seriousness of such reports, especially when repetitive and take appropriate action.

First responders must have immediate access to such places. If for any reason they are unable, building management must be reachable 24/7 to provide immediate access - No exceptions! Further, first responders must immediately seek to gain access with building management, especially when inspecting closed spaces containing gas equipment within multi-family buildings.

A placard/sign should be placed adjacent to the lockbox or entrance providing an emergency phone number and a notice that when keys or combinations are changed, that they must be placed in the lockbox.

First responder training should include scenarios recreating this circumstance, so crews know how to respond when this situation is invariably repeated. It cannot be said with certainty that had the first responders gained access to the meter room on July 25th the accident would have

been prevented, but it might have. Given the loss of life and property, both looking backward and forward, this seems like a very small and easily accomplished action.

6 Appendix

6.1 Appendix A: The Investigation

The National Transportation Safety Board (NTSB) was notified around 2:00 a.m. on August 11, 2016, of an explosion and fire at the Flower Branch apartment complex in Silver Spring, Maryland. A team of seven, including an investigator-in-charge, investigators, representatives from Transportation Disaster Assistance, and an attorney from the office of General Counsel, launched to the scene later that morning.

Parties to the investigation included the Pipeline and Hazardous Materials Safety Administration (PHMSA), Public Service Commission of Maryland (PSC), Montgomery County Fire and Rescue Service (MCFRS), Montgomery County Police Department (MCPD), and Washington Gas (WG).

6.2 Appendix B: Sample of 20 NTSB Investigations of Residential and Commercial Building Pipeline Accidents Between 1971 and 2018

- a. On October 4, 1971, in Fort Worth, Texas, a house exploded and burned when gas ignited and exploded inside the home as a resident tried to light her gas stove. The resident sustained major burns to over 50 percent of her body. Natural gas had migrated from an improperly installed plastic service saddle-tapping nipple connection into the house, which ultimately failed, and load stresses from the operation of heavy construction equipment over the connection and heavy rainfall that caused the soil to exert pressure on the pipe (NTSB 1972).
- b. On March 24, 1972, in Annandale, Virginia, a contractor backhoe snagged a 2-inch steel gas main. Gas company personnel arrived 40 minutes later and started searching for the break but did not shut off the gas, check for gas in the nearby houses, or call emergency responders. About 20 minutes later, gas had leaked from the main and into the houses. One house exploded, and then a few minutes later two other homes exploded and burned, killing three and injuring one. A number of residents had smelled gas in their houses, but only one reported it to the gas company (NTSB 1972a).
- c. On April 22, 1973, in El Paso, Texas, an explosion occurred at a 15-unit apartment complex, killing seven people and injuring eight. Residents had smelled gas odor the day before the explosion but had not alerted the fire department or the gas company. The educational materials provided by the gas company on procedures to follow in case of a gas leak contributed to the problem because they were only printed in English and were sent to an area that housed a primarily Latino population. In addition, no emergency number was provided on the materials. The gas leak had occurred from a broken cast-iron reducer and also from two corrosion leaks from the gas main (NTSB 1974).

- d. On December 2, 1973, in Charleston, West Virginia, a gas explosion occurred at a single-family home, followed by an intense fire that killed three people and injured two. The fire was initially extinguished by the local fire department and the gas was shut off, but another fire rekindled from the gas-saturated soil. The NTSB determined the probable cause of the explosion and fire was an accumulation of natural gas that had released from two corroded holes of a gas main, which had migrated into the house and ignited. Residents in the home had smelled a slight odor the day before the accident, but did not report it to the gas company or fire department. The natural gas was tested and found to have met the federal requirements for odorant level. The NTSB contributed the odor fade to filtering of the odorant through the soil and olfactory fatigue (NTSB 1974a).
- e. On April 22, 1974, in New York City, New York, an explosion occurred at a commercial building, injuring 70 people. The NTSB determined that the probable cause of the accident was a rupture of an overpressure hydropneumatics tank which rocketed upward and tore an overhead gas service line, which allowed an uncontrollable flow of gas into the building, which ignited and exploded. Personnel who went into the basement to check on the water smelled a gas odor, but the building exploded before the gas could be shut off. The NTSB issued a recommendation to the US Department of Housing and Urban Development to require gas vapor detection instruments for installation at strategic locations in buildings (NTSB 1976).
- f. On January 10, 1976, in Fremont, Nebraska, a natural gas main failed due to contraction caused by cold weather that caused the pipe to pull out of its compression coupling and release gas. The gas seeped into a hotel, eventually accumulating and igniting, causing an explosion and fire that killed 20 and injured 39 people. The gas company had received multiple odor calls an hour before the explosion occurred. The gas technicians responded but could not identify the leak in time. An evacuation order was issued about 20 minutes before the explosion, but that was not sufficient time for everyone to leave the building (NTSB 1976a).
- g. On December 15, 1977, in Lawrence, Kansas, a natural gas main pulled out of a compression coupling which was jointed to a steel gas main. Natural gas released and migrated through the stone foundation walls of a three-story apartment building and an adjacent bakery, which then accumulated and ignited. The result was an explosion and fire that killed two residents and injured three. One of the employees of the bakery had smelled a gas odor, but did not call the gas company (NTSB 1978).
- h. On June 28, 1982, in Portales, New Mexico, a natural gas explosion killed five people and injured one person in a single-family home. The natural gas release was caused by a failed service line that had been damaged from earlier excavation work for the local telephone company over a month before the accident occurred. Between the time of the excavation work and the explosion, no one had detected gas and did not report it. The natural gas was tested and found to have met the federal requirements for odorant level. At that time there was high rainfall in the region. The NTSB concluded that the odorant compounds in the gas were absorbed in the surrounding soil where the gas leaked from the service line. Soil samples were taken and supported this conclusion (NTSB 1983).

- i. On September 25, 1984, in Phoenix, Arizona, an intense natural gas-fed fire destroyed two apartments in an apartment building, killing five residents and injuring seven. The probable cause of the accident was the weakening of a plastic main that failed and released natural gas that migrated through the soil and under two apartments, where it accumulated and ignited by a gas pilot light of a furnace. Prior to the accident, residents smelled gas, but failed to report it to the gas company (NTSB 1985).
- j. On December 6, 1985, in Derby, Connecticut, a natural gas explosion and fire destroyed a restaurant, killing 6 people and injuring 12 inside. Also, one passerby and one firefighter were also injured. Gas had released into the restaurant from a broken gas main that migrated into the basement of the restaurant and ignited and exploded. Restaurant personnel and patrons detected the gas odor, but did not report it to the gas company of the fire department prior to the accident (NTSB 1986).
- k. On June 9, 1994, in Allentown, Pennsylvania, a natural gas explosion occurred at a retirement home. Excavation work was being performed outside the home when a natural gas service line was hit. The fugitive gas flowed underground, passed through an opening in the building foundation, and migrated to other floors. Eventually the gas accumulated and ignited, causing an explosion, killing 1, and injuring 66. Workers and residents inside the home smelled gas and reported it to the gas company, but did not complete the evacuation before the explosion occurred. The NTSB recommended to the US Department of Housing and Urban Development to evaluate the safety benefits of using gas detectors and to require an approved device in buildings similar to the retirement home (NTSB 1996).
- l. On October 17, 1994, in Waterloo, Iowa, an explosion and fire occurred at a neighborhood tavern, killing six, severely injuring one, and causing several minor injuries. The NTSB determined that the service pipeline had failed due to stress intensification that was primarily caused by shifting soil settlement at a connection to a steel main. The service pipeline had poor resistance to brittle cracking. Odorant levels were tested and found in compliance with federal requirements (NTSB 1998).
- m. On July 7, 1998, in South Riding, Virginia, a house exploded, killing one and injuring three others. The accident was caused by the failure of a gas service line to the home that had been located too close to an electrical service line that overheated and arced. The uncontrolled release of gas accumulated into the basement and ignited. The owner of the house did not smell gas before going to bed, which was about 2 hours before the explosion occurred. A resident located 150 feet away smelled gas 30 minutes before the explosion, investigated, and called the gas company when he could not locate the source. Minutes later, the explosion occurred (NTSB 2001).
- n. On December 13, 2005, in Bergenfield, New Jersey, an apartment building exploded after natural gas migrated into the building from a damaged distribution service pipeline due to nearby excavation work that was being performed the same day. The building exploded while contractors and gas company service technicians were working to shut off the gas. Three residents were killed and five were injured. Although

some residents smelled gas, people remained in the building because there was no evacuation order (NTSB 2007).

- o. On March 5, 2008, in Plum Borough, Pennsylvania, an explosion and fire occurred at a single-family home, killing one person and severely injuring a child. The NTSB determined that the gas distribution pipeline had been damaged from excavation work from years before which created corrosive conditions, causing the pipe to fail. No one smelled gas 30 minutes prior to the explosion, and the gas was thought to have migrated through a porous backfill of a new sewer line and accumulated rapidly in the house with little warning to residents. Odorant levels were tested and found in compliance with both federal and state requirements (NTSB 2008).
- p. On December 24, 2008, in Rancho Cordova, California, an explosion and fire occurred at a house, killing one person and injuring five others, including a utility employee and one firefighter who were hospitalized. The NTSB determined that the main pipeline had inadequate wall thinning that allowed gas to leak from a mechanical coupling that was installed 2 years before the accident. Residents had smelled gas prior to the accident and called the gas company. Although the gas company personnel were in the process of locating the leak, they did not promptly evacuate the residents and the public. The delayed response contributed to the accident (NTSB 2010).
- q. On December 17, 2013, in Birmingham, Alabama, a two-story duplex at a public housing project exploded when natural gas in an apartment ignited, killing one resident and injuring three others. Residents said they had smelled gas outside the surrounding apartments earlier in the night but reported that it was only a faint smell and they did not notify the fire department. The NTSB determined that the probable cause was the accumulation of natural gas released from a corroded main that cracked from tree root growth. The NTSB report noted that when odorized natural gas passes through the soil, it can absorb and deplete the odorant from the gas (NTSB 2016).
- r. On March 12, 2014, two adjacent multi-occupancy, five-story buildings in Manhattan, New York City, were destroyed by a natural gas-fueled explosion and fire, killing 8, injuring more than 50 people, and displacing over 100 families from their home. The NTSB found that a defective fusion joint at the service tee allowed natural gas to leak from the gas main and migrated into the building where it ignited. During postaccident interviews, residents reported smelling gas the evening prior, but did not report it to the gas company (NTSB 2015).
- s. On August 2, 2017, the NTSB investigated a school building in Minneapolis, Minnesota, that was destroyed by a natural gas explosion, killing two individuals and injuring nine. At the time of the explosion, two workers were installing new piping to support the relocation of gas meters from the basement of the building to the outside. As gas company employees were removing the existing piping, a natural gas line pressure opened, releasing gas into the basement. A school maintenance worker smelled the natural gas and went to the basement meter room where the gas company employees had been working. He exited the basement, announcing over his handheld radio there was gas in the building and that everyone should evacuate immediately.

However, less than 1 minute later, the building exploded. At the time of this report, this investigation is still open (NTSB 2017).

- t. On February 21, 2018, in Dallas, Texas, a natural gas-fueled explosion occurred at a single-family home, killing a 12-year old juvenile and injuring four other family members. The family reported they had not smelled any natural gas prior to the explosion. At the time of this report, this investigation is still open (NTSB 2018).

References

- ASME (The American Society of Mechanical Engineers). *Welded and Seamless Wrought Steel Pipe*. ASME B36.10M-2018. (New York: ASME).
- Bull, David, 1998. [Title] 49 CFR § 192.625: *Odorization: A Matter of Protection*. White paper. April 1998. (Washington, DC: US Department of Transportation, Transportation Safety Institute).
- BSI (British Standards Institution). 2009. *Electrical apparatus for the detection of combustible gases in domestic premises. Part 1. "Test methods and performance requirements."* (London: BSI).
- . 2016. *Electrical apparatus for the detection of combustible gases in domestic premises. Guide on the selection, installation, use and maintenance*. EN50244. (London: BSI).
- EPA (US Environmental Protection Agency). 2011. *Before You Tear it Down, Get the Mercury Out*. (https://www.epa.gov/sites/production/files/2015-10/documents/before_you_tear_it_down.pdf), accessed September 5, 2018.
- FR (*Federal Register*). 1970. Vol. 35, no. 161 (August 19).
- GAO (US Government Accountability Office). 2018. *Gas Pipeline Safety: Stakeholders and Officials' Views of Federal Odorizing Requirements*. GAO-18-409. (Washington, DC: GAO).
- GTI (Gas Technology Institute). 2017. *Residential Methane Detector Program, Phase II*. Prepared for Operations Technology Development. (Des Plaines, Illinois: GTI).
- IAED (International Academies of Emergency Dispatch). 2014. *Protocol-60 Gas Leak/Gas Odor (Natural and Liquefied Petroleum Gases)*. (Salt Lake City, Utah: IAED).
- ICC (International Code Council). 2015. *International Fuel Gas Code*. (Washington, DC: ICC).
- MCFRC (Montgomery County Fire and Rescue Commission). 1996. *Policy and Procedure, "Natural Gas Incident Response."* No. 25-07. (Rockville, Maryland: MCFRC).
- Moses, Alfred J., 1978. *Practicing Scientist's Handbook*. (New York: Van Nostrand Reinhold Company).
- NCSL (National Conference of State Legislatures). 2018. "Carbon Monoxide Detector Requirements, Laws and Regulations." (<http://www.ncsl.org/research/environment-and-natural-resources/carbon-monoxide-detectors-state-statutes.aspx>), accessed November 5, 2018.
- NFPA (National Fire Protection Association). 2017. *Guide for Fire and Explosion Investigations*. Section 10.2.1, "Natural Gas." *NFPA 921*. (Quincy, Massachusetts: NFPA).

----. 2018. *National Fuel Gas Code. NFPA 54*. (Quincy, Massachusetts: NFPA).

NTSB (National Transportation Safety Board). 1972. *Lone Star Gas Company, Fort Worth, Texas, October 4, 1971*. PAR-72/05. (Washington, DC: NTSB).

----. 1972a. *Washington Gas Light Company, Natural Gas Explosion, Annandale, Virginia, March 24, 1972*. PAR-72/04. (Washington, DC: NTSB).

----. 1974. *Southern Union Gas Company, El Paso, Texas, April 22, 1973*. PAR-74/02. (Washington, DC: NTSB).

----. 1974a. *Columbia Gas of West Virginia, Inc., Charleston, West Virginia, December 2, 1973*. PAR-74/04. (Washington, DC: NTSB).

----. 1976. *Consolidated Edison Company Explosion, New York, New York, April 22, 1974*. PAR-76/02. (Washington, DC: NTSB).

----. 1976a. *Nebraska Natural Gas Company, Pathfinder Hotel Explosion and Fire, Fremont, Nebraska, January 10, 1976*. PAR-76/06. (Washington, DC: NTSB).

----. 1978. *Kansas Public Service Company, Inc. Explosion and Fire, Lawrence, Kansas, December 15, 1977*. PAR-78/04. (Washington, DC: NTSB).

----. 1983. *The Gas Company of New Mexico Natural Gas Explosion and Fire, Portales, New Mexico, June 28, 1982*. PAR-83/01. (Washington, DC: NTSB).

----. 1985. *Arizona Public Service Company Natural Gas Explosion and Fire, Phoenix, Arizona, September 25, 1984*. PAR-85/01. (Washington, DC: NTSB).

----. 1986. *Northeast Utilities Service Company Explosion and Fire, Derby, Connecticut, December 6, 1985*. PAR-86/02. (Washington, DC: NTSB).

----. 1996. *UGI Utilities, Inc., Natural Gas Distribution Pipeline Explosion and Fire, Allentown, Pennsylvania, June 9, 1994*. PAR-96/01. (Washington, DC: NTSB).

----. 1998. *Fire and Explosion, Midwest Gas Company, Waterloo, Iowa, October 17, 1994*. PAB-98/02. (Washington, DC: NTSB).

----. 2001. *Natural Gas Explosion and Fire, South Riding, Virginia, July 7, 1998*. PAR-01/01. (Washington, DC: NTSB).

----. 2007. *Natural Gas Service Line Break and Subsequent Explosion and Fire, Bergenfield, New Jersey, December 13, 2005*. PAB-17/01. (Washington, DC: NTSB).

----. 2008. *Natural Gas Distribution Line Break and Subsequent Explosion and Fire, Plum Borough, Pennsylvania, March 5, 2008*. PAB-08/01. (Washington, DC: NTSB).

----. 2010. *Explosion, Release, and Ignition of Natural Gas, Rancho Cordova, California, December 24, 2008*. PAB-10/01. (Washington, DC: NTSB).

- . 2015. *Natural Gas-Fueled Building Explosion and Resulting Fire, New York, New York, March 12, 2014*. PAR-15/01. (Washington, DC: NTSB).
- . 2016. *Pipeline Accident Brief: Birmingham Public Housing Gas Explosion, Birmingham, Alabama, December 17, 2013*. PAB-16/01. (Washington, DC: NTSB).
- . 2017. *Preliminary Report: Pipeline: Gas Explosion Destroyed Minnehaha Academy, Minneapolis, Minnesota, August 2, 2017*. DCA17MP007. (Washington, DC: NTSB).
- . 2018. *Preliminary Report: Natural Gas-Fueled Explosion of Residence, Dallas, Texas, February 23, 2018*. PLD18FR002. (Washington, DC: NTSB).
- . 2018a. *Materials Laboratory Study Report*. 18-039S. (Washington, DC: NTSB).
- OSHA (Occupational Safety and Health Administration). 2018. "OSHA's Nationally Recognized Testing Laboratory (NRTL) Program." (<https://www.osha.gov/dts/otpca/nrtl/index.html>), accessed November 5, 2018.
- OTD (Operations Technology Development). 2018. "Strengthening North America's Energy Infrastructure." (<https://www.otd-co.org/about/Pages/default.aspx>), accessed November 5, 2018.
- RSPA (Research and Special Programs Administration). 1975. *Study of the Properties of the Numerous Odorants and Assessment of their Effectiveness in Various Environmental Conditions to Alert People to the Presence of Natural Gas*. (Washington, DC: US Department of Transportation, RSPA).
- UL (Underwriter's Laboratories). 2016. *Standard for Residential Gas Detectors*. (Northbrook, Illinois: UL).
- Usher, M.J., 1999. *Odor Fade – Possible Causes and Remedies*. White paper. (Philadelphia, Pennsylvania: Elf Atochem North America, Inc. and London: CGA Gas Measurement School).
- WG (Washington Gas). 2016. *Operations and Maintenance Manual*. Revision 27. (Washington, DC: WG).
- Wiley, K. 2016. "Methane Detection Projects." Presentation to the Pipeline and Hazardous Materials Safety Administration Research and Development Forum, November 16, 2016, Cleveland, Ohio.
- WSSC (Washington Suburban Sanitary Commission). 2015. *Plumbing and Fuel Gas Code*. (Laurel, Maryland: WSSC).



National Transportation Safety Board

Washington, DC 20594

Office of the Chairman

June 10, 2019

The Honorable Howard “Skip” Elliott
Administrator
Pipeline and Hazardous Materials Safety Administration
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Mr. Elliott:

On April 24, 2019, the National Transportation Safety Board (NTSB) adopted its report, *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*, NTSB/PAR-19/01. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

As a result of this investigation, the NTSB identified the following safety issues:

- The location and inspection of service regulators within a structure.
- The inspection of the gas meter assembly.
- The notification of the natural gas odor to Washington Gas Light Company.
- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendations to the Pipeline and Hazardous Materials Safety Administration (PHMSA). Additional information regarding these recommendations can be found in the noted sections of the report.

- Require that all new service regulators be installed outside occupied structures. **(P-19-001) (See section 2.3.10.)**
- Require existing interior service regulators be relocated outside occupied structures whenever the gas service line, meter, or regulator is replaced. In addition, multifamily structures should be prioritized over single-family dwellings. **(P-19-002) (See section 2.3.10.)**

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement these recommendations.

When replying, please refer to the safety recommendations by number. We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20 MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.



National Transportation Safety Board

Washington, DC 20594

Office of the Chairman

June 10, 2019

Mr. Jason M. Stanek
Chairman
Public Service Commission of Maryland
6 St. Paul Street
Suite 1600
Baltimore, MD 21202

Dear Mr. Stanek:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge your organization to act on the safety recommendations in this letter because we believe your organization can help reduce the risk of future accidents. For more information about NTSB and our recommendation process, please see the attached one-page summary.

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- The notification of the natural gas odor to Washington Gas Light Company.
- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendations to the Public Service Commission of Maryland, the Commonwealth of Virginia State Corporation Commission Division of Public Utility Regulation, and the Public Service Commission of the District of Columbia. Additional information regarding these recommendations can be found in the noted sections of the report.

- Following Washington Gas’s successful completion of Safety Recommendation P-19-009, audit and verify the performance of Washington Gas’s mercury service regulator replacement program, including its recordkeeping. **(P-19-003) (See section 2.3.9.)**
- Oversee the replacement process for the mercury service regulators that Washington Gas has in service. **(P-19-004) (See section 2.3.10.)**

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (for example, P-19-003). We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20 MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

The Honorable Judith Williams Jagdmann
Chairman
Commonwealth of Virginia
State Corporation Commission
Division of Public Utility Regulation
Tyler Building
1300 E. Main Street
Richmond, VA 23219

Dear Judge Jagdmann:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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Sincerely,

Robert L. Sumwalt, III
Chairman

cc: The Honorable Marc C. Christie, Commissioner
The Honorable Patricia L. West, Commissioner
Mr. William F. Stephens, Director of Division of Public Utility Regulation

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. Willie L. Phillips
Chairman
Public Service Commission of
the District of Columbia
1325 G Street, NW
Suite 800
Washington, DC 20005

Dear Mr. Phillips:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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Sincerely,

Robert L. Sumwalt, III
Chairman

cc: Mr. Richard A. Beverly, Commissioner
Ms. Greer J. Gillis, Commissioner

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. Gary Galasso
Chairman
Fire Council of Standards
International Academies of Emergency Dispatch
110 South Regent Street
8th Floor
Salt Lake City, UT 84111

Dear Mr. Galasso:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendation to the International Academies of Emergency Dispatch. Additional information regarding this recommendation can be found in the noted section of the report.

- Revise *Protocol-60 Gas Leak/Gas Odor (Natural and Liquefied Petroleum Gases)* to direct dispatchers to notify the gas company when any odor call is received. **(P-19-005) (See section 2.4.3.)**

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number (for example, P-19-005). We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20 MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. Brett Patterson
Chairman
Medical Council of Research
International Academies of Emergency Dispatch
110 South Regent Street
8th Floor
Salt Lake City, UT 84111

Dear Mr. Patterson:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. Michael Spath
Chairman
ED-Q Council of Standards
International Academies of Emergency Dispatch
110 South Regent Street
8th Floor
Salt Lake City, UT 84111

Dear Mr. Spath:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Ms. Tami Wiggins
Chair
Police Council of Standards
International Academies of Emergency Dispatch
110 South Regent Street
8th Floor
Salt Lake City, UT 84111

Dear Ms. Wiggins:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. William R. Bryant, MCP, CBO
President
International Code Council
500 New Jersey Avenue, NW
6th Floor
Washington, DC 20001

Dear Mr. Bryant:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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On April 24, 2019, the NTSB adopted its report, *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*, NTSB/PAR-19/01. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

As a result of this investigation, the NTSB identified the following safety issues:

- The location and inspection of service regulators within a structure.
- The inspection of the gas meter assembly.
- The notification of the natural gas odor to Washington Gas Light Company.
- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendation to the International Code Council. Additional information regarding this recommendation can be found in the noted section of the report.

- In coordination with the Gas Technology Institute and the National Fire Protection Association, incorporate provisions in the *International Fuel Gas Code* that requires methane detection systems for all types of residential occupancies with gas service. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. **(P-19-006) (See section 2.5.2.)**

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number (for example, P-19-006). We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20 MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. James Pauley
President
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169-7471

Dear Mr. Pauley:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

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As a result of this investigation, the NTSB identified the following safety issues:

- The location and inspection of service regulators within a structure.
- The inspection of the gas meter assembly.
- The notification of the natural gas odor to Washington Gas Light Company.
- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendation to the National Fire Protection Association. Additional information regarding this recommendation can be found in the noted section of the report.

- In coordination with the Gas Technology Institute and the International Code Council, revise the *National Fuel Gas Code, National Fire Protection Association 54* to require methane detection systems for all types of residential occupancies with gas service. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. **(P-19-007) (See section 2.5.2.)**

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number (for example, P-19-007). We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. David C. Carroll
President and Chief Executive Officer
Gas Technology Institute
1700 S. Mount Prospect Road
Des Plaines, IL 60018

Dear Mr. Carroll:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge your organization to act on the safety recommendation in this letter because we believe your organization can help reduce the risk of future accidents. For more information about NTSB and our recommendation process, please see the attached one-page summary.

On April 24, 2019, the NTSB adopted its report, *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*, NTSB/PAR-19/01. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

As a result of this investigation, the NTSB identified the following safety issues:

- The location and inspection of service regulators within a structure.
- The inspection of the gas meter assembly.
- The notification of the natural gas odor to Washington Gas Light Company.
- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendation to the Gas Technology Institute. Additional information regarding this recommendation can be found in the noted section of the report.

- In coordination with the National Fire Protection Association and the International Code Council, work to develop standards for methane detection systems for all types of residential occupancies in both the *International Fuel Gas Code* and the *National Fuel Gas Code*, *National Fire Protection Association 54*. At a minimum, the provisions should cover the installation, maintenance, placement of the detectors, and testing requirements. **(P-19-008) (See section 2.5.2.)**

The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement this recommendation. When replying, please refer to the safety recommendation by number (for example, P-19-008). We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

Robert L. Sumwalt, III
Chairman

National Transportation Safety Board

Washington, DC 20594



Office of the Chairman

June 10, 2019

Mr. Adrian P. Chapman
President and Chief Executive Officer
Washington Gas Light Company
1000 Maine Avenue, SW
Washington, DC 20024

Dear Mr. Chapman:

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation—railroad, highway, marine, and pipeline. We determine the probable cause of the accidents and issue safety recommendations aimed at preventing future accidents. In addition, we carry out special studies concerning transportation safety and coordinate the resources of the federal government and other organizations to assist victims and their family members affected by major transportation disasters.

We are providing the following information to urge your organization to act on the safety recommendations in this letter because we believe your organization can help reduce the risk of future accidents. For more information about NTSB and our recommendation process, please see the attached one-page summary.

On April 24, 2019, the NTSB adopted its report, *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*, NTSB/PAR-19/01. The details of this accident investigation and the resulting safety recommendations may be found in the attached report, which can also be accessed at <http://www.nts.gov>.

As a result of this investigation, the NTSB identified the following safety issues:

- The location and inspection of service regulators within a structure.
- The inspection of the gas meter assembly.
- The notification of the natural gas odor to Washington Gas Light Company.
- The detection of natural gas through odorants and methane.

Accordingly, the NTSB makes the following safety recommendations to the Washington Gas Light Company. Additional information regarding these recommendations can be found in the noted sections of the report.

- Throughout the Washington Gas network, implement an audit program to verify the data on the service forms used to determine the location and condition of mercury service regulators to ensure the accuracy of this safety-critical data. **(P-19-009) (See section 2.3.9.)**
- Revise your procedures and field forms to require technicians to verify the integrity of vent lines following the testing of indoor service regulators throughout the Washington Gas network. **(P-19-010) (See section 2.3.5.)**
- Establish a time frame with specific dates and milestones for the replacement of mercury service regulators throughout the Washington Gas network that recognizes the need to expedite this program and that prioritizes multifamily dwellings where mercury service regulators are located inside the property. **(P-19-011) (See section 2.3.10.)**
- Install all new service regulators outside occupied structures. **(P-19-012) (See section 2.3.10.)**
- Relocate existing interior service regulators outside occupied structures whenever the gas service line, meter, or regulator is replaced. In addition, multifamily structures should be prioritized over single-family dwellings. **(P-19-013) (See section 2.3.10.)**

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate a response within 90 days, detailing the actions you have taken or intend to take to implement these recommendations. When replying, please refer to the safety recommendations by number (for example, P-19-009). We encourage you to submit your response to correspondence@ntsb.gov. If your reply exceeds 20MB, including attachments, please e-mail us at the same address for instructions on how to send larger documents. Please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

Robert L. Sumwalt, III
Chairman

Safety Recommendation Reiteration List

SR Number	Reiteration Number	Report Number	Report Date	Accident Description	Accident City	Accident State	Accident Date
P-19-006	1	PAR-21-01	2/8/2021	Natural Gas-Fueled Explosion	Dallas	TX	2/23/2018

Safety Recommendation Reiteration List

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P-19-007	1	PAR-21-01	2/8/2021	Natural Gas-Fueled Explosion	Dallas	TX	2/23/2018

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P-19-008	1	PAR-21-01	2/8/2021	Natural Gas-Fueled Explosion	Dallas	TX	2/23/2018

Overpressurization of Natural Gas Distribution System,
Explosions, and Fires in
Merrimack Valley, Massachusetts
September 13, 2018



Accident Report

NTSB/PAR-19/02
P82019-101365



**National
Transportation
Safety Board**

Pipeline Accident Report

Overpressurization of Natural Gas Distribution System,
Explosions, and Fires in
Merrimack Valley, Massachusetts
September 13, 2018



**National
Transportation
Safety Board**

490 L'Enfant Plaza, S.W.
Washington, D.C. 20594

ational Transportation Safety Board. 2019. *Overpressurization of Natural Gas Distribution System, Explosions, and Fires in Merrimack Valley, Massachusetts, September 13, 2018*. Pipeline Accident Report NTSB/PAR-19/02. Washington, DC.

Abstract: On September 13, 2018, about 4:00 p.m. local time, a series of structure fires and explosions occurred after high-pressure natural gas was released into a low-pressure natural gas distribution system in the northeast region of the Merrimack Valley in the Commonwealth of Massachusetts. The natural gas distribution system was owned and operated by Columbia Gas of Massachusetts, a subsidiary of NiSource, Inc. Columbia Gas of Massachusetts delivers natural gas to about 325,000 customers in Massachusetts. One person was killed and 22 individuals, including three firefighters, were transported to local hospitals due to injuries; seven other firefighters incurred minor injuries. The fires and explosions damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. Most of the damage occurred from fires ignited by natural gas-fueled appliances; several of the homes were destroyed by natural gas-fueled explosions. Fire departments from the three municipalities were dispatched to the fires and explosions. First responders initiated the Massachusetts fire-mobilization plan and received mutual aid from neighboring districts in Massachusetts, New Hampshire, and Maine. Emergency management officials had the electric utility shut down electrical power in the area, the state police closed local roads, and freight and passenger railroad operations in the area were suspended. Columbia Gas of Massachusetts shut down the low-pressure natural gas distribution system, affecting 10,894 customers, including some outside the area who had their service shut off as a precaution. The National Transportation Safety Board made new recommendations to the Pipeline and Hazardous Materials Safety Administration; the 31 states with an industrial exemption for natural gas infrastructure projects; the Commonwealth of Massachusetts Executive Office of Public Safety and Security; and NiSource, Inc.

The National Transportation Safety Board (NTSB) is an independent federal agency dedicated to promoting aviation, railroad, highway, marine, and pipeline safety. Established in 1967, the agency is mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person." 49 C.F.R. § 831.4. Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of any NTSB report related to any accident in a civil action for damages resulting from a matter mentioned in the report. 49 U.S.C. § 1154(b).

For more detailed background information on this report, visit the [NTSB investigation website](#) and search for NTSB accident ID PLD18MR003. Recent publications are available in their entirety on the Internet at the [NTSB website](#). Other information about available publications also may be obtained from the website or by contacting:

National Transportation Safety Board Records Management Division, CIO-40, 490 L'Enfant Plaza, SW, Washington, DC 20594, (800) 877-6799 or (202) 314-6551.

NTSB publications may be purchased from the National Technical Information Service. To purchase this publication, order product number PB2019-101308 from:

National Technical Information Service, 5301 Shawnee Rd., Alexandria, VA 22312, (800) 553-6847 or (703) 605-6000, [NTIS website](#).

NOTE: This report was reissued on November 7, 2019 with corrections to page 60 to remove NiSource employee information.

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Acronyms and Abbreviations

AGA	American Gas Association
ANSI	American National Standards Institutes
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
CFR	<i>Code of Federal Regulations</i>
CMA	Columbia Gas of Massachusetts
CoMIRS	Commonwealth of Massachusetts Interoperable Radio System
DPU	Massachusetts Department of Public Utilities
EOC	emergency operations center
ERP	emergency response plans
FMEA	failure modes and effects analysis
FOL	field operations leader
GIS	geographic information system
IC	incident commander
LFE	leader of field engineering
M&R	Measurement and Regulation
MAOP	maximum allowable operating pressure
MEMA	Massachusetts Emergency Management Agency
MOC	management of change
NG	National Grid United States
NCEES	National Council of Examiners for Engineering and Surveying
NSPE	National Society of Professional Engineers
NTSB	National Transportation Safety Board

ON	Operational Notice
OQ	operator qualification
P.E.	professional engineer
PHMSA	Pipeline and Hazardous Materials Safety Administration
PSAP	Public Safety Answering Points
psi	pounds per square inch
psig	pounds per square inch, gauge
PSMS	Pipeline Safety Management Systems
RP	Recommended Practice
RSPA	Research and Special Programs Administration
SCADA	Supervisory Control and Data Acquisition system
SCIP	Statewide Communications Interoperability Plan
SMS	safety management systems
w.c.	water column
WMS	work management system

Executive Summary

On September 13, 2018, about 4:00 p.m. local time, a series of structure fires and explosions occurred after high-pressure natural gas was released into a low-pressure natural gas distribution system in the northeast region of the Merrimack Valley in the Commonwealth of Massachusetts. The natural gas distribution system was owned and operated by Columbia Gas of Massachusetts, a subsidiary of NiSource, Inc. Columbia Gas of Massachusetts delivers natural gas to about 325,000 customers in Massachusetts. One person was killed and 22 individuals, including three firefighters, were transported to local hospitals due to injuries; seven other firefighters incurred minor injuries. The fires and explosions damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. Most of the damage occurred from fires ignited by natural gas-fueled appliances; several of the homes were destroyed by natural gas-fueled explosions. Fire departments from the three municipalities were dispatched to the fires and explosions. First responders initiated the Massachusetts fire-mobilization plan and received mutual aid from neighboring districts in Massachusetts, New Hampshire, and Maine. Emergency management officials had National Grid United States (the electric utility) shut down electrical power in the area, the state police closed local roads, and freight and passenger railroad operations in the area were suspended. Columbia Gas of Massachusetts shut down the low-pressure natural gas distribution system, affecting 10,894 customers, including some outside the area who had their service shut off as a precaution.

The accident investigation focused on the following safety issues:

- Adequacy of natural gas regulations
- Project documentation
- Constructability review
- Project management
- Risk assessment
- Safety management systems
- Licensed professional engineer approval of natural gas projects
- Emergency response

The National Transportation Safety Board determines that the probable cause of the overpressurization of the natural gas distribution system and the resulting fires and explosions was Columbia Gas of Massachusetts' weak engineering management that did not adequately plan, review, sequence, and oversee the construction project that led to the abandonment of a cast iron main without first relocating regulator sensing lines to the new polyethylene main. Contributing to the accident was a low-pressure natural gas distribution system designed and operated without adequate overpressure protection.

1. Factual Information

1.1 Accident Synopsis

On September 13, 2018, about 4:00 p.m. local time, a series of structure fires and explosions occurred after high-pressure natural gas was released into a low-pressure natural gas distribution system in the northeast region of the Menimack Valley in the Commonwealth of Massachusetts. The natural gas distribution system was owned and operated by Columbia Gas of Massachusetts (CMA), a subsidiary of NiSource, Inc. CMA delivers natural gas to about 325,000 customers in Massachusetts. The fires and explosions damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. (See figure 1.) Most of the damage occurred from fires ignited by natural gas-fueled appliances; several of the homes were destroyed by natural gas-fueled explosions. Fire departments from the three municipalities were dispatched to the fires and explosions. First responders initiated the Massachusetts fire-mobilization plan and received mutual aid from neighboring districts in Massachusetts, New Hampshire, and Maine. Emergency management officials had National Grid United States (NG) (the electric utility) shut down electrical power in the area, the state police closed local roads, and freight and passenger railroad operations in the area were suspended. CMA shut down the low-pressure natural gas distribution system, affecting 10,894 customers, including some outside the affected area who had their service shut off as a precaution.

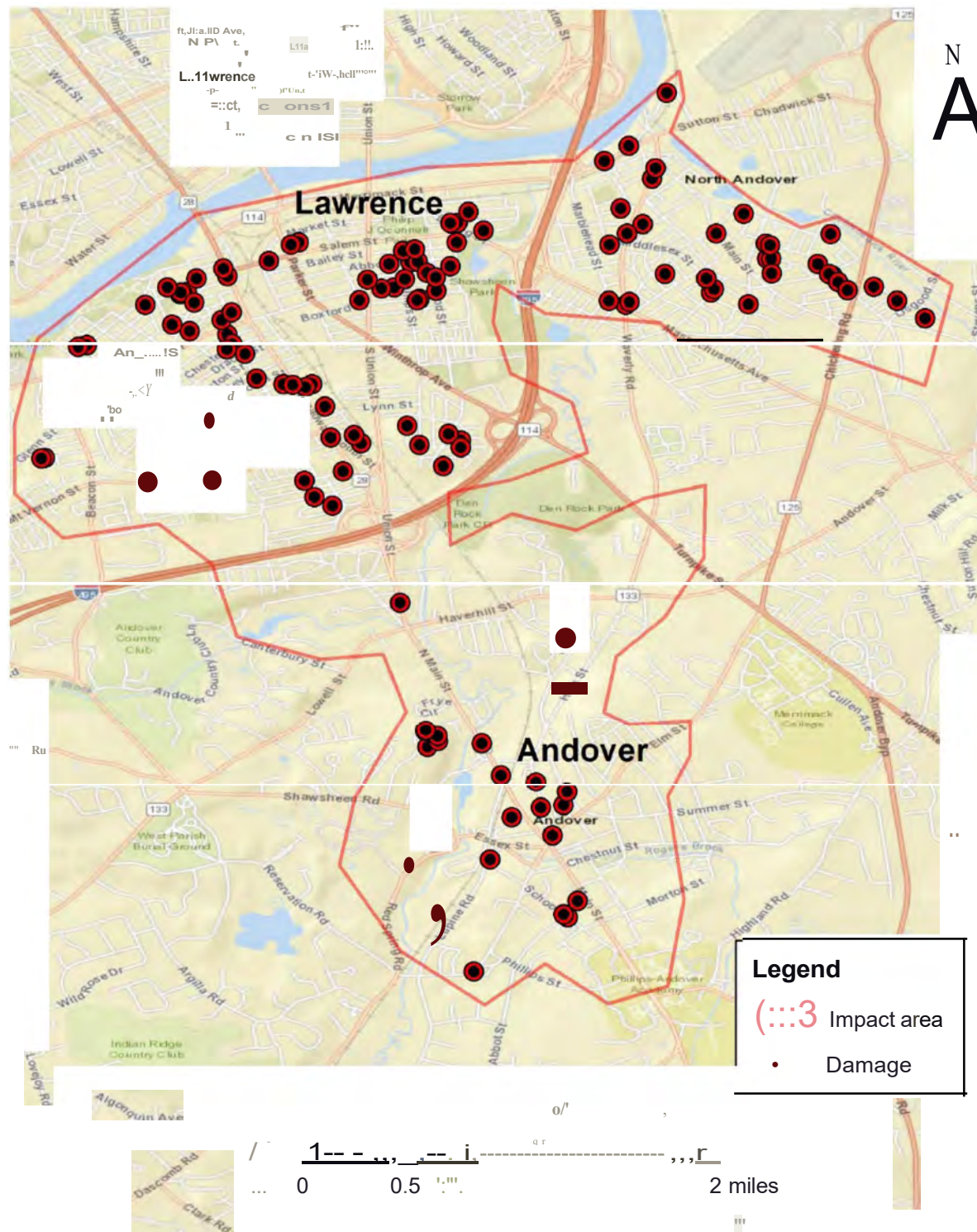


Figure 1. Map of the damaged structures in the area impacted by the overpressurization.

An 18-year-old male was killed when a home exploded, and the chimney fell onto the vehicle where he was sitting. (See figure 2.) Another person in the vehicle at the time of the

explosion was seriously injured, as was someone on the second floor of the house. In total, 22 people, including 3 firefighters, were transported to hospitals for treatment of their injuries. Injuries included respiratory injuries related to smoke inhalation from fires and musculoskeletal injuries from evacuating. Some people were transported to hospitals to maintain ongoing medical treatment that could not be continued in their homes because of the shutdown of natural gas and electricity and the evacuation of residents.



Figure 2. Remnants of house where the fatality and two severe injuries occurred.

1.2 Background

1.2.1 NiSource

NiSource, Inc. is an Indiana-based energy holding company whose subsidiaries are regulated natural gas and electric utility companies serving about 3.9 million customers in seven states.¹ Its natural gas distribution operations comprise about 60,000 miles of pipeline and include 732 low-pressure natural gas distribution systems. NiSource's Massachusetts subsidiary, CMA,

¹ NiSource is the successor to a corporation organized in 1987 under the name of Northern Indiana Public Service Company Industries, Inc., which changed its name to NiSource in 1999.

delivers natural gas to over 325,000 natural gas customers in southeastern Massachusetts, the greater Springfield area, and the Merrimack Valley.²

1.2.2 Feeney Brothers

CMA contracted with Feeney Brothers, a pipeline services firm, to work on a CMA project to replace an existing cast iron main with a polyethylene main.³ About 7:00 a.m. on the day of the accident, a CMA construction coordinator, along with four employees of Feeney Brothers, arrived at Salem and South Union Streets in Lawrence, Massachusetts, to continue work on this project. The work they performed that day led to the overpressurization of the natural gas distribution system. All crewmembers were trained and qualified in accordance with the Pipeline Operator Qualification Rule, commonly known as OQ.⁴ Following the accident, the contractor crewmembers, along with the CMA construction coordinator, were alcohol and drug tested in accordance with Title 49 *Code of Federal Regulations (CFR)* Part 199. The test results were negative for alcohol or other drugs.

1.2.3 Natural Gas Distribution Systems

Natural gas distribution systems deliver natural gas to customers for heating, cooking, lighting, and other uses. A basic distribution system has three elements: (1) natural gas mains that transport natural gas underground, (2) service lines that deliver natural gas from the mains to customers, and (3) meters that measure the quantity of natural gas used by each customer. Customer piping takes natural gas from the meter to customer's appliances where it is used. To minimize service interruptions, normal maintenance and natural gas distribution system upgrades are typically performed with the system operating.

Both low-pressure and high-pressure natural gas distribution systems are used to supply natural gas to customers. In a low-pressure natural gas distribution system, the natural gas in the mains is essentially the same pressure as the pressure provided to the customer's piping and used by the appliances. Natural gas is typically supplied to the mains from a high-pressure source through a regulator station that reduces the pressure to that required by the customers. The low-pressure natural gas distribution system in the Merrimack Valley was installed in the early 1900s with cast iron mains. The system used 14 regulator stations to supply natural gas to the mains and control pressure.⁵ The regulator stations each contained two regulators in series—a worker regulator and a monitor regulator—each with a sensing line that feeds back the pressure in the main to the regulator, forming a redundant closed-loop control system. The worker regulator is the primary regulator that maintains the natural gas pressure, and the monitor regulator provides a redundant backup to the worker regulator. Each of the regulator stations reduced the natural gas

² Although CMA had internal guidance documents specifically for its employees, NISource also had guidance documents that employees in all its subsidiaries were required to follow. In this report, guidance documents are identified accordingly.

³ Feeney Brothers, a utility services firm headquartered in Dorchester, Massachusetts, was established in 1988 and employs over 700 employees and operates throughout Massachusetts, Connecticut, and New York.

⁴ Title 49 *Code of Federal Regulations (CFR)* Part 192, Subpart N.

⁵ Regulator stations house the worker and monitor regulators that are used to maintain natural gas pressure.

pressure from about 75 pounds per square inch gauge (psig) to 12 inches of water column (w.c.), about 0.5 psig, for distribution through the mains and delivery to customers.⁶

Since the regulator stations are the primary means of pressure control in the low-pressure systems, an overpressure condition in a natural gas distribution system could affect all customers served by the system. This is an inherent weakness of a low-pressure natural gas distribution system.

Figure 3 shows a typical arrangement for the low-pressure natural gas distribution system used in the Merrimack Valley before the accident

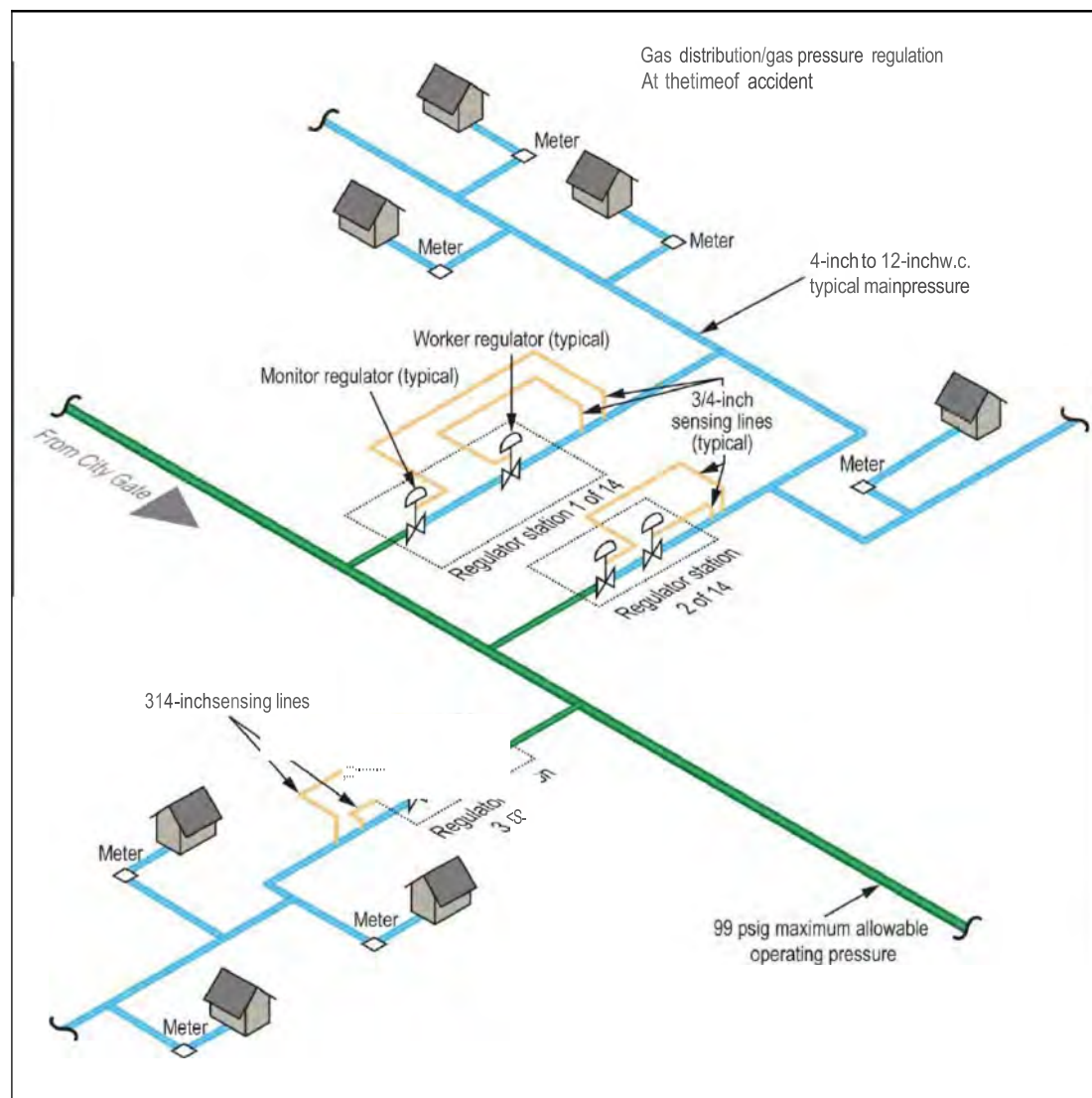


Figure 3. Typical configuration of the Merrimack Valley low-pressure natural gas distribution system.

⁶ In the pipeline industry, it is customary to measure anything less than 1 psig in inches of water column. A measurement of 1 inch w.c. equals 0.0361 psig.

In a high-pressure natural gas distribution system, the natural gas pressure in the main is substantially higher than that required by the customer. A pressure regulator is installed at each meter to reduce the pressure. These regulators incorporate an overpressure protection device to prevent overpressurization of the customer's piping and appliances should the regulator fail. Additionally, excess flow valves are installed in the service line.⁷ Because each customer's service in a high-pressure natural gas distribution system is protected by an excess flow valve and a pressure regulator, it is highly unlikely that an overpressure condition in the main would impact multiple customers. Figure 4 shows a typical high-pressure natural gas distribution system. This is the type of natural gas distribution system that was installed postaccident in the Menimack Valley.

⁷ An *excess flow valve* is a mechanical safety device installed on a gas service line to a residence or small commercial gas customer. In the event of damage to the gas service line between the street and the meter, the excess flow valve will minimize the flow of gas through the service line. Current federal regulations require a gas distribution company to install such a device on new or replacement service lines for single-family residences and certain multifamily and commercial buildings where the service line pressure is above 10 psig. See 49 *CFR* 192.383 for specific requirements.

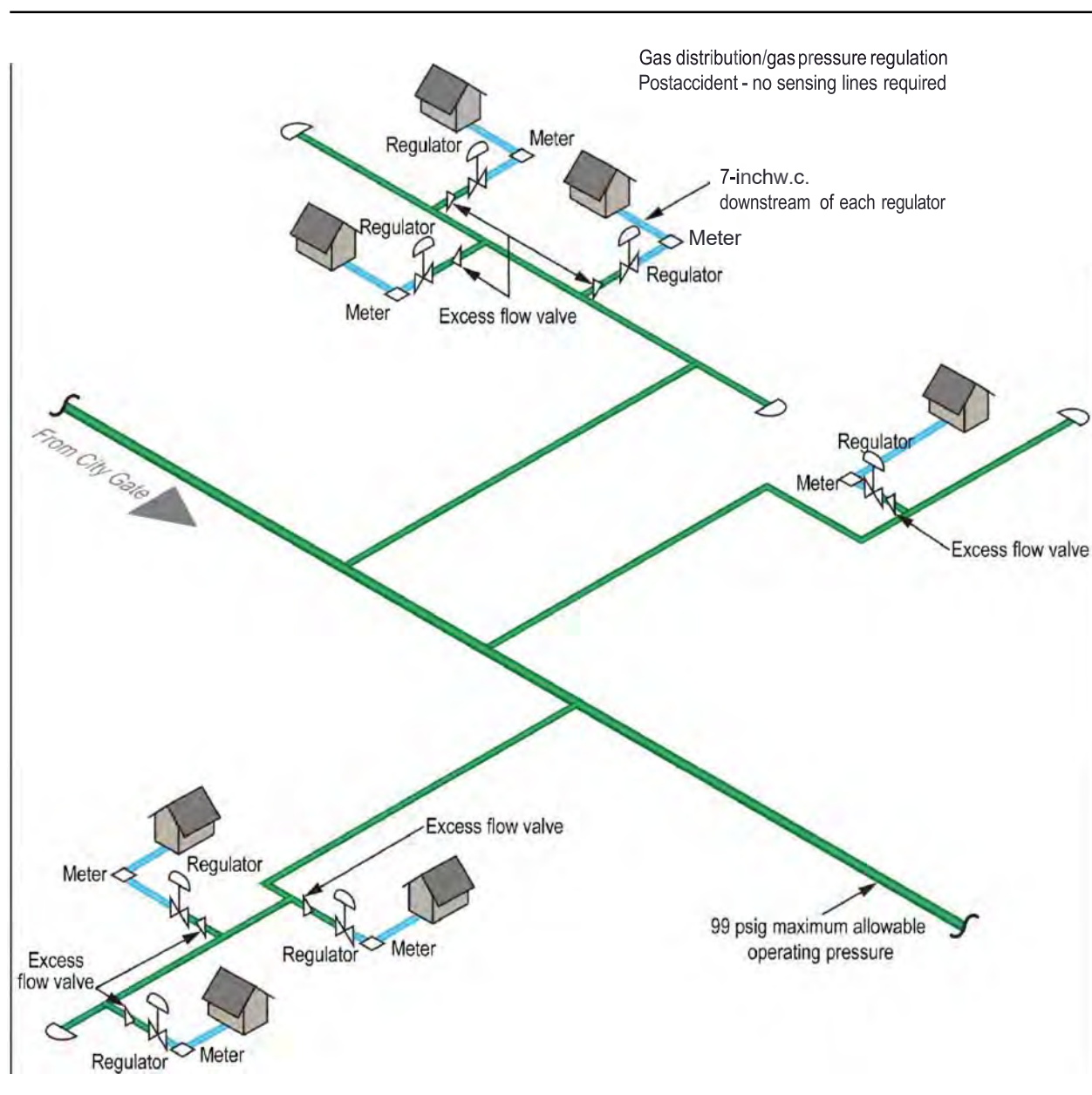


Figure 4. Typical configuration of high-pressure natural gas distribution system installed postaccident.

1.3 Events Preceding the Overpressure

About 7:00 a.m. on the day of the accident, a CMA construction coordinator, along with four employees of Feeney Brothers, arrived at Salem and South Union Streets in Lawrence, Massachusetts, to continue work on a CMA project to replace an existing cast iron main with a polyethylene main.

The crew completed the installation according to the CMA work plan, placed the new tie-ins into service, and isolated the existing cast iron main shortly before 4:00 p.m., by closing

valves on a 2-inch plastic bypass pipe between the cast iron and polyethylene mains.⁸ The crew then cut the bypass pipe to abandon the cast iron main. (See figure 5.) In postaccident interviews, crewmembers said that within minutes of closing the valves and cutting the bypass, they observed the pressure gauge on the polyethylene main exceed the expected readings.⁹ Furthermore, a fitting on the polyethylene natural gas main blew off into the hand of one of the workers. The crewmembers said that they responded quickly to plug the blowing natural gas, and they heard emergency vehicles in the neighborhood and observed smoke plumes in multiple directions within minutes.

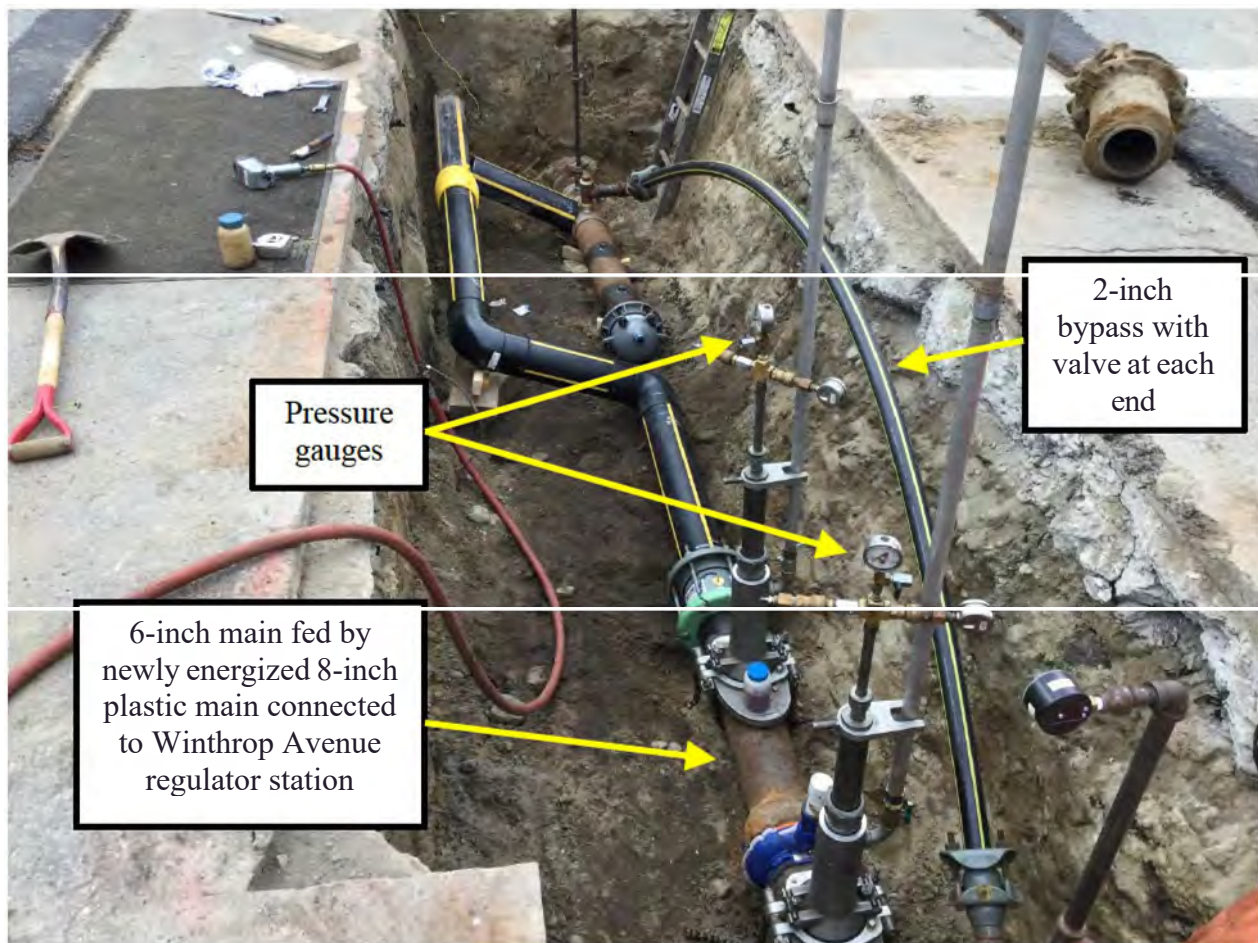


Figure 5. Salem Street tie-in for the South Union Street project (looking west). Photograph courtesy of Feeney Brothers.

At the Winthrop Avenue regulator station, about 0.5 mile south of the work area, the abandoned cast iron main was still connected to the regulator sensing lines providing input to the two pressure regulators used to control the system pressure.¹⁰ (See figure 6.) Once the contractor

⁸ A *tie-in* involves connecting new piping to existing piping. In this case, the main ran north and south while the branches ran east and west. When the main was replaced, the east and west branches needed to be tied into the new main.

⁹ Supporting documentation referenced in this report can be found in the public docket for this accident, accessible from the [NTSB Accident Dockets](https://www.ntsb.gov/AccidentDockets/) web page by searching PLD18MR003.

¹⁰ *Sensing lines* are also called *control lines* or *static lines*.

crew isolated the cast iron main, the natural gas pressure began to drop in the cast iron main and in the regulator sensing lines. As the pressure dropped, the pressure regulators responded by opening further, increasing pressure in the natural gas distribution system. Since the Winthrop Avenue regulators no longer sensed system pressure, they fully opened, allowing high-pressure natural gas to be released into the low-pressure natural gas distribution system.



Figure 6. Location of September 13, 2018, tie-in and the Winthrop Avenue regulator station.

1.4 Emergency Response

1.4.1 Local and State Response

The overpressurization of the low-pressure natural gas distribution system in the MelTimack Valley impacted over 10,000 natural gas customers in three municipalities—Lawrence, North Andover, and Andover. The emergency call centers in these municipalities, known as public safety answering points (PSAP) began receiving 9-1-1 calls immediately following the overpressurization from residents and businesses reporting fires and explosions and requesting assistance.

Shortly after 4:00 p.m., the fire departments in Lawrence, North Andover, and Andover were inundated with emergency calls reporting structure fires and explosions. Within the first 30 minutes, all three fire departments had exhausted their list of mutual aid. The incident commanders (IC) from all three fire departments, who were either the fire chief or deputy chief,

told National Transportation Safety Board (NTSB) investigators they had never responded to a natural gas accident of this magnitude. Table 1 shows information on the local fire response from each of these municipalities.

Table 1. Local fire response.

Municipality	Time of notification	Number of stations	Number of responding firefighters	Number of injured firefighters
Lawrence	4:11 p.m.	6	124	4
Andover	4:19 p.m.	3	68	0
North Andover	4:13 p.m.	3	44	1

In Massachusetts, municipalities determine their own emergency radio communications and resources because Massachusetts Home Rule grants them the responsibility for the welfare of their residents.¹¹ The Commonwealth of Massachusetts Interoperable Radio System (CoMIRS) is a statewide network of connected but individually managed radio systems and dispatch networks that supports over 30,000 devices statewide. The Massachusetts State Police and North Andover use CoMIRS, but Lawrence and Andover do not.

Once the 10th alarm level was reached, a request to the Massachusetts Emergency Management Agency (MEMA) to activate the statewide Fire Mobilization Plan was triggered. The plan activated 15 task forces across the state, and over 180 fire departments and 140 law enforcement agencies responded to the scene.

Massachusetts State Police also responded to the affected area after receiving emergency calls. During the next 24 hours, they dispatched over 200 officers, which included detectives, members of the fire and explosion group, and crime-scene technicians. A total of 362 uniformed assets were deployed in the subsequent 4 days. They assisted in closing portions of Interstate 495, State Route 28, and State Route 114, and the police also escorted firefighters and technicians into the affected area.

Shortly after 4:00 p.m., the Massachusetts State Fire Marshal was notified of the natural gas events. Unified command was initiated and collaboratively operated by the Massachusetts State Fire Marshal and the director of MEMA and was staged in South Lawrence.¹²

About 5:20 p.m., NG received the first of several requests from CMA using a priority phone number to shut down electricity in the area to reduce sources that could ignite the released natural gas.

The mayor of Lawrence issued an evacuation order for areas south of the Merrimack River. The evacuation alert was issued over cell phones and media broadcasts to residents in the area. North Andover authorities issued a voluntary evacuation for all occupied structures with natural

¹¹ According to the National Association of Counties, *home rule* "gives local government the capability to shape the way it serves the needs of its constituency (Coester 2004)."

¹² In an IC system, a *unified command* is an authority structure in which the role of the IC is shared by two or more individuals, each already having authority in a different responding agency.

gas utility service, using local cable channels, the town website, and a citizen alert telephone system to send public service messages.¹³ The Andover fire chief called for an evacuation using a citizen alert telephone system and social media, and instructed residents to turn off natural gas service meters if they knew how to and to evacuate if they did not feel safe or smelled natural gas. In total, over 50,000 residents were asked to evacuate following the overpressurization (MEMA 2018). Five centers were set up in the three municipalities to receive displaced people; four of the centers became overnight shelters and remained open for several days. Although residents were allowed to return to their homes in all three municipalities on September 16, 2018, 3 days after the accident, many were uninhabitable at that time. As explained in section 1.4.3, many residents were unable to live in their homes for several months after the accident.

1.4.2 Columbia Gas Response

On September 13, the NiSource Gas Systems Control monitoring center in Columbus, Ohio, received pressure alarms on its supervisory control and data acquisition (SCADA) system, which recorded a sudden increase of pressure in the Merrimack Valley low-pressure natural gas distribution system at 3:57 p.m. The SCADA capability was only able to monitor system pressures; it was unable to remotely control the natural gas system.¹⁴

The first SCADA high-pressure alarm activated at 4:04 p.m. for the South Lawrence regulator station, noting a pressure of 15.02 inches w.c.¹⁵ A second high-pressure alarm activated for the Riverina SCADA pressure-monitoring center in Andover, noting a pressure of 16.94 inches w.c. at 4:05 p.m. The controller acknowledged both alarms and called the on-call technician for the CMA measurement and regulation (M&R) department at 4:06 p.m. A rate-of-change alarm was activated at 4:07 p.m., as well as a high-high pressure alarm at 4:08 p.m. for the Riverina station, which the controller acknowledged immediately.¹⁶ At 4:16 p.m., the CMA on-call technician replied to the monitoring center that he saw smoke and explosions from a distance.

In response to the phone call from the SCADA center, the Lawrence technician called the M&R technicians about the alarms at 4:06 p.m. The M&R technicians immediately responded to perform field checks on the affected 14 regulator stations in the Merrimack Valley natural gas distribution system to identify and shut down any station that was feeding high-pressure natural gas into the system. At 4:30 p.m., one of the M&R technicians at the Winthrop Avenue regulator station heard a loud sound and recognized that a large quantity of natural gas was flowing through the regulators there. He adjusted the setpoint on the two regulators to reduce flow and isolated them. He noticed that the sound of the flowing natural gas began to decrease.

¹³ The alert system automatically called every landline. Cell phones and private numbers had to be registered.

¹⁴ The natural gas distribution system complies with all applicable regulatory requirements.

¹⁵ Interviews with NiSource controllers defined a *high-pressure alarm* as elevated pressure in the system and *high-high pressure* is when the pressure in the system has reached its maximum allowable operating pressure (MAOP).

¹⁶ A rate-of-change alarm is triggered by a rapid change in pressure.

A CMA field engineer and the CMA field operations leader (FOL) were at another construction site when they received notification at 4:18 p.m. to contact the CMA construction department, from whom they learned that fires were coming out of house chimneys.¹⁷

Due to traffic congestion, a police officer escorted the FOL toward the work site at Salem and South Union Streets. The FOL arrived around 5:08 p.m.¹⁸ When the FOL arrived, the crewmembers told him they had confirmed the pressure in the entire low-pressure natural gas distribution system was in the normal range before removing the bypass. He then went to a home near the Salem and South Union Streets construction site and with the assistance of a pipefitter using a pressure gauge, found there was elevated pressure of 2.5 psi at 5:19 p.m. He then recommended to his supervisor, the Lawrence Operations Center manager, that CMA shut down the low-pressure natural gas distribution system.

After being designated as the CMA IC by the Lawrence Operations Center manager, the FOL then called the engineering department for the list of valves that needed closing to isolate and shut down the system. While waiting for this information, he requested all distribution crews to meet him at the work site at Salem and South Union Streets. The FOL assigned crews to regulator stations and directed them to verify with the engineering department the correct valve to close once they arrived at a regulator station. Once confirmed, they closed the valves. The FOL confirmed the closure of all valves at 7:24 p.m.

Low-low pressure alarms, indicating that the system was losing pressure, were received from the Riverina and South Lawrence SCADA pressure-monitoring points between 7:19 p.m. and 7:24 p.m., confirming the system was shutting down. At 7:43 p.m., the president of CMA declared a Level 1 emergency, in accordance with CMA's emergency response plan (ERP).¹⁹

Beginning at 8:39 p.m., the FOL sent pipefitters to different points in the system to take pressure readings to see if the pressure was dropping. About midnight, crews were dispatched to the affected areas in all three municipalities to assist the fire department personnel in shutting off meters and responding to fires, leak calls, and odor complaints. Locksmiths also were requested by CMA to provide technicians access to secured properties that needed to be checked for leaking natural gas.

On September 14 at 2:52 a.m., NiSource submitted a request to the Northeast Gas Association seeking mutual assistance from service technicians and supervisors from other natural gas companies. A total of 586 service technicians and 57 supervisors from 27 different natural gas companies responded to the request.

During the night, CMA's M&R department worked at the FOL's direction to confirm all regulator stations were locked in.²⁰ At 6:27 a.m., all 14 regulator stations were locked in and the

¹⁷ A FOL primarily handles customer requests and responds to natural gas incidents and leaks.

¹⁸ The location of the FOL was recorded by a global positioning system tracker in the NiSource system.

¹⁹ *Level 1* is defined in NiSource's Emergency Manual as "Catastrophic Event-Which if not handled in an appropriate manner may dramatically impact NiSource's reputation, assets, or cause liability. Corporate Crisis Plan activated." Level 1 scenarios include a loss of a major natural gas facility or loss of critical natural gas infrastructure.

²⁰ *Lock in* refers to the inlet and outlet valves being completely closed and, as a result, there is no natural gas flowing in the regulator station.

low-pressure natural gas distribution system was confirmed shut down for 8,447 customers in the Lawrence, Andover, and North Andover areas. An additional 2,447 customers outside the immediate area had their natural gas shut off as a precaution.

1.4.3 Community Impact

Residents who were evacuated from the impacted area were allowed to return to their homes by 7:00 a.m. on September 16, 2018. However, restoration of residential natural gas and electricity required more time and involved multiple steps to coordinate the activities safely. CMA restored natural gas service to most customers in the impacted areas of Lawrence, North Andover, and Andover by December 16, 2018, 3 months after the accident.

On September 14, 2018, the governor of Massachusetts authorized Eversource Energy as the lead organization of the recovery process and to manage the restoration of the utility services in Andover, North Andover, and the portion of Lawrence that was south of the river (Commonwealth of Massachusetts 2018).²¹ Between September 14 and September 16, 2018, NG coordinated with CMA and Eversource Energy to restore electrical power, following a required procedure to ensure that it was safe to re-energize homes without igniting any natural gas. As a precaution, the fire department sent assets to neighborhoods in case structure fires occurred when the electric service was resumed.

Until natural gas service was restored, many customers were without heat, hot water, and the service of other natural gas-fueled appliances such as stoves and clothes dryers. MEMA, the American Red Cross, and local officials set up a Recovery Resource Center to provide the communities with food and other support services. Also, NiSource and MEMA collaboratively set up an alternative housing program that relocated about 2,300 families to hotels, apartments, and trailers until they moved back into their homes (MEMA 2018).

1.5 Natural Gas Main Replacement Project

1.5.1 Scope

Beginning in 2016, CMA initiated an effort to replace 7,595 feet of low-pressure cast iron and polyethylene mains with 4,845 feet of low-pressure and high-pressure polyethylene mains on South Union Street and neighboring streets. The project was estimated to last 96 days, encompassing 12 different projects with two work crews, and the work scope included 93 service lines—65 service line replacements and 28 service line tie-ins. This was the first of the projects that involved abandoning the existing pipe. A work package, which included materials such as isometric drawings and procedural details for disconnecting and connecting pipes, was prepared for each of the planned construction activities. However, no package was prepared for the relocation of the Winthrop Avenue sensing lines from the cast iron main to the polyethylene main.

²¹ Eversource Energy is an energy company that offers retail electricity, natural gas service, and water service to about 4 million customers in New England.

Figure 7 shows the area of the replacement of the natural gas main in South Lawrence along South Union Street with the cross-street tie-ins. The work on the day of the accident was at the north end of the project at Salem Street. The Winthrop Avenue regulator station is at the south end of the project.

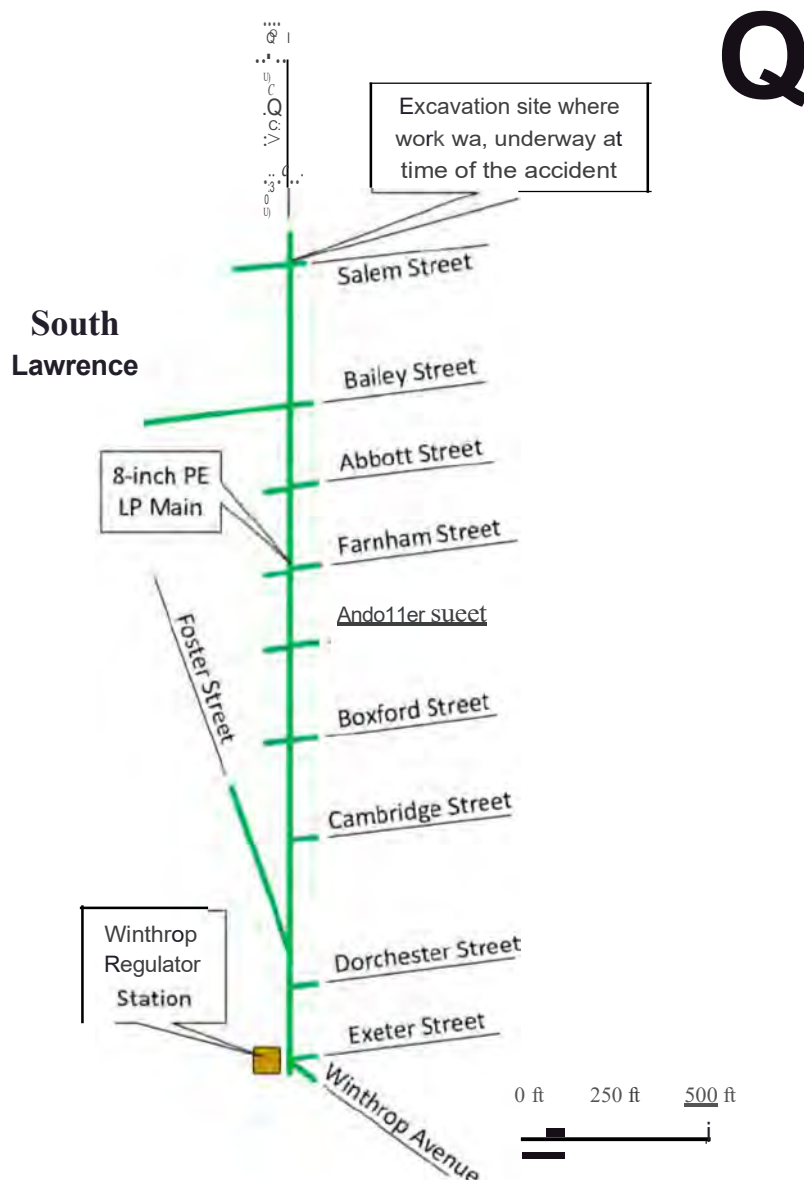


Figure 7. Areas along South Union Street with tie-ins impacted by the project.

The first stage of the project involved the installation of the polyethylene main, which was completed in late 2016. The regulator sensing lines at the Winthrop Avenue regulator station remained attached to the cast iron main, where they controlled natural gas flow through the

Winthrop Avenue regulator station into both the cast iron and polyethylene mains, which were connected in the low-pressure natural gas distribution system. (See figure 8.)

The city restrictions, due to paving in the area, delayed the South Union Street project for more than a year. Prior to the delay, CMA connected the polyethylene pipe to the distribution system, which allowed it to be monitored for pressure changes. The second stage of the project began in 2018 and involved installing the tie-ins to the polyethylene main and abandonment of the cast iron main. On the day of the accident, the sensing lines were still connected to the cast iron main and were functionally disconnected from the distribution system when the cast iron main was abandoned.

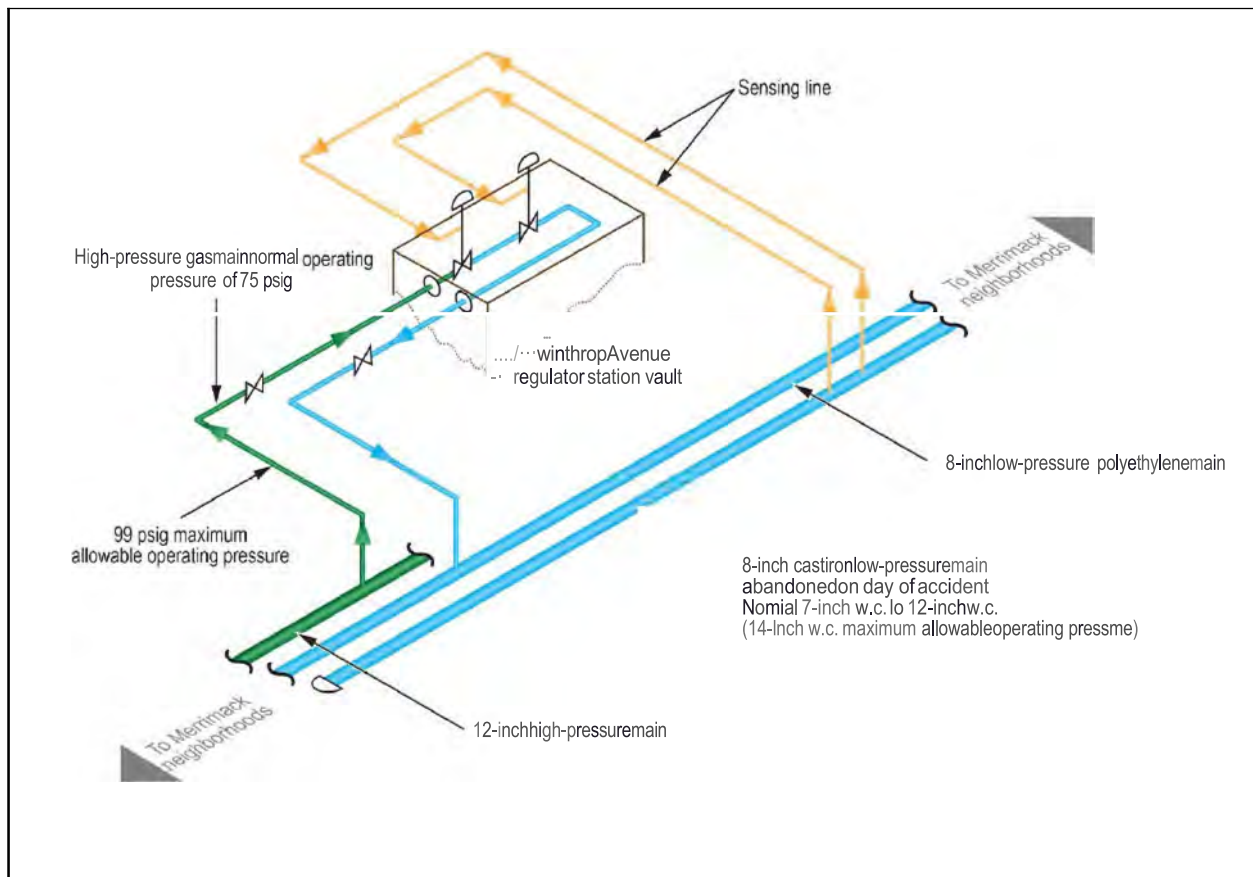


Figure 8. The Winthrop Avenue regulator station.

1.5.2 Project Reviews

CMA uses three types of documents that are found in a work package and that are used to control the workflow of a construction project. Once these documents were complete, they were submitted to engineering management for approval.

Table 2. Required CMA project workflow documentation.

Chronology	Title of document	Number of pages	Description
1	Capital Design Job Order Checklist	2	Details the individual steps and activities, accountabilities, and approvals performed and obtained by the field engineer during the project design and approval process.
2	Capital Project Execution Workflow	3	Provides the activity detail, handoffs, accountability, and approval that occurs throughout the construction process from the time a project is released until it is completed and submitted to the GIS Capital Closeout team for project closeout and approval.
3	Constructability Safety Review	3	Documents a collaborative discussion between the project engineer and the construction leader to review the scope and details of a project before construction to identify and address potential obstacles to the execution of a project.

Constructability reviews are a recognized and generally accepted good engineering practice for the execution of professional design services and are intended to provide an independent and structured review of construction plans and specifications to ensure there are no conflicts, errors, or omissions (Kirby and others 1989). Two constructability reviews of the South Union Street project were signed on March 1, 2016, and January 6, 2017. The second constructability review was signed again on December 14, 2017. The constructability review form had a required signature line for the engineering and construction departments and a signature line for M&R that was designated as optional. The constructability review forms for the South Union Street project did not include signature(s) for representatives from the M&R department.

Before the accident on September 13, 2018, the M&R department participation in constructability reviews was on a case-by-case basis. For example, if the project involved changing the design or location of a regulator station or installing or replacing a regulator, M&R would likely be involved in the constructability review and meetings in the field.

Postaccident review of the engineering work package and construction documentation for the project identified some omissions. Although CMA used its project workflow process to develop, review, and approve the engineering plans, the work package did not consider the existence of regulator sensing lines connected to the distribution lines that were slated to be abandoned within the scope of work. This omission was not identified by any of the CMA constructability reviews (NTSB 2018). In fact, none of the CMA workflow documents refer to natural gas distribution system pressure control nor do they refer to regulator control or sensing lines, and none of the documentation in the construction packages for the South Union Street project referred to sensing lines for regulator control. The 2018 constructability review document referenced pressure monitoring and stated that "if pressure rises/falls beyond these points, contact M&R."

1.5.3 Sensing Line Documentation

NTSB investigators spoke with an M&R department supervisor, who stated:

Except for the newest stations, there's no, there is no, there is no drawings of control [sensing] lines. We frequently get asked to come out and help, you know, locators mark control lines. We can't really help them because we don't know where they are. Well, I mean a lot of the stations go back to the '50s and '60s. The new stations, we have the field engineers come out and draw them for us.

The M&R supervisor said that employees sometimes used older legacy recordkeeping systems to supplement newer isometric drawings of the regulator stations because critical information was missing from the new drawings. He described the documentation failures of the newer drawings, such the omission of valves, as "a deficiency on the engineers," although he said that it might not have been the fault of the engineers because "it wasn't clear enough when they explained to them what they wanted drawn."

He described the legacy recordkeeping system as "the old books," stating that "we call them our bibles." He said that even though employees "weren't supposed to have them anymore because they may not be current," during his tenure in his prior position in the field, he found them to sometimes be "more current than the new drawings."

Table 3 details the information associated with the sensing lines and the regulator stations including where it can be found and also includes other related documentation, such as the geographic information system (GIS) data. According to the director of field engineering, the GIS data did not provide project reviewers/approvers with sensing line location information at the time of the accident. These information sources were not in one location; hence, engineers would be required to visit multiple places to capture the true as-built configuration. M&R staff also had extensive institutional knowledge about sensing line locations.

Table 3. Sources of sensing line information and select regulator station documentation. Table courtesy of NiSource.

Document or source of information	Location	Description	Update interval	Responsible for updating
Critical Valve Book (contain sensing line information)	Lawrence Operations Center	Identifies the location of critical valves in relation to other system components, including regulator stations and sensing lines where applicable	As needed	Engineering
Work Done Files (contain sensing line information)	Lawrence Operations Center	Compilation by town and street of records and as-built sketches of work done on system, including sensing line installations, replacements, and relocations	As work is done	Distribution, Construction, Operations
Historical Maps (contain sensing line information)	Lawrence Operations Center	System maps predating implementation of GIS. Certain historical maps include sensing line locations	Historical	N/A

Document or source of information	Location	Description	Update interval	Responsible for updating
Capital Close Out Files (contain sensing line information)	Lawrence Operations Center	As-built drawings and other project documentation from inspector work order packets for capital projects, including as-built drawings of project sensing line installations, replacements, relocations	As projects are closed out	Construction/Capital Close Out
WMS (work management system) Docs (contain sensing line information)	WMS Docs Database	Electronic version of Capital Close Out files, including as-built drawings of project sensing line installations, replacements, relocations	As projects are closed out	Capital Close Out
M&R Regulator Books (contains sensing line information)	M&R Technician Vehicles	Books maintained for reference by M&R in the field. The books contain diagrams depicting the piping configuration around regulator stations, including the location of sensing lines	As needed	M&R
Regulator Station Inspection Record	Regulator Station	Record of station attributes, major components, station shut-off valve	As inventory changes	M&R
Regulator Station Inventory Record	Regulator Station	Record of station attributes, major components, station shut-off valve	As inventory changes	M&R
Station Isometric Drawing	Regulator Station	Depicts direction of flow through regulator station and sequence of major station components	As needed	Engineering
GIS Map Printout	Regulator Station	GIS record identifying location of regulator station's critical valve in relation to regulator station, station's inlet and outlet piping, and natural gas mains in the vicinity of station	As needed	Capital Close Out

1.6 Engineering Project Management

1.6.1 Staffing and Scope of Responsibilities

The field engineer assigned to the South Union Street project was based in the Lawrence Operations Center, and began work at CMA in July 2014, soon after graduating from college with a mechanical engineering degree. He was promoted from field engineer 1 to field engineer 2 in December 2016. He was responsible for developing and planning engineering modifications to the natural gas distribution system. He had about 1 year of experience when assigned to the South Union Street project in 2015, and he continued to work on that and other projects through 2018. He had worked as a field engineer with CMA for about 4 years when the accident occurred.

The field engineer had completed training from NiSource on various topics, including regulators, sensing lines, and company-wide NiSource Operational Notice (ON) 15-05; the latter discussed how sensing lines could be damaged by excavation close to a regulator station, and it highlighted the specific risk of overpressurization due to damage to sensing lines. However, he told NTSB investigators that sensing lines typically were not addressed in his work packages unless a project involved replacing a regulator station (such as in the 2014 work package) or vault. He could not recall if he had addressed sensing lines on previous projects. He added that he did

not know if the engineering department had access to sensing line information, although he believed that the M&R department did.

Field engineers are supervised by one of two leaders of field engineering (LFE), who both report to the manager of field engineering. There is one LFE for CMA's Brockton Operations Center and the other for CMA's Springfield and Lawrence Operations Centers. The LFE for the Springfield and Lawrence Operations Centers oversaw the South Union Street project. He began working for Bay State Gas Company (now CMA) as a co-op student on January 3, 1984. He was hired full time as an associate engineer in 1987 and worked within the engineering department until 2001. He then left the company and went into private consulting for 5 years. He came back to CMA in April 2007. He was promoted from field engineer to LFE in December 2013. In that capacity, his responsibilities included overseeing engineering projects in areas covering Springfield, Massachusetts, and Lawrence, Massachusetts. He had six full-time engineers who reported directly to him from the Springfield division and three engineers in the Lawrence Operations Center, where work packages for the South Union Street project were prepared.

The LFE earned a bachelor of science degree in mechanical engineering and a master of science degree in engineering management. He is licensed as a professional engineer (P.E.) in Massachusetts.

The field engineering group provides engineering support that includes the design of replacement projects, estimating, cost tracking, creation of tie-ins, and project management. For calendar year 2018, CMA established a goal to replace 58 miles of what was categorized as replacement pipe. The section of cast iron pipe related to the accident was part of this 58-mile scope.

In an interview, the LFE described the initiation of the South Union Street project. He said that as part of a natural gas system enhancement program, the field engineering department submits a 5-year pipe-replacement plan each year to the Massachusetts Department of Public Utilities (DPU). From there, the team develops a preliminary design to determine the project scope and prioritize tasks. After a preliminary estimate and preliminary design, the field engineering group meets with the construction group for a constructability review.

According to the LFE, once they finalize a plan:

We make sure that we take a look at all of the material that's going to be installed and abandoned. We develop tie-in procedures, pressure-testing procedures. We make sure environmental concerns are addressed. And we actually have a checklist to go down to make sure that the protocol has been followed as far as constructability reviews, reviews of crews in the field-I mean, constructability reviews for the construction people so they understand the scope of the project.

The engineering review includes sign off by the LFE, the manager of field engineering, and the director of field engineering. During interviews with NTSB investigators, the LFE, and the manager and director of field engineering stated that their review did not include an evaluation of each step in the work package. The LFE stated, "I do not go through and actually-on every

single project look at every single step of the process." The LFE was not required or asked to review the work package and certify it under the standards of a Professional Engineer.

The director of field engineering indicated that he is responsible for approving projects with costs over \$1 million, which included the South Union Street project. He said that his reviews typically were at a higher level, and he did not carefully review each step of work packages, particularly those that were routine in nature, as was the case with the work being done on the day of the accident. Moreover, he suggested that he would expect the managers of engineering to perform similar high-level reviews.

However, the director of field engineering indicated that he would expect the field engineers and the LFEs to work together to ensure that work packages were safely designed. He said that it was up to the LFE to assess the capabilities of each field engineer and provide the appropriate level of oversight based on their capabilities. He added that peer reviews, in which field engineers evaluated each other's work, were often used as well. However, he said that such reviews were informal and unstructured. He added that when field engineers were in the process of gathering information on a project, they looked at the documentation on the facilities that are in the scope of the work. He said that after the accident NiSource recognized that "we were short on readily available information around the sensing lines, the control lines."

1.6.2 Measurement and Regulation Department

The M&R department is responsible for maintaining the regulator stations in the CMA natural gas distribution system. On September 13, 2018, the M&R department consisted of 11 full-time technicians across Massachusetts, with 2 technicians in the Lawrence area who had more than 45 years of experience between them. The department is responsible for the regulator vaults, the regulators, and the sensing lines. CMA expects the M&R department to initiate work for existing sensing line maintenance. On capital projects, CMA expects the engineering department to work in coordination with M&R and the construction departments when sensing line work is needed.

The NTSB was provided an affidavit from the field engineer in which he stated that he discussed sensing line configurations in general with a member of the construction department during the design phase of the South Union Street project, and during the constructability review that took place on March 1, 2016. The field engineer also said that he contacted the M&R department to discuss sensing lines, though he no longer recalled "all the specifics of that conversation." The field engineer said that he concluded his discussion with the M&R department with the understanding that the engineering department did not need to do anything further regarding sensing lines on the South Union Street project. The affidavit did not reveal a plan to relocate the sensing lines. NiSource did not have a requirement to document conversations between the engineering and measurement and regulation departments regarding sensing lines.

NiSource provided the investigation with an e-mail, dated October 16, 2016, from the Lawrence construction leader to the M&R department. The Lawrence construction leader was involved in the South Union Street project and had signed the first constructability review for the project on March 1, 2016, (before sending the e-mail), and the second constructability review on January 6, 2017, (after sending the e-mail). However, the M&R department employee addressed

in the e-mail had left CMA and was not employed by the company at the time of the accident. The e-mail stated:

We are working near the union st reg station. We are working on the low-pressure outlet and will be placing a tap fitting on the outlet and eventually moving the static lines to the new outlet piping. A new outlet valve will be installed. The shutdown of the pit will be scheduled for some time later. This is a notice that work in the area has started.

In addition, NiSource provided the NTSB with an affidavit from a contract inspector in its Lawrence Operations Center that stated that he discussed with the Lawrence construction leader the need to relocate the sensing lines before the existing cast iron main was abandoned.²² The contract inspector said that the two agreed to discuss the relocation "in more detail, with input from others, once the project progressed further." He said that the construction crew, including the construction foreman, construction lead, and the NiSource local construction coordinator, also were aware of the need to relocate the sensing lines before the cast iron main was abandoned. Although several affidavits suggest there were conversations about sensing lines, and an e-mail exists that confirms that it was known that the sensing lines needed to be relocated, there is no evidence that a work order or formal plan was ever developed to address the issue.

In 2015, NiSource issued an operational notice, *Below Grade Regulator Control Lines: Caution When Excavating Near Regulator Stations or Regulator Buildings*, ON 15-05, requiring that M&R personnel be consulted on all future excavation work that was done within 25 feet of a regulator station with sensing lines, other communications and/or electric lines critical to the operation of the regulator station, or buried odorant lines. The ON provided that M&R personnel stand by the regulator station throughout the excavation if there was a risk that the excavation could damage any such line. The South Union Street project excavation work being performed on the day of the accident occurred over 2,000 feet away from the Winthrop Avenue regulator station and, thus, was beyond the 25-foot requirement in ON 15-05. The basis of the 25 feet in ON 15-05 is the assumption of a safe distance that encompasses the equipment associated with a regulator station, including sensing lines. According to the document:

If a control line breaks, the regulator will sense a pressure loss, causing the valve to open further, resulting in an over pressurization on the downstream piping system, which may lead to a catastrophic event. The same result occurs if the flow through the control line is otherwise disrupted (e.g., control line valve shut off, control line isolated from the regulator it is controlling) (NiSource 2015).

As documented in the NTSB's November 14, 2018, Safety Recommendation Report on this accident, a former CMA employee informed NTSB investigators about a purported past policy or practice that CMA allegedly phased out, whereby M&R personnel stood by a regulator station when construction took place on its natural gas mains (NTSB 2018). During interviews with a NiSource employee and a former employee, investigators were told there were times in the past (at least 5 years earlier) when M&R personnel provided assistance while distribution system piping modifications were being tied over to live systems to minimize the risks associated with

²² The affidavit was signed on May 2, 2019, 231 days after the accident.

overpressurization at natural gas mains. No documentation was found to support that such a policy or practice existed, except as outlined by ON 15-05. NiSource stated that no such policy or practice existed and; therefore, none was phased out or discontinued.²³

1.7 Overpressure Protection

1.7.1 Overpressurization Protection Requirements

For low-pressure natural gas distribution systems, there is no requirement for a service regulator or protective device at the service location that would prevent the overpressurizing of customers' piping and appliances. Overpressure protection relies on the redundant worker and monitor regulators at the regulator stations where natural gas is introduced to the low-pressure natural gas distribution system.

Title 49 *CFR* 192.197 requires high-pressure natural gas distribution systems be equipped with a service regulator or protective devices at the service location that would prevent the overpressurizing of customers' piping and appliances. This is in contrast to the requirements for low-pressure natural gas distribution systems, where the pressure in the main is essentially the same as the pressure provided to the customer.

The American Society of Mechanical Engineers (ASME) sets forth guidelines for the safe design and construction of both high and low-pressure natural gas distribution systems. These guidelines, called *The Code*, include requirements for district regulator vaults, regulators, and control lines (ASME 2012).

Specifically, *The Code* states the following in section 845.3:

(g) When a monitoring regulator, series regulator, system relief, or system shutoff is installed at a district regulator station to protect a piping system from overpressuring, the installation shall be designed and installed to prevent any single incident, such as an explosion in a vault or damage by a vehicle, from affecting the operation of both the overpressure protective device and the district regulator.²⁴

(h) Special attention shall be given to control [sensing] lines. All control lines shall be protected from falling objects, excavations by others, or other foreseeable causes of damage and shall be designed and installed to prevent damage to any one control line from making both the district regulator and the overpressure protective device inoperative.

Title 49 *CFR* 192.195 requires protection from the accidental overpressuring of natural gas distribution systems, and states that systems must have a pressure-relieving or pressure-limiting

²³ NiSource informed the NTSB that it had investigated this issue thoroughly, speaking with 18 field and supervisory employees from the construction and M&R departments at each of NiSource's operations centers-including the employees interviewed by the NTSB. NiSource also provided the NTSB with sworn affidavits from each of those employees regarding this issue.

²⁴ *Monitor regulators* are sometimes referred to as *monitoring regulators*.

device that meets the requirements outlined in 49 *CFR* 192.199 (g). Title 49 *CFR* 192.199 (g) states, "where installed at a district regulator station to protect a pipeline system from overpressuring, be designed and installed to prevent any single incident such as an explosion in a vault or damage by a vehicle from affecting the operation of both the overpressure protective device and the district regulator." The redundant worker and monitor regulators underground vault at the Winthrop Avenue regulator station met the overpressure requirements of 49 *CFR* 192 and the AS:ME guidelines.

1.7.2 Previous Overpressurization Accidents Investigated by the NTSB

Over the past 50 years, the NTSB has investigated several accidents that involved natural gas under high pressure entering low-pressure natural gas lines.²⁵

On June 3, 1969, the NTSB investigated a natural gas pipeline overpressure incident in Gary, Indiana (NTSB 1969). The pipeline, owned by Northern Indiana Public Service Company (NIPSCO), which is the present-day NiSource, was overpressurized when an employee inadvertently opened a separation valve that allowed 20 psig gas to flow into a 0.25 psig system. The absence of any overpressure protection in the 0.25 psig system now subjected to the 20 psig resulted in a regulator diaphragm failure. Although operators recognized the error and closed the separation valve, the failed regulator allowed 20 psig gas into the natural gas distribution system. There were no fatalities; however, nine residents and five firefighters were injured. Seven homes were destroyed and several incurred damage. The property damage was about \$350,000.

On November 6, 1969, a low-pressure natural gas distribution system in Burlington, Iowa, overpressurized when a bulldozer impacted one of 24 regulator stations on a 7,500-customer system (NTSB 1969a). The impact damaged the worker regulator. When the worker regulator was damaged, the monitor regulator activated; however, the monitor regulator failed to control the 55 psig inlet pressure to the required 0.25 psig as-designed setting. The Iowa Southern Utility Company estimated that the pressure reached 1.25 psig, which amounted to a four- to five-fold increase over the normal operating pressure. Although the sensing lines were bent in the mishap, their integrity to maintain pressure was not compromised. There were no fatalities, but two firefighters suffered minor injuries. There were no explosions, but six homes were totally destroyed; 42 other homes suffered fire damage. The Burlington Fire Department estimated the damages at \$80,000.

On August 9, 1977, natural gas under high-pressure (20 psig) entered a Southern Union Gas Company low-pressure (6 ounces per square inch) natural gas distribution line and overpressured more than 750 customer service lines in a 7-block area in El Paso, Texas.²⁶ Flames from gas pilots and the burners of appliances burned out of control and caused fires in nearby flammable materials. The gas company was replacing a section of 10-inch cast iron low-pressure natural gas main and isolated it between two valves. The isolated sector contained the natural gas regulator pressure sensing control lines. When the pressure fell to 0 psig the natural gas regulators

²⁵ The reports cited in this section are available on <http://www.nts.gov>.

²⁶ For reference, 1 mmce per square inch, gauge equals 0.0625 psig which equals 1.73-inch w.c.

opened up to try to maintain the operating pressure and overpressured the rest of the affected system. The problem was corrected before any fatalities or major injuries resulted (NTSB 1978).

On May 17, 1978, a Columbia Gas of Ohio, Inc., construction crew in Mansfield, Ohio, mistaking an 8-inch low-pressure steel natural gas main for an 8-inch high-pressure steel natural gas main, drilled a small pilot bit hole through the wall of the low-pressure natural gas main and began to cut into the pipe wall with a large diameter bit.²⁷ The construction crew was making a "hot tap" to complete the final tie-in of an 8-inch, replacement natural gas main to the existing high-pressure natural gas distribution system.²⁸ The hot tap was to be made using a three-way tapping tee which had its side outlet welded to the live high-pressure replacement natural gas main and its bottom outlet mistakenly welded to the low-pressure natural gas main. When the 1-inch pilot bit on the tapping machine attached to the top outlet of the tee penetrated the wall of the low-pressure natural gas main, gas at 42 psig pressure from the high-pressure natural gas distribution system entered the 14-inch w.c. (about 1/2 psig pressure) low-pressure natural gas main and rapidly increased the pressure in the low-pressure natural gas system in a 4.8 square mile area of Mansfield. The Mansfield Fire Department began receiving reports of fires caused by excessively high appliance flames on natural gas appliances. There were no fatalities or injuries requiring hospitalization. Property damage to 16 houses resulted from the ignition of nearby combustibles by high-pilot flames; five of these houses were extensively damaged.

On January 28, 1982, in Centralia, Missouri, natural gas at 47 psig entered a low-pressure natural gas distribution system which normally operated at 11-inches w.c. (0.40 psig) after a backhoe bucket snagged, ruptured, and separated the 0.75-inch diameter steel pressure regulator control line at the Missouri Power and Light Company's district regulator station No. 1 (NTSB 1982). Because the regulator no longer sensed system pressure, the regulator opened and high-pressure natural gas entered customer piping systems, in some cases, resulting in high pilot light flames which initiated fires in buildings; while in other cases, the pilot light flames were blown out, allowing natural gas to escape within the buildings. Of the 167 buildings affected by the overpressurization, 12 were destroyed and 32 sustained moderate to heavy damage. Five occupants received minor injuries.

On September 23, 1983, natural gas pressure in the Boston Gas Company's distribution system in East Boston, Massachusetts, rapidly increased from 7-inches w.c. (about 0.25 psig) to more than 17-inches w.c. (about 0.6 psig).²⁹ The Boston Fire Department began receiving telephone calls about natural gas odors, high pilot lights, and fires. Natural gas company crews searching for the source of high-natural gas pressure found the district regulator vault at Bremen and Polier Streets (one out of four in the East Boston area) had been submerged in water following a broken water main. After the vault had been pumped out, inspection of the primary regulator

²⁷ For more information, see the NTSB letters, dated August 21, 1978, to Columbia Gas of Ohio (regarding NTSB Safety Recommendations P-78-45 through -49); Materials Transportation Bureau (regarding NTSB Safety Recommendations P-78-50 and -51); and American Gas Association (regarding NTSB Safety Recommendation P-78-52).

²⁸ *Hot tapping* is the method of making a connection to existing piping while the pipe is in service without interrupting the flow of natural gas.

²⁹ For more information, see the NTSB letter, dated April 9, 1984, to the Boston Gas Company regarding NTSB Safety Recommendations P-84-7 through -9.

showed that water had entered the regulator through leaks in a gasket and through the vent piping, filling the area above the regulator diaphragm, holding the regulator valve open and allowing natural gas pressure to increase in the distribution system. In addition, a dispatcher at the Boston Gas Company control center received an alarm about the substantial rise in pressure.³⁰ Many East Boston residents had been awakened to the sound and smell of blowing natural gas to see larger-than-normal natural gas pilot lights and natural gas appliance pilot flames in their homes. The Boston Fire Department responded immediately to telephone calls from the residents and began alerting and evacuating residents. The fire department turned off natural gas at customer meters and pursued fighting fires. A 1-square-mile section of East Boston was affected; one restaurant was destroyed by an explosion, two residences were destroyed by natural gas-fed fires, and other small fires occurred as a result of the natural gas overpressurization. No fatalities or injuries resulted from the accident.

On January 17, 1992, in the River West area of Chicago, Illinois, a crew from Peoples' Gas, Light and Coke Company (Peoples) was doing routine annual maintenance work on a monitor regulator at one of its regulator stations, when high-pressure natural gas at 10 psig entered a low-pressure natural gas distribution system (NTSB 1993). The natural gas escaped through appliances into homes and other buildings where it was ignited by several unidentified sources. The resulting explosion and fires killed 4 people, injured 4, and damaged 14 houses and 3 commercial buildings.

1.7.3 Previous NiSource Overpressurization Incidents

Over the past 15 years, there have been four overpressurization events and one near-miss within the NiSource network, not including this one on September 13.³¹ NTSB did not investigate these incidents.

On March 1, 2004, a system with an inlet pressure of 50 psig and an outlet pressure of 13 inches w.c. was overpressurized to 4.5 psig when debris was lodged at the seat of the bypass valve in Lynchburg, Virginia.

On February 28, 2012, an operator error during an M&R station inspection resulted in accidental overpressurization in Wellston, Ohio. Over 300 customers were without service for 14 hours.

On March 21, 2013, a segment of pipe with a maximum allowable operating pressure (MAOP) of 1 psig was pressurized at over 2 psig in Pittsburgh, Pennsylvania. A work crew, under the direction of the local NiSource subsidiary, was making a tie-in and failed to monitor the pressure and flow of the existing low-pressure natural gas distribution system during the tie-in process. The pressure cycled from 12 inches w.c. up to 2 psig three times.

On August 11, 2014, a local NiSource crew in Frankfort, Kentucky, was excavating to repair a Grade 1 leak located on the outside of a regulator station building. The crew uncovered

³⁰ For more information, see the NTSB letter, dated November 27, 1984, to the Boston Gas Company regarding NTSB Safety Recommendations P-84-43 through -45.

³¹ E-mail from NiSource to NTSB, March 25, 2019.

and narrowly missed hitting the 1-inch sensing line and tap located on the 8-inch outlet pipeline. The crew was unaware of the purpose of the 1-inch pipeline and called local M&R personnel. The M&R personnel advised the crew of the purpose of a sensing line and what would have happened had the line been broken.

On January 13, 2018, during the investigation of a service complaint, a pressure of 2 psig was discovered on a 14-inch w.c. natural gas distribution system in Longmeadow, Massachusetts. The cause was associated with debris accumulation on both the worker and monitor regulator seats at a regulator station. Once the debris was removed, the pressure returned to normal.

1.8 Pipeline Safety Management Systems

On July 25, 2010, a 30-inch diameter pipeline owned and operated by Enbridge Incorporated ruptured and released more than 840,000 gallons of crude oil into nearby wetlands and a creek that flowed into the Kalamazoo River in Marshall, Michigan. Unaware that the pipeline had ruptured, Enbridge employees continued pumping oil into the ruptured pipeline for 17 hours until a local utility worker discovered the oil and contacted the company (NTSB 2012).

The rupture was caused by fatigue cracks that grew and coalesced from crack and corrosion defects under disbonded polyethylene tape coating. Contributing to the accident were weak regulations for assessing and repairing crack indications as well as ineffective oversight of pipeline integrity management programs, weak pipeline control center procedures, and a low level of public awareness. As a result of the Marshall, Michigan, investigation, the NTSB made the following safety recommendation to the American Petroleum Institute (API):

Facilitate the development of a safety management system standard specific to the pipeline industry that is similar in scope to your Recommended Practice 750, *Management of Process Hazards*. The development should follow established American National Standards Institute requirements for standard development. (P-12-17)

In response to this recommendation, API developed a recommended practice (RP), titled *Pipeline Safety Management Systems*, which was sanctioned by the American National Standards Institute (ANSI).³² The API document, known as API RP-1173, exceeded the NTSB's intent in issuing the recommendation to facilitate the development of a safety management system (SMS) standard specific to the pipeline industry. In addition, API, which represents commercial concerns throughout the oil and natural gas industry, addressed safety culture and other safety-related issues in its API RP-1173 (API 2015). As a result, on October 22, 2015, the NTSB classified Safety Recommendation P-12-17 "Closed-Exceeds Recommended Action."

API formed a stakeholder group consisting of oil and natural gas pipeline operator personnel and trade association staff, other federal and state agency personnel, and safety experts representing the public. The group met monthly, surveyed the public, and developed actionable guidelines for the pipeline industry to work toward a goal of continuous safety improvement. The API RP-1173 established a pipeline safety management system (PSMS) framework for

³² A recommended practice is a voluntary pipeline industry consensus standard.

organizations that operate hazardous liquids and natural gas pipelines under the jurisdiction of the US Department of Transportation.

In 2015, the pipeline industry completed the development of the PSMS framework, designed specifically for pipeline operators. It is a product of a collaboration between pipeline operators, state and federal regulators, and other stakeholders. Participants include API, the Association of Oil Pipe Lines, the American Gas Association, the American Public Gas Association, the Interstate Natural Gas Association of America, and the Canadian Energy Pipeline Association.³³ Since the availability of API RP-1173, many oil and natural gas companies have been aligning with its guidance and building PSMSs that suit their companies' situations and goals. To facilitate the continued success and use of PSMS guidance, the developers of API RP-1173 prepared a PSMS maturity model for companies to gauge the status of their PSMS build out. (See figure 9.) Five levels of maturity were defined in the maturity model (MM): planning (level 1), developing (level 2), implemented (level 3), sustaining (level 4), and improving (level 5). The "plan, do, check, act" cycle and; therefore, the full safety benefits of PSMS are realizable in levels 4 and 5.

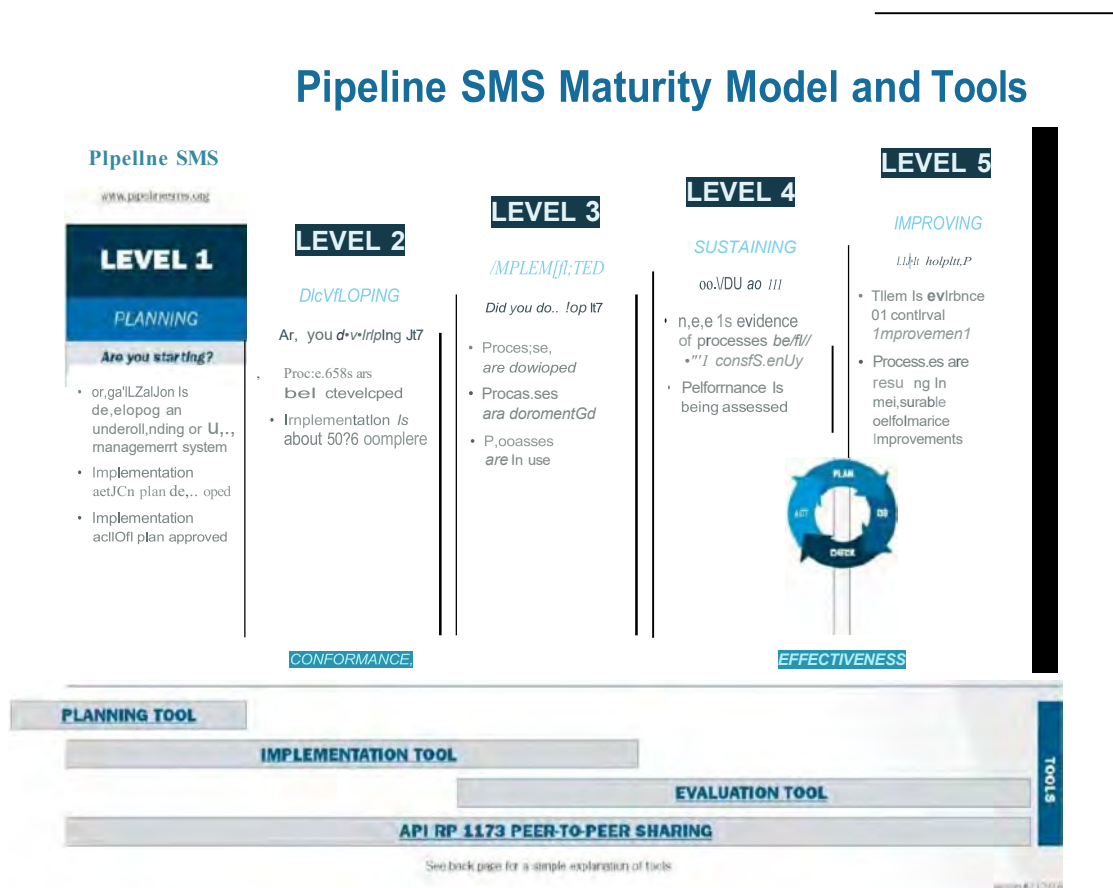


Figure 9. Pipeline SMS maturity model. Graphic courtesy of Pipelinesms.org.

³³ For more information, see <https://pipelinesms.org>.

NiSource began its SMS efforts several years prior to the overpressurization, as evidenced by the company being listed as a participant in the American Gas Association's (AGA) SMS project. Interviews with NiSource executives revealed that they had initiated SMS development in 2015 and accelerated efforts since the accident. NiSource employees indicated that they were excited about SMS development, but were still early in the process. They had not yet determined how they were going to assess the maturity of their SMS.

NiSource was among the first natural gas utility companies to embrace API RP-1173 for its operations when it was implemented at its subsidiary, Columbia Gas of Virginia, in 2015. Its initial efforts at Columbia Gas of Virginia began before the Merrimack Valley overpressurization. NTSB investigators interviewed senior executives at NiSource to better understand the status of its PSMS development and implementation efforts.

The director of pipeline safety for NiSource Corporate Services said that both he and the NiSource board of directors were excited about the deployment of PSMS. After the accident, he indicated that he had another opportunity to discuss the PSMS with the board, at which point PSMS efforts were "very much encouraged to move even faster," and NiSource has now accelerated implementation of PSMS in all its companies. When investigators asked about the maturity of the PSMS, he indicated that the maturity measures had not "been defined," though there was "certainly a lot of discussion" taking place on the topic, additional resources have been added to accelerate PSMS implementation, and there is not an "endpoint" because it involves a process of continual improvement.

He also said that NiSource, as well as third parties, would be involved in safety oversight. He indicated there would be checks and balances and stated that the "governance piece is really good." However, he also indicated that "the auditing process is yet to be defined." He said that NiSource is trying to get the primary elements of PSMS in place by the end of 2019.

NTSB investigators also spoke with a NiSource senior vice president about the implementation of PSMS. Direct reports to this senior vice president include the vice president of safety, the vice president of training, and the vice president of environmental. The senior vice president indicated that the initial plans for PSMS were a "sequential deployment" on a state-by-state basis. He said that he believed that a "generic gap analysis kind of at the (natural) gas segment level" had been performed. He added that NiSource was in the process of "really deploying and building safety management systems around the recommended practice [API RP-1173]." He also indicated that gap analyses had been performed for Virginia and Indiana, and that NiSource is undertaking them in other states, including Massachusetts. The senior vice president indicated that many gaps had been improved upon, if not closed. When they began their efforts, they performed a gap analysis based on the 10 elements within the API-1173 standard and determined that NiSource's Virginia-based safety programs were about 58 percent in agreement with the 10 elements. Relating to API-1173 implementation, Virginia was intended to be the pilot state for implementation; at the time of the accident, API-1173 implementation had yet to be

implemented in Massachusetts. Following the accident, CMA was ordered by the Massachusetts DPU to adopt API-1173.³⁴

1.9 Professional Engineer Review and Approval

Professional engineer (P.E.) approval and stamping of drawings is a required practice for engineering projects to assure the safety of the public throughout the United States. P.E.s must be licensed by the state in which they practice. Although licensing laws vary state to state, they contain similar requirements for education and experience. To be licensed as a P.E., an engineer must earn a 4-year degree in engineering from an accredited engineering program, pass the Fundamentals of Engineering examination, complete 4 years of progressive engineering experience under the guidance of a licensed P.E., and pass the Principles and Practice of Engineering examination.

Projects requiring P.E. approval and stamping include, but are not limited to, roadways, bridges, tunnels, dams, and building structural design. Industrial exemptions allow utilities to perform engineering work related to public safety without the approval and stamp of a licensed P.E. In many cases, this exemption creates a loophole because there is no requirement to have work performed by an engineer at all. The P.E. who approves and stamps the project documents must be in responsible charge of the project.³⁵ This assures that all aspects of the project are performed under the supervision and direction of a qualified engineer. However, 31 states exempt public utilities from this requirement even though proper design is necessary for public safety. Prior to the overpressurization of the CMA natural gas system in Menimack Valley, Massachusetts was one of those states that exempted utilities.

At the time of the accident, two NiSource employees who held P.E. licenses were involved with the South Union Street project: the LFE and the director of field engineering. Their employment roles required both employees to review and sign off on the South Union Street project, but there was no requirement to stamp the construction documents. Neither the LFE nor the director of field engineering was in responsible charge of the project. Therefore, none of the construction documents were issued with P.E. stamps.

The documents prepared for the South Union Street project were signed by a degreed engineer who had an engineer-in-training certificate, which is held by individuals preparing to take the P.E. examination. However, he was not yet eligible to take the P.E. examination because he had not satisfied the work experience requirement.

On November 14, 2018, the NTSB issued Safety Recommendation P-18-5 to the Commonwealth of Massachusetts that addressed the removal of a P.E. licensure exemption for such public utility work, along with a corresponding Safety Recommendation P-18-6 issued to NiSource, the parent company of Columbia Gas of Massachusetts, recommending P.E. approval

³⁴ Commonwealth of Massachusetts Department of Public Utilities Consent Order, D.P.U. 18-PL-03, November 30, 2018.

³⁵ *Responsible charge* refers to the degree of control an engineer is required to maintain over engineering decisions made personally or by others over whom the engineer exercises supervisory direction and control authority.

of natural gas pipeline projects within NiSource (NTSB 2018).³⁶ As described more fully in section 2.1, Massachusetts acted to satisfy Safety Recommendation P-18-5 less than 2 months after it was issued. Subsequent to this recommendation, the NTSB contacted two independent organizations seeking expert information on the current state of P.E. license oversight and the industrial exemptions among the United States and territories for major infrastructure projects.

The National Council of Examiners for Engineering and Surveying (NCEES) is a national nonprofit organization dedicated to advancing professional licensure for engineers and surveyors. NCEES develops, administers, and scores the examinations used for engineering and surveying licensure in the United States. It also facilitates professional mobility and promotes uniformity of licensure processes in the United States through services for its member licensing boards and licensees, including engineering and surveying examinations, examination preparation materials, records programs, and credentials evaluations.

The National Society of Professional Engineers (NSPE) is a professional association representing licensed P.E.s in the United States, in 53 state and territorial societies and over 500 local chapters (NSPE 2019). In August 2016, NSPE compiled a published report that documented the language of the individual states, including Washington, DC, pertaining to laws and regulations that govern the P.E. oversight of major infrastructure project practices and reviewed the industrial exemption provisions, as allowed by those laws and regulations. Currently 31 states have exemptions and 19 states and the District of Columbia do not. The State of New York is in the process of removing the exemption. Table 4 outlines the P.E. industrial exemption by state.

Table 4. P.E. industrial exemption for infrastructure project practices.

State	Exempt (Yes or No)	If Yes, action required for change
Alabama	Yes	Amend statute
Alaska	Yes	Amend statute
Arizona	Yes	Amend statute
Arkansas	Yes	Amend statute
California	Yes	Amend statute
Colorado	Yes	Amend statute
Connecticut	Yes	Amend statute
Delaware	No	
District of Columbia	No	
Florida	Yes	Amend statute
Georgia	Yes	Amend statute
Hawaii	No	
Idaho	Yes	Amend statute
Illinois	Yes	Amend statute
Indiana	No	
Iowa	Yes	Amend statute
Kansas	No	
Kentucky	Yes	Amend statute
Louisiana	Yes	Amend statute
Maine	Yes	Amend statute
Maryland	Yes	Amend statute
Massachusetts	No	Legislation passed and signed into law

³⁶ NTSB Safety Recommendation P-18-6 (Urgent).

State	Exempt (Yes or No)	If Yes, action required for change
Michigan	No	
Minnesota	Yes	Amend statute
Mississippi	Yes	Amend statute
Missouri	Yes	Amend statute
Montana	Yes	Amend statute
Nebraska	Yes	Amend statute
Nevada	Yes	Amend statute
New Hampshire	No	
New Jersey	No	
New Mexico	No	
New York	Yes	Amend statute ^a
North Carolina	Yes	Amend statute
North Dakota	No	
Ohio	No	
Oklahoma	No	
Oregon	No	
Pennsylvania	Yes	Amend statute
Rhode Island	No	
South Carolina	Yes	Amend statute
South Dakota	Yes	Amend statute
Tennessee	No	Amend statute
Texas	Yes	Amend statute
Utah	Yes	Amend statute
Vermont	No	
Virginia	Yes	Amend statute
Washington	No	
West Virginia	No	
Wisconsin	No	
Wyoming	Yes	Amend statute

^a Legislation proposed.

1.10 Government Oversight

1.10.1 Federal Oversight

Federal pipeline safety statutes allow for states to assume safety authority over intrastate natural gas pipelines, hazardous liquid pipelines, and underground natural gas storage through celiifications and agreements with the Pipeline and Hazardous Materials Safety Administration (PHMSA) under Title 49 *United States Code* 60105 and 60106. To participate in PHMSA's pipeline safety and underground natural gas storage programs, states must adopt the minimum federal pipeline safety regulations; however, states may pass more stringent state regulations for intrastate pipeline and underground natural gas storage safety through their state legislatures. If states do not participate in the pipeline safety programs, the inspection and enforcement of these intrastate pipeline facilities would be PHMSA's responsibility.

To support states participating in the pipeline safety programs, PHMSA celiifies and provides grants to states to reimburse up to 80 percent of the total cost of the personnel, equipment, and activities reasonably required by the state agency for conducting its pipeline safety program during a given calendar year (PHMSA 2019).

1.10.2 Massachusetts Oversight

1.10.2.1 Massachusetts Department of Public Utilities

The Massachusetts DPU is a state-level adjudicatory agency overseen by a three-member commission. It is responsible for the oversight of investor-owned electric power, natural gas, and water utilities in Massachusetts. In addition, the DPU develops alternatives to traditional regulation, monitors service quality, regulates safety in the transportation and natural gas pipeline areas, and oversees the siting of energy facilities. The mission of the DPU is to ensure that customers of the covered utilities receive reliable and economical service, along with protecting the public from natural gas pipeline-related accidents and ensuring that residential ratepayers' rights are protected (Commonwealth of Massachusetts 2019).

The pipeline safety division of the DPU is an enforcement office, ensuring that operators of natural gas distribution companies, municipal natural gas departments, steam distribution companies, and other intrastate operators are following state and federal regulations governing safety. The pipeline safety division investigates natural gas incidents and determines the cause of those incidents, which is intended to improve public safety and prevent similar incidents. Incident investigations have resulted in new safety regulations for abandoned service lines, cast iron pipe, and liquefied natural gas plants. The DPU regulates pipeline safety within the Commonwealth of Massachusetts; however, pipelines that cross state boundaries (interstate) are regulated by PHJvISA. The DPU also tests commonwealth natural gas meters for accuracy and leaks. After passing the test, each meter is marked with a stamp, showing that it is approved for use (Commonwealth of Massachusetts 2019a).³⁷ PHJvISA audits the DPU annually and gives it a proficiency score based on its actions to ensure that operators comply with federal requirements. The proficiency score influences funding levels that DPU receives from PHJvISA. In the 2017 audit, the DPU scored 112 points out of a possible 115, for an overall state rating of 97.5. Past DPU actions involving CMA violations are listed in appendix C.³⁸ Enforcement action by DPU on this accident is pending.

1.10.2.2 Massachusetts Executive Office of Public Safety and Security

The Commonwealth of Massachusetts Executive Office of Public Safety and Security oversees several agencies that deal with emergency response. According to its website, the Executive Office of Public Safety and Security "is responsible for the policy development and budgetary oversight of its secretariat agencies, independent programs, and several boards which aid in crime prevention, homeland security preparedness, and ensuring the safety of residents and visitors in the Commonwealth." (Commonwealth of Massachusetts 2019b).

³⁷ Massachusetts Code 220 *Code of Massachusetts Regulations* 69.00, "Procedures for the Determination and Enforcement of Violation of Safety Codes pertaining to Pipeline Facilities, Transportation of Natural Gas, and Liquefied Natural Gas Facilities" is the guidance for the DPU enforcement actions.

³⁸ E-mail from NiSource to NTSB, May 13, 2019.

2 Postaccident Actions

2.1 NTSB Safety Recommendation to Commonwealth of Massachusetts

At the time of the accident, a Massachusetts P.E. stamp was not required on any utility system construction, operations, or maintenance projects as local natural gas distribution companies in the state had a utility exemption from requiring a P.E.'s stamp. On November 14, 2018, the NTSB issued a safety recommendation report, *Natural Gas Distribution System Project Development and Review*, in response to this accident and the events that followed (NTSB 2018). According to the report:

The Commonwealth of Massachusetts' exemption for the requirement of registered Professional Engineer (P.E.) to perform industrial and public utility work limits the opportunities for competently trained and experienced engineers to uncover system design and work process deficiencies. By eliminating the exemption, especially for systems involving inherently dangerous materials such as natural gas distribution systems, companies, workers, and the public are provided greater safety assurance that competent and qualified engineers, who are ethically bound to work only on projects within the scope of their expertise, will review, assess, and execute the requisite work activities according to best engineering practices and with expected safeguards.

As a result of this investigation, the NTSB issued Safety Recommendation P-18-5 to the Commonwealth of Massachusetts

Eliminate the professional engineer licensure exemption for public utility work and require a professional engineer's seal on public utility engineering drawings. (P-18-5)

Less than 2 months after the safety recommendation was issued, on December 28, 2018, Bill H.5005, requiring that licensed P.E.s review and approve engineering plans developed by or on behalf of natural gas companies, to ensure the safe construction, operation, and maintenance of natural gas infrastructure, was passed by the Massachusetts House of Representatives. The act applies to engineering work or services on natural gas distribution systems that could pose a material risk to public safety, as determined by the DPU, performed by or on behalf of a natural gas company. Moreover, the act requires any engineering plans or specifications for engineering work or services that could pose a material risk to public safety, developed by or on behalf of a natural gas company, to bear the stamp of approval of a licensed P.E.³⁹ After the Massachusetts Senate passed the act, it was signed by the governor on December 31, 2018, as Chapter 339 of the Acts of 2018. This new law included an emergency preamble and took effect immediately. Because it required natural gas work that might pose a material risk to the public be reviewed and approved by a certified P.E., Safety Recommendation P-18-5 is classified "Closed-Acceptable Action."

³⁹ See <https://malegislature.gov/Bills/190/H5005>. Accessed on May 25, 2019.

2.2 NTSB Urgent Recommendations to NiSource

In the November 14, 2018, safety recommendation report, *Natural Gas Distribution System Project Development and Review*, the NTSB also issued four urgent recommendations to NiSource (NTSB 2018). While the engineering design package for the South Union Street project underwent a constructability review, the review did not identify the impact on pressure regulation and control. The NiSource field engineer who developed the engineering plans told NTSB investigators he developed them without reviewing engineering drawings that documented the regulator sensing lines.

Because a comprehensive constructability review, which would require all departments to review each project, along with the seal of approval from a registered P.E., likely would have identified the omission of the regulator sensing lines, thereby preventing the error that led to the accident, the NTSB issued urgent Safety Recommendation P-18-6 to NiSource:

Revise the engineering plan and constructability review process across all your subsidiaries to ensure that all applicable departments review documents for accuracy, completeness, and correctness, and that the documents or plans be sealed by a professional engineer prior to commencing work. (P-18-6) (Urgent)

In response to this recommendation, NiSource developed and implemented a new Gas Standard (GS 2810.050) detailing the stakeholder reviews that are required for design capital projects or projects where pipeline facilities are installed or replaced. The Gas Standard details the steps in project design and execution when additional stakeholder input is necessary to ensure safe work performance. With this Gas Standard, the use of an enhanced Constructability/Safety Review form is required across the organization to provide additional assurance that all applicable departments review project plans prior to the start of work.

Since January 1, 2019, NiSource requires that all relevant construction documents for complex projects are being sealed by a P.E. prior to the start of construction. In meetings with the NTSB, NiSource discussed that there were potentially large numbers of routine main extensions involving standard tie-ins, emergency main replacements requiring standard tie-ins, or new and replacement service lines, and that completing all of these standard designs would delay implementing this recommendation beyond what is appropriate given its urgent classification. Therefore, although NiSource agreed that construction work that could pose a material risk to public safety needed P.E. review and approval prior to commencing construction, NiSource developed criteria for when review by a P.E. is not necessary. In GS 2810.050, NiSource defines complex projects requiring that documents or plans be sealed by a P.E. as follows:

- Plans for installation or replacement of transmission-class pipelines or distribution mains with an MAOP equal to or greater than 200 psig
- Plans for the installation of or replacement of distribution mains with more than two tie-ins
- Plans for the installation of pipelines requiring a temporary bypass

- Projects which involve a change in system pressure
- Plans for the installation of distribution services requiring the interruption of natural gas flow to the adjacent transmission lines and/or distribution main
- Plans for nonstandard new points of delivery and district regulator stations
- Plans for regulator station work that require an interruption of natural gas flow on the inlet or outlet transmission lines and/or distribution mains

The development and implementation of GS 2810.050, including the requirement that construction documents and plans be sealed by a P.E., satisfies Safety Recommendation P-18-6 which is classified "Closed-Acceptable Action."

NiSource engineering plans used during the construction work did not document the location of regulator sensing lines. The NTSB believes that had accurate alignment sheets with comprehensive system information been prominently available and required within the toolsets used by the engineers, and diligently reviewed for completeness and technical/safety risks by engineering supervisors, the work package and construction activity plans would have accounted for the regulator sensing lines and prioritized their relocation before abandoning the cast iron main. As a result, the NTSB made the following urgent safety recommendation to NiSource:

Review and ensure that all records and documentation of your natural gas systems are traceable, reliable, and complete. (P-18-7) (Urgent)

In its May 10, 2019, letter, NiSource responded it had completed locating, marking, and mapping control (regulator-sensing) lines at all 2,072 low-pressure regulator mains across its system. NiSource said that these facilities are depicted in isometric drawings and are visible in its GIS. In addition, NiSource contracted with a third-party natural gas engineering firm to verify the assets required to safely operate its low-pressure natural gas systems and ensure these assets are clearly indicated on relevant maps and records. On July 22, 2019, Safety Recommendation P-18-7 was classified "Closed-Acceptable Action."

NTSB investigators found that NiSource did not use management of change (MOC) procedures for managing maintenance and construction changes to pipeline operations. The company did not conduct separate risk assessments for each construction project, critical components of a PSMS program. MOC procedures require an analysis of implications, among several other elements. Additionally, a risk identification and assessment are necessary to establish the appropriate prevention and mitigation measures to reduce the likelihood of consequences should an incident occur. CMA failed to perform such an analysis and failed to establish appropriate controls to mitigate the risks of the work that was being performed. Had NiSource adequately performed MOC, it could have immediately addressed the issue and mitigated the

consequences of the event. Therefore, the NTSB issued Safety Recommendation P-18-8 to NiSource:

Apply management of change process to all changes to adequately identify system threats that could result in a common mode failure. (P-18-8) (Urgent)

In response, NiSource improved its MOC process by developing and using Gas Standard 1680.010, "Tie-Ins and Tapping Pressurized Pipelines," and NiSource now requires the use of a written tie-in plan template. As part of its PSMS development activities, NiSource initiated asset review and probabilistic risk assessments that focus on improving risk analysis, identification, and mitigation. NiSource also developed and implemented an MOC procedure for its construction employees and contractors that details the steps needed to ensure safety on a project during a change in personnel. These activities satisfy Safety Recommendation P-18-8 which is classified "Closed-Acceptable Action"

NTSB investigators also determined that had NiSource adequately performed system engineering management throughout its project work, the safety risk of an overpressurization likely would have been identified, along with appropriate mitigations implemented before undertaking the construction activities. For example, with recognition for potential overpressurization to the unprotected low-pressure distribution lines, mitigations could have been used, such as pressure relief valves, temporary slam-shut valves, or personnel positioned at critical points along the system and prepared to manually intervene by closing valves. NiSource failed to adopt and execute an appropriate system engineering management approach to this work and, consequently, neglected to perform important engineering reviews based on thorough system-level information which, consequentially exposed the company, its workers, and the public to the unexpected, albeit foreseeable through proper engineering practices, overpressurization. The NTSB issued Safety Recommendation P-18-9 to NiSource:

Develop and implement control procedures during modifications to gas mains to mitigate the risks identified during management of change operations. Gas main pressures should be continuously monitored during these modifications and assets should be placed at critical locations to immediately shut down the system if abnormal operations are detected. (P-18-9) (Urgent)

In a May 2019 letter, NiSource said that it has made "significant" enhancements to its tie-in and tapping procedures, including risk assessments, thorough checklists, and the development of contingency plans. NiSource also said that it was installing automatic pressure-control equipment and remote monitoring devices on every low-pressure natural gas distribution system across its operating area. These revisions satisfied Safety Recommendation P-18-9, which on July 22, 2019, was classified "Closed-Acceptable Action."

2.3 NiSource Emergency Preparedness and Response Actions

In early 2019, and as part of the company's SMS implementation, NiSource commissioned a cross-functional emergency preparedness and response team, led by a senior vice president for emergency preparedness, to enhance emergency preparedness activities and emergency response capabilities. The project is integrating improved preparedness plans and drills covering a broad

range of potential scenarios and levels of emergency with well-defined roles and clerical responsibilities.

Key outcomes of the project include:

- A single emergency response plan (ERP) across the natural gas segment
- Consistent definitions for incident levels from less severe to the most severe
- Implementation of a single incident command system and structure regardless of incident level
- Consistent use of incident command system processes and terminology
- Enhanced training (computer-based, classroom and independent study) for all employees with roles in the ERP and incident command system
- Emergency drills in the third and fourth quarters to build familiarity with the plan, processes, and terminology

In addition to creating consistency across the NiSource natural gas segment, these efforts enhance consistency with key external partners who have used the incident command system for a number of years. A comprehensive project plan is guiding the team's work and remains on track. Key milestones achieved through the first half of 2019 included:

- Successfully completing classroom training and certification in Federal Emergency Management Agency ICS 100, 200, and 700 modules
- Reviewing and analyzing existing corporate and operating company emergency and crisis communications plans, as well as the corporation's business continuity plans
- Completing best practice visits with industry peers and internally
- Conducting more than 20 internal critical function interviews with individuals who spent significant time supporting Menominee Valley restoration efforts
- Finalizing the first draft of the natural gas segment incident command structure in early April and the first draft of the natural gas segment ERP in late April

NiSource reported that its emergency preparedness response team is engaged with its technical training department to build comprehensive and individualized plans for those employees with emergency response roles. Concurrently, the team is working to develop comprehensive drills and exercises to test the plan, identify gaps, and make the necessary adjustments to strengthen overall company preparedness.

The NiSource corporate affairs and legal teams are working to develop a crisis communications "playbook" to support crisis response efforts. An ongoing assessment by

NiSource corporate affairs is the first phase of the effort. They plan to incorporate the crisis communications plans, processes, protocols and materials into the natural gas segment of the Emergency Preparedness and Response Plan.

2.4 Industry Actions

On November 26, 2018, AGA released a technical document titled *Leading Practices to Reduce the Possibility of an Over-Pressurization Event*, a document that serves as a resource for natural gas utilities to help avoid an overpressurization incident in a natural gas system (AGA 2018).

Following this natural gas accident, the AGA had information about the role of overpressurization that allowed the AGA to work to identify practices and procedures that can help avoid a similar accident in the future.

There are several leading practices included in the document:

- Design practices, including common overpressure protection designs and equipment
- Operating procedures and practices, including system monitoring, records, and damage prevention
- Human factors, including MOC, OQ, and field oversight
- Management of the risk of an overpressurization event, including addressing overpressurization under the operator's distribution integrity management plan

General practices the AGA considers key to managing the risk of an overpressure event include:

- Looking for opportunities to work with all stakeholders to proactively upgrade utilization pressure systems
- Defining risk criteria for overpressure events

This AGA document was developed with input from stakeholders and experts across the industry, with the focus on developing leading practices that can be used to help prevent overpressurization events.

3 Analysis

3.1 Exclusions

On the day of the accident, the crew that performed the last tie-in on the South Union Street project included one full-time CMA employee, who was a construction coordinator, and a contracted four-member utility construction crew, consisting of a foreman, a truck driver, and two laborers. The CMA employee had several years' experience running utility construction crews and had worked on multiple occasions with the contracted crew. All crewmembers were trained and qualified in accordance with OQ. In addition, a representative from the local police department was present for traffic control.

The type of instructions provided on the day of the accident were of the same format, layout, and overall content as that of the previous 12 tie-ins performed on the South Union Street project; but unique to this work was abandoning the cast iron main. The work package consisted of a computer-aided design drawing with item numbers on it that matched a project execution set of instructions. A review of the work performed by the contractor showed no deviations from the work instructions. Postaccident testing of the regulators from the Winthrop Avenue regulator station determined that they functioned as designed with no deficiencies.

Therefore, the NTSB concludes that none of the following were factors in this accident: the training and qualification of the construction crew, the use of alcohol or other drugs, or the condition and operability of the regulators at the Winthrop Avenue regulator station.

3.2 Overpressurization Protection for Low-Pressure Natural Gas Systems

The low-pressure natural gas distribution system in Melrimack Valley met the requirements for overpressure protection contained in 49 *CFR* 192.195 *Protection against accidental overpressuring* and 49 *CFR* 192.197 *Control of the pressure of gas delivered from high-pressure distribution systems*. At each of the 14 regulator stations feeding natural gas into the low-pressure natural gas distribution system, there were two regulators installed in series to control the natural gas flow from the high-pressure natural gas distribution system. The worker regulator and the monitor regulator were set to limit the pressure to the mains and then to the customer to a maximum safe value. However, a review of accidents investigated by the NTSB over the past 50 years (section 1.7.2) and prior NiSource incidents (section 1.7.3) demonstrate that this scheme for overpressure protection can be defeated in several ways. Three of the NTSB investigations (Gary, Indiana, June 3, 1969; Mansfield, Ohio, May 17, 1978; and Chicago, Illinois, January 17, 1992) detailed how operator error resulted in high-pressure gas being introduced into the low-pressure natural gas distribution system through an interconnection. In three other NTSB investigations (Burlington, Iowa, November 6, 1969; Centralia, Missouri, January 26, 1982; and East Boston, Massachusetts, September 23, 1983), outside force damage in or near the regulator vaults damaged equipment, resulting in high-pressure gas being introduced into the low-pressure natural gas distribution system through the regulators. The remaining NTSB investigation (El Paso, Texas, August 9, 1977) was nearly identical to this accident in Melrimack Valley because

it occurred when a cast iron main with sensing lines attached was isolated as part of a pipe replacement project.

In this accident, when the cast iron main with the sensing lines attached was isolated from the distribution system and abandoned in place, both regulators responded to the decreasing pressure, detected by the sensing lines, by fully opening. Both regulators were disabled simultaneously by the single event of isolating the cast iron main, which eliminated the redundancy of using dual regulators. In this accident and the earlier accidents discussed above, the overpressure occurred as the result of a single failure. In engineering analyses, such a situation is referred to as a common mode failure. Therefore, the NTSB concludes that the multiple overpressurization accidents investigated by the NTSB over the past 50 years demonstrate that low-pressure natural gas distribution systems that use only sensing lines and regulators as the means to detect and prevent overpressurization are not optimal to prevent overpressurization accidents. Thus, the NTSB recommends that PHMSA revise 49 *CFR* Part 192 to require overpressure protection for low-pressure natural gas distribution systems that cannot be defeated by a single operator error or equipment failure.

For regulator sensing lines, CMA only considered excavation damage as a risk to be mitigated. In engineering design, there are several methods available to assess and mitigate risk. A failure modes and effects analysis (FMEA) is a generally accepted and recognized engineering practice to identify and assess potential failures, including common mode failures. FMEA methodology is a structured and systematic technique for assessing and mitigating risks. FMEA was initially applied in the 1950s to understand and prevent malfunctions. Its use has continued to influence engineering design of systems and it has been expanded into several forms: risk assessment for design, functionality, and process failures; as well as criticality analyses of engineered systems. The NTSB concludes that a comprehensive and formal risk assessment, such as an FMEA, would have identified the human error that caused the redundant regulators to open and overpressurize the system. Although PHMSA rulemaking could take several years, it has other mechanisms to quickly communicate and encourage best safety practices. Therefore, the NTSB recommends that PHMSA issue an alert to all low-pressure natural gas distribution system operators of the possibility of a failure of overpressure protection; and the alert should recommend that operators use an FMEA or equivalent structured and systematic method to identify potential failures and take action to mitigate those identified failures.

3.3 CMA Engineering Processes

Early in the investigation, after determining that the contractors followed the instructions they were provided, it became apparent that there were deficiencies in several of NiSource's engineering processes. About 2 months after the accident, NTSB released a safety recommendation report, *Natural Gas Distribution System Project Development and Review*, which issued several urgent safety recommendations to NiSource (NTSB 2018). The following sections build on that report regarding records and documentation, constructability reviews, and risk management.

3.3.1 Records and Documentation

The field engineer responsible for the South Union Street Project largely relied on GIS to develop work packages. He also had access to isometric drawings containing schematics of the pipes in the regulator vaults as well as the piping and valve configurations. Sensing lines, however, were not included in the isometric drawings or GIS.

The field engineer told investigators that he did not know if the engineering department had access to sensing line information, though he believed that the M&R department did. According to NiSource, information about sensing lines for the Winthrop Avenue regulator station was available in hard-copy records in the Lawrence Operations Center. However, when investigators asked NiSource in an e-mail exchange about the instructions that NiSource provides employees with respect to how to find information about sensing lines, NiSource did not provide an answer; rather, it asserted that "CMA Engineering, Construction, and M&R personnel know how to obtain information about sensing line locations."⁴⁰ Moreover, an M&R manager suggested that locating accurate and up-to-date information about sensing lines was challenging because there was a shortage of information and confusion regarding what recordkeeping system would be used. The available evidence suggests that although the field engineer would have likely been able to seek out sensing line information, these data were not easily accessible electronically.

NiSource's director of engineering told investigators that the GIS was the company's centralized record system and that a goal of the system was to integrate data from various sources. That is, the company was taking data from old cabinets and binders and making it available electronically to all interested stakeholders. The director of engineering recognized that, at the time of the accident, there was a shortage of readily available information about the sensing lines. NiSource reported it has addressed the lack of sensing line data in the GIS after the accident.

An e-mail provided by NiSource showed that at least one employee, the Lawrence construction leader, knew that the sensing lines needed to be relocated. Moreover, an affidavit provided by NiSource suggested that other employees were aware of the need to relocate the sensing lines. However, NiSource stated in its submission for this accident investigation that after the South Union Project was delayed in 2016:

There was a nearly complete turnover in project personnel. CMA did not effectively transfer the knowledge its 2016 construction personnel had about the status of the project sensing lines to its 2018 construction personnel.

Thus, according to NiSource, the successful execution of the South Union Street project was contingent upon employees remembering to transfer knowledge. In its evaluation of the probable cause of the accident, the company pointed to the city of Lawrence's "unprecedented suspension of project work," a 1 1/2-year delay, as a contributing factor. A delay in construction does not justify a catastrophic accident. However, NiSource does point to a true system defect in its list of contributing factors: "The project work order package did not explicitly address sensing line locations or their relocation."

⁴⁰ E-mail from NiSource to NTSB, May 31, 2019.

NiSource displayed an informal, unstructured approach for documenting this critical project step for the South Union Street project. The lack of documentation made it impossible to pinpoint the exact nature of the joint failure between the engineering, M&R, and construction departments to develop a formal plan for relocating the sensing lines. It is likely that more robust documentation and recordkeeping would have resulted in the sensing line issue being formally addressed prior to the work package being released to construction. As it was, the relocation of the sensing lines was not directed in an orderly top-down manner, but rather, NiSource relied on institutional knowledge. When the appropriate employees were not at the correct place at the correct time due to a project delay, there was no documentation to refer to for preventing a critical project step from being omitted. Therefore, the NTSB concludes that CMA's inadequate planning, documentation, and recordkeeping processes led to the omission of the relocation of the sensing lines for the South Union Street project. Furthermore, the NTSB concludes that the abandonment of the cast iron main without first relocating the sensing lines led to the system overpressurization, fires, and explosions.

Although there was a 2-year delay from the time the work order was developed until the time of the accident, NTSB investigators could find no evidence that the delay contributed to the accident. Had this work order been executed 2 years earlier, the system would have been overpressurized just as it was on September 13, 2018. The NTSB concludes that the delay between the development of the initial project work order and its execution had no impact on this accident.

3.3.2 Constructability Review

The engineering plans were included in the project package that was circulated for a constructability review. Constructability reviews are recognized and accepted as a necessary engineering practice for the execution of construction services. They are intended to provide structured reviews of construction plans and specifications to ensure functionality, sustainability, and safety---ensuring there are no shortcomings, inefficiencies, conflicts, or errors. Constructability reviews are essential in the engineering management of projects for verifying that all stakeholders have knowledge about and input into a work project.

Nonetheless, the constructability review process did not detect the omission of the need to relocate the sensing lines. Part of the failure of the process was likely due to the absence of a review by a critical department. Despite there being at least two constructability reviews for the South Union Street project, the M&R department did not participate. CMA requires the engineering department and the construction department to approve all projects, but the land services department and the M&R department are only required to review the packages on an "as-needed basis" as determined by the project engineer. The M&R department maintains the regulator stations, and with the project requiring the relocation of the sensing lines, the department should have been included. A review from someone in the M&R department may have resulted in the detection of the omission of a work order to relocate the sensing lines. The basis for the "need" is not described, nor are examples provided in the NiSource constructability review guidance.

There are several other factors that suggest an overall lack of robustness of the review process. The Lawrence construction leader signed all three reviews, but never objected to the lack of a work order to relocate the sensing lines, even though he had e-mailed the M&R department regarding the need to relocate the sensing lines between the first and second review. In addition,

the only indication of a third review is the set of signatures (dated December 14, 2017) on the paperwork for the second review (originally signed January 6, 2017). NiSource did not provide any additional documentation for the third review. This calls into question the thoroughness of the third review. The NTSB concludes that the CMA constructability review process was not sufficiently robust to detect the omission of a work order to relocate the sensing lines. After the accident, NiSource has been working to improve its constructability review process.

3.3.3 Engineering Risk Assessment

NiSource's ON 15-05 requires that M&R personnel be consulted on all excavation work that is performed within 25 feet of a regulator station with sensing lines, and for other specified work. This notice resulted from a near-miss incident in 2014, where excavation work almost struck sensing lines near a regulator.

The work being performed on the South Union Street project on the day of the accident did not occur within 25 feet of the Winthrop Avenue regulator station; therefore, ON 15-05 did not apply directly to the work. NiSource's ON 15-05 can be read in its entirety in appendix E.

Although the risk mitigations mandated in ON 15-05 did not apply, the language of the notice revealed that NiSource was aware that a catastrophic overpressurization of downstream piping would occur if flow should be disrupted through a segment of piping with active sensing lines for any reason. However, the controls implemented in the notice were only intended to prevent sensing lines from being struck during excavation.

More robust risk management was needed in the planning of the South Union Street project with respect to the analysis of the impact on the system, as discussed in NTSB Safety Recommendation Report PSR-18/02 (NTSB 2018). Moreover, as discussed earlier, broader risk management was needed with respect to overpressurization to the system in general. That is, engineering controls should have been implemented considering the vulnerability of the system to a common mode failure during the construction project. After the accident, NiSource has worked to improve its risk management processes and is installing automatic pressure-control equipment. Therefore, the NTSB concludes that NiSource's engineering risk management processes were deficient.

3.4 Professional Engineer Review and Approval

The NTSB recognizes that a P.E. license is a valued credential, especially for engineering projects affecting public safety. The P.E. license conveys that the holder maintains and demonstrates technical competency and imposes continuing education requirements in most states. Moreover, P.E. licensees are bound to a code of ethics for engineers, which creates a duty to hold public safety, health, and welfare paramount and to perform services only in the areas of their competence, among several other obligations. P.E. licensees are also personally accountable for the work they approve and stamp and must exercise responsible charge over all aspects of the work. As shown in table 4 of this report, 31 states have an industrial exemption for P.E. licensure. The NTSB concludes that requiring a licensed professional engineer to stamp plans would illustrate that the plans had been approved by an accredited professional with the requisite skills,

knowledge, and experience to provide a comprehensive review. Therefore, the NTSB recommends that those 31 states with an industrial exemption for natural gas infrastructure projects remove the exemption so that all future natural gas infrastructure projects require licensed professional engineer approval and stamping.

3.5 Emergency Response

3.5.1 Public Safety Answering Points

The PSAPs in each municipality were inundated with emergency calls, especially during the first hour after the accident. Each PSAP had alternate and final PSAPs as backup resources, to handle the overflow of incoming calls. The Lawrence PSAPs, which had the highest number of calls for aid from people affected by the overpressurization, reported that the number of incoming calls declined after the first hour of the event through midnight on September 13, 2018. The NTSB found no evidence that the high number of emergency calls delayed critical repairs of damage nor requests for emergency assistance. Therefore, the NTSB concludes that the municipal PSAPs had available and ready resources to handle the large number of distress calls requesting emergency services.

3.5.2 Emergency Responder Communications

Radio communications among emergency responders was necessary for effective deployment and reassignment of emergency personnel and resources across the area affected by the natural gas overpressurization. Responding units from fire, police, and medical departments needed to coordinate activities, share situation-specific status information, and communicate instructions when required to move to new locations.

Each fire department had one radio channel for intradepartmental communications. In addition, some fire departments had radios capable of interdepartmental communications, allowing direct communications with other fire departments during the emergency response. ICs from each of the three municipalities reported to NTSB investigators that there was a high volume of "chatter" on the radio due to many responders and agencies using the single interdepartmental channel, making it difficult to understand and exchange information. NTSB investigators were told that the mix of radios used by the responding departments also created challenges because not all radios were interoperable. As a result, not all fire departments could directly access other departments.

When the 15 task forces were activated across the state, additional communication resources were included. On September 13, Communication unit leaders were sent to the overpressure accident. Communication unit leaders are responsible for developing communications plans in accordance with the Massachusetts Tactical Channel plan and assessing what resources are needed to maintain communications during an accident. Communication plans were developed for the Merrimack Valley natural gas accident through the operational period from September 13 through September 16. However, the first communication plan was not implemented until around 7:05 p.m., 3 hours after the fires began. Local fire departments needed additional tactical radio channels within the first 2 hours of the accident, when most emergency calls were

made. The NTSB concludes that the field radio communications used across fire departments on September 13 lacked adequate interoperability and availability to ensure that emergency responders had efficient means of interdepartmental and intradepartmental communications.

Statewide Communications Interoperability Plans (SCIP) are comprehensive plans to enhance and maintain emergency communications between multiple jurisdictions in the event of natural disasters, acts of terrorism, or other man-made disasters. Massachusetts issued its first SCIP in 2007 and noted that home rule poses challenges to radio interoperability because towns were given the authority to determine their own needs (Commonwealth of Massachusetts 2015). The SCIP identified six critical strategic initiatives that Massachusetts needed to put into place to achieve optimum communications interoperability, including the development of funding sources to support the program. The northeast region of Massachusetts, including Merrimack Valley, does have a regional communications system, but the SCIP suggested that the region needed greater interoperability and moment-to-moment sharing of information.

Massachusetts' SCIP was last updated in 2015 and outlined a multi-jurisdictional and multidisciplinary statewide strategic plan to enhance interoperable and emergency communications. The purpose of the updated SCIP was to provide a strategic plan for directing and aligning resources for interoperable and emergency communications at both state and local levels, as well as expanding existing systems for voice communications for sufficient capacity and coverage for first responders. The plan discusses critical elements to achieve successful interoperable communications such as developing standard operating procedures and upgrading technology. However, no guidance is provided on how to coordinate and implement a plan for emergency responders to effectively communicate during a multi-jurisdictional incident.

The Federal Emergency Management Agency (FEMA) developed "how-to" guides to assist state and local governments in developing effective hazard mitigation planning. This guidance helps local governments develop and implement multi-jurisdictional hazard mitigation plans to help assess and identify vulnerabilities within and across communities and formulate strategies to mitigate the consequences of such events (FEMA 2006).

The communications difficulties experienced by emergency responders in the multi-jurisdictional response to the overpressurization indicate that communications interoperability is still a problem in Massachusetts, despite the communication resources available to local jurisdictions, as outlined in the 2015 SCIP. The NTSB concludes that the communications issues during the September 13 overpressurization illustrate the need for emergency planning for a multi-jurisdictional response. Therefore, the NTSB recommends that the Commonwealth of Massachusetts Executive Office of Public Safety and Security develop guidance that includes a component for effective communications when deploying mutual aid resources within the first hours of a multi-jurisdictional incident.

3.5.3 NiSource Emergency Coordination with Municipal Responders

The ICs from Lawrence, North Andover, and Andover each told NTSB investigators that they attempted to reach CMA through dispatch, but they did not receive information from the company until hours later. They acknowledged that CMA likely was overwhelmed with

emergency calls, but they emphasized that responders needed to know in a timely manner about the company's response efforts and about which natural gas service sites were impacted.

The *NiSource Emergency Manual* states that when an overpressurization of the system occurs, there "may be a need" to communicate with local government officials and emergency management agencies as well as fire and police departments. The manual states that it is "imperative for all entities involved to remain informed of each other's activities." The manual states that the IC, in this case, the FOL, is required to establish appropriate contacts for communications purposes throughout the accident (NiSource 2018). However, during the initial hours of the event, the IC did not establish these requisite communication contacts because he was involved with shutting down the natural gas system. Moreover, although CMA representatives went to emergency responder staging areas and emergency operations centers, NTSB investigators were told that representatives could not address many of the questions from the emergency responders because they were not prepared with thorough and actionable information.

The NTSB concludes that the CMA IC faced multiple competing priorities, such as communicating with affected municipalities, updating the emergency responders, and shutting down the natural gas distribution system, which adversely affected his ability to complete his tasks in a timely manner.

The CMA ERP describes a detailed communications plan in which its director of government affairs (or designees) would be posted with the MEMA emergency operations center (EOC), who must have access to the CMA emergency coordinator, the CMA president, and the CMA vice president/general manager. According to the plan, appropriate maps and outage reports would be made available to these staff for the purpose of informing the EOC officials. MEMA officials and the state fire marshal stated that NiSource took too long to provide maps of the low-pressure system. They emphasized that emergency response officials needed street maps showing the layout of the natural gas system to understand where the affected customers were located. They also emphasized that emergency response officials needed updates on CMA's progress to shut down the natural gas system. The officials stated that CMA did not provide this requested information, either during the initial hours following the overpressurization or afterward, and that the absence of information from CMA impeded its public safety decision-making.

Without understanding the nature or extent of the overpressurization or the company's success in restoring control of the natural gas distribution system, emergency response officials and ICs had to make decisions to preserve public safety despite a lack of critical information. For example, decisions were made to evacuate thousands of people from homes and businesses and to shut down electricity throughout the region, including nonaffected neighboring areas. Because emergency officials did not have accurate information with respect to the affected area, they evacuated and shut down electricity in an area larger than necessary.

The evacuations led to major traffic congestion, which slowed CMA and NG technicians responding to the areas in and surrounding the accident location. The traffic issues were handled by the Massachusetts State Police, who were stationed at major intersections within an hour following the overpressurization. Travel delays on public roads and confusion caused by the uncertainty of the natural gas explosions and fires existed for hours following the overpressurization.

When electricity was shut off to the cities and towns, state and local officials had to manage a number of complex public safety issues, such as sustaining critical services in hospitals and critical-care facilities, police and fire departments, water and sewer treatment plants, and ensuring the security of numerous facilities, as well as maintaining orderly evacuations without traffic lights. State and *local* government and emergency response officials coordinated with NG, the electric utility company, to ensure that sensitive populations and critical infrastructure were prepared before shutting down the electric power. State and local police provided security to some facilities without electric power.

The lack of timely, thorough, and actionable information on the circumstances of the overpressurization evacuations and electricity shutdowns were conducted in areas where they were not needed, straining resources and further complicating the response. The NTSB concludes that CMA was not adequately prepared with the resources necessary to assist emergency management services with the response to the overpressurization. Therefore, the NTSB recommends that NiSource review its protocols and training for responding to large-scale emergency events, including providing timely information to emergency responders, appropriately assigning NiSource emergency response duties, performing multi-jurisdictional training exercises, and participating cooperatively with municipal emergency management agencies.

4 Conclusions

4.1 Findings

1. None of the following were factors in this accident: the training and qualification of the construction crew, the use of alcohol or other drugs, or the condition and operability of the regulators at the Winthrop Avenue regulator station.
2. The multiple overpressurization accidents investigated by the National Transportation Safety Board over the past 50 years demonstrate that low-pressure natural gas distribution systems that use only sensing lines and regulators as the means to detect and prevent overpressurization are not optimal to prevent overpressurization accidents.
3. A comprehensive and formal risk assessment, such as a failure modes and effects analysis, would have identified the human error that caused the redundant regulators to open and overpressurize the system.
4. Columbia Gas of Massachusetts' inadequate planning, documentation, and recordkeeping processes led to the omission of the relocation of the sensing lines for the South Union Street project.
5. The abandonment of the cast iron main without first relocating the sensing lines led to the system overpressurization, fires, and explosions.
6. The delay between the development of the initial project work order and its execution had no impact on this accident.
7. The Columbia Gas of Massachusetts constructability review process was not sufficiently robust to detect the omission of a work order to relocate the sensing lines.
8. NiSource's engineering risk management processes were deficient.
9. Requiring a licensed professional engineer to stamp plans would illustrate that the plans had been approved by an accredited professional with the requisite skills, knowledge, and experience to provide a comprehensive review.
10. The municipal public safety answering points had available and ready resources to handle the large number of distress calls requesting emergency services.
11. The field radio communications used across fire departments on September 13 lacked adequate interoperability and availability to ensure that emergency responders had efficient means of interdepartmental and intradepartmental communications.
12. The communications issues during the September 13 overpressurization illustrate the need for emergency planning for a multi-jurisdictional response.

13. The Columbia Gas of Massachusetts incident commander faced multiple competing priorities, such as communicating with affected municipalities, updating the emergency responders, and shutting down the natural gas distribution system, which adversely affected his ability to complete his tasks in a timely manner.
14. Columbia Gas of Massachusetts was not adequately prepared with the resources necessary to assist emergency management services with the response to the overpressurization.

4.2 Probable Cause

The National Transportation Safety Board determines that the probable cause of the overpressurization of the natural gas distribution system and the resulting fires and explosions was Columbia Gas of Massachusetts' weak engineering management that did not adequately plan, review, sequence, and oversee the construction project that led to the abandonment of a cast iron main without first relocating regulator sensing lines to the new polyethylene main. Contributing to the accident was a low-pressure natural gas distribution system designed and operated without adequate overpressure protection.

5 Recommendations

5.1 New Recommendations

As a result of this investigation, the National Transportation Safety Board makes the following safety recommendations:

To the Pipeline and Hazardous Materials Safety Administration:

Revise Title 49 *Code of Federal Regulations* Part 192 to require overpressure protection for low-pressure natural gas distribution systems that cannot be defeated by a single operator error or equipment failure. (P-19-14)

Issue an alert to all low-pressure natural gas distribution system operators of the possibility of a failure of overpressure protection; and the alert should recommend that operators use a failure modes and effects analysis or equivalent structured and systematic method to identify potential failures and take action to mitigate those identified failures. (P-19-15)

To the States of Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Kentucky, Louisiana, Maine, Maryland, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New York, North Carolina, Pennsylvania, South Carolina, South Dakota, Texas, Utah, Virginia, and Wyoming:

Remove the exemption so that all future natural gas infrastructure projects require licensed professional engineer approval and stamping. (P-19-16)

To the Commonwealth of Massachusetts Executive Office of Public Safety and Security:

Develop guidance that includes a component for effective communications when deploying mutual aid resources within the first hours of a multi-jurisdictional incident. (P-19-17)

To NiSource, Inc.

Review your protocols and training for responding to large-scale emergency events, including providing timely information to emergency responders, appropriately assigning NiSource emergency response duties, performing multi-jurisdictional training exercises, and participating cooperatively with municipal emergency management agencies. (P-19-18)

5.2 Previously Issued Recommendations

On November 14, 2018, the National Transportation Safety Board issued the following safety recommendations:

To the Commonwealth of Massachusetts:

Eliminate the professional engineer licensure exemption for public utility work and require a professional engineer's seal on public utility engineering drawings. (P-18-5)

This recommendation is classified "Closed-Acceptable Action" in section 2.1 of this report.

To NiSource, Inc.:

Revise the engineering plan and constructability review process across all of your subsidiaries to ensure that all applicable departments review construction documents for accuracy, completeness, and correctness, and that the documents or plans be sealed by a professional engineer prior to commencing work. (P-18-6) (Urgent)

This recommendation is classified "Closed-Acceptable Action" in section 2.2 of this report.

Review and ensure that all records and documentation of your natural gas systems are traceable, reliable, and complete. (P-18-7) (Urgent)

This recommendation is currently classified "Closed-Acceptable Action."

Apply management of change process to all changes to adequately identify system threats that could result in a common mode failure. (P-18-8) (Urgent)

This recommendation is classified "Closed-Acceptable Action" in section 2.2 of this report.

Develop and implement control procedures during modifications to gas mains to mitigate the risks identified during management of change operations. Gas main pressures should be continually monitored during these modifications and assets should be placed at critical locations to immediately shut down the system if abnormal operations are detected. (P-18-9) (Urgent)

This recommendation is currently classified "Closed-Acceptable Action."

BY THE NATIONAL TRANSPORTATION SAFETY BOARD

ROBERT L. SUMWALT, III
Chairman

JENNIFER HOMENDY
Member

BRUCE LANDSBERG
Vice Chairman

Date: September 24, 2019

Appendix

Appendix A. The Investigation

The National Transportation Safety Board (NTSB) was notified about 4:00 p.m. local time on September 13, 2018, of an overpressurization of a low-pressure natural gas distribution system that occurred in the city of Lawrence and the towns of Andover and North Andover in Massachusetts that resulted in fires or explosions at over 60 locations. Columbia Gas of Massachusetts (CMA) owns and operates the natural gas distribution system in these jurisdictions.

Local emergency response officials urged all residents with homes serviced by CMA to evacuate, impacting about 146,000 residents. CMA isolated and depressurized the system to prevent further incidents. Electrical power in the area was shut off to minimize potential ignition sources. One person was killed and at least 10 people were injured in the event.

NTSB Board Chairman Robert L. Sumwalt, III, Board Member Jennifer Homendy, an investigator-in-charge, and 18 other staff traveled to the accident scene.

Parties to the investigation included the Pipeline and Hazardous Materials Safety Administration (PHMSA); the Massachusetts Department of Public Utilities (DPU); the Massachusetts State Police; NiSource, Inc.; and CMA.

Appendix B. NiSource Safety Management System Plan

NiSource's Safety Management System Plan

Starting the Journey at Columbia Gas of Virginia

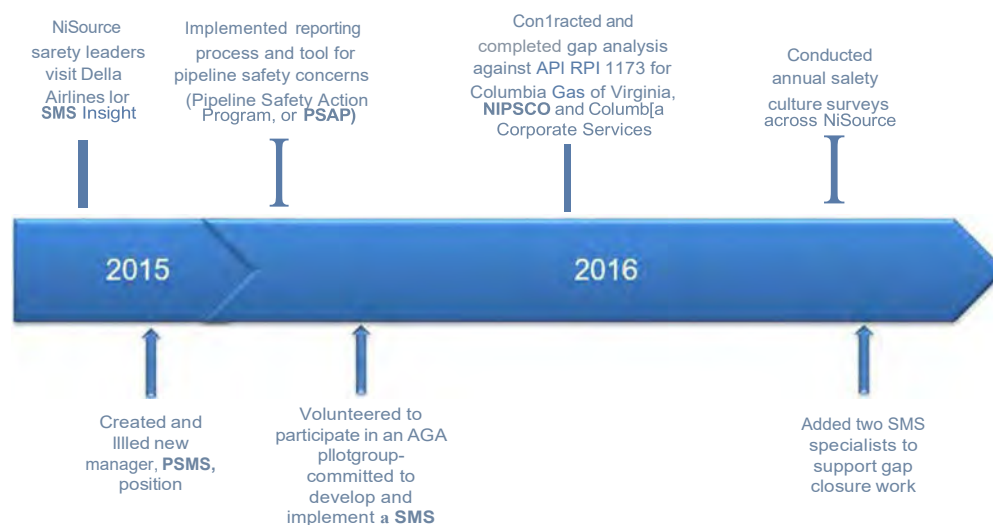


Figure 10. NiSource Safety Management System Plan Part A.

NiSource's Safety Management System Plan

Continuing the Journey

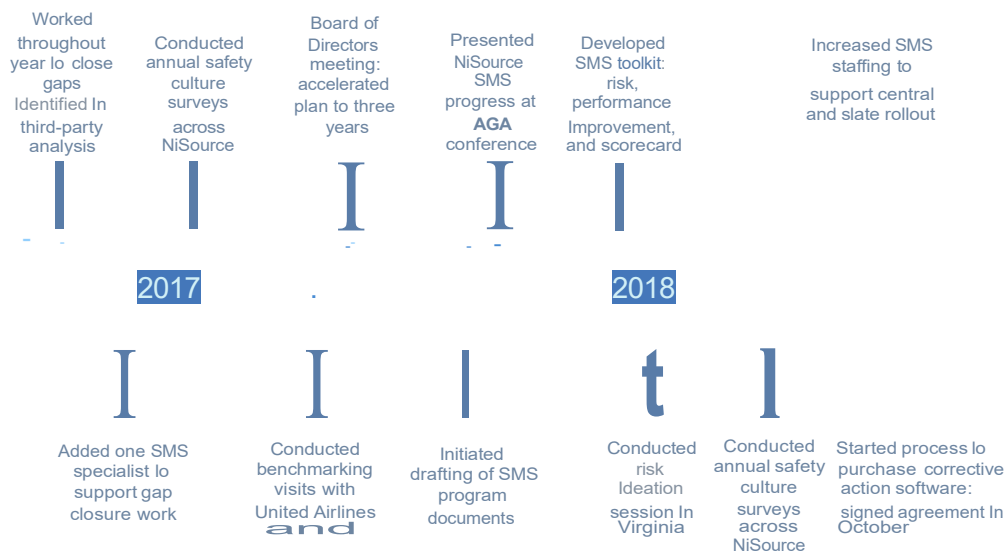


Figure 11. NiSource Safety Management System Plan Part B.

Appendix C. Enforcement Actions

Table 5. Massachusetts DPU enforcement actions for the 5 years previous to the accident. Data courtesy of the Massachusetts DPU.

Violation Date	PHMSA 192 Code Sections	Fine	Location	Description
March 7, 2012	192.13(c) 192.227 192.455 192.461 192.605	\$7,500	55 Arthur's Place Bridgewater	Buried steel portion of transition fitting on a 2" plastic main had no cathodic protection; records did not indicate transition fitting or name of welder
July 26, 2012	192.13(c) 192.361(a) 192.375	\$15,000	100 Union Street Attleboro	Shallow cover on service and outlet piping; transition fitting used as service riser, and exoosed transition fitting
June 24, 2012	192.13(c) 192.605(a) 192.615(a)(2) 192.615(b)(2) 192.805(h) 192.727(a) 192.727(b) 220 CMR 107.04	\$20,000	390 Fall River Avenue Seekonk	Shallow cover on service and outlet piping; transition fitting used as service riser, and exposed transition fitting
November 23, 2012	192.13(c) 192.605(a) 192.615(a)(3) 192.615(a)(5) 192.615(a)(7) 192.615(b)(2) 192.615(b)(3) 192.805(b) 192.805(d) 192.805(e) 192.805(h) 199.101 199.105(b) 199.202 199.225(a) 199.107(a) 40.277	\$170,000	453 Worthington Street Springfield (leak)	CMA tech failed to follow proper procedures during leak investigation; during abnormal operating condition, CMA did not check other buildings in area per procedures; CMA did not properly evaluate tech's conduct; call center response to caller was inadequate, did not follow script; CMA did not follow its anti-drug and alcohol plans for testing
November 23, 2012	192.13(c) 192.481(a) 192.491(c) 192.605(a) 192.723(a) 192.723(b){1) 192.805(h)	\$150,000	453 Worthington Street Springfield {ignition)	CMA failed to show that it monitored service lines for atmospheric corrosion; provided insufficient evidence that it performed atmospheric corrosion inspections per procedures; insufficient evidence re leak surveys in business district; insufficiently calibrated leak detection equipment; personnel not properly requalified for leak investigation and surveys

Violation Date	PHMSA 192 Code Sections	Fine	Location	Description
May 1, 2012	192.13(c) 192.605(a) 192.615(a) 192.615(b) 192.727(a) 192.727(b) 220 CMR 107.04	\$125,000	36 Maple Avenue Seekonk	Improper abandonment of service; failed to report leak and fire to Division; CMA integration center personnel failed to act after reports of fire from four employees; insufficient procedures; inadequate communications with Fire Dept; insufficient public awareness plan
November 17, 2012	192.13(c) 192.605(a) 192.615(a)(5) 192.615(a)(7) 192.615(b)(2) 192.615(b)(3) 192.703(a) 192.703(b) 192.703(c) 192.805(b) 192.805(e) 192.805(h) 220 CMR 101.06(21)(e)	\$100,000	189 Washington Street Canton	CMA personnel failed to classify leak pursuant to CMA's (natural) gas standard; supervisor did not have current operator qualifications necessary to classify leaks; CMA did not check guiding foundations in area
February 4, 2015	192.13(c) 192.605(a) 192.805(b) 192.805(h) 192.807(a) 192.805(b)	\$35,000	335 Washington Street Taunton	Unqualified employee (service outage) attempted to install Trident Seal on leak; no mention of Trident Seal in procedures
February 15, 2016	192.201(a)(2)(i) 192.739(1) 192.195(b)(2) 192.603(b) 192.13(c) 192.605(b)(1)	\$75,000	West Water Street Taunton	Overpressurization; MAOP exceeded; distribution system not designed to prevent accidental overpressuring; CMA failed to protect regulators from dirt and debris; failed to maintain records retesting, maintenance inspection

Appendix D. Constructability Safety Review

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(Land Services only need to sign when applicable)				

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Page 2 of 2

last updated: 7/20/14

Appendix E. NiSource Operational Notice ON 15-05

The following is NiSource's Operational Notice *Below Grade Regulator Control Lines: Caution When Excavating Near Regulator Stations or Regulator Buildings.*

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Целю

This Operational Notice has the following objectives:

1. Bring awareness to the company and the other employees regarding the importance of the optical sensing for the accurate monitoring of the outlet pressure into the Company's piping systems, and the data for the lines.
2. Set forth the action plan for the company's piping systems.

A Near Mia&

A Company crew was excavating to repair a gas leak located on the C1-Jtsid9 of a regulator station building. The uncorrected and narrowly misquoted title 1-inch (Intro 1 line and title) located on the B-inch outlet pipeline. The crew was unaware of the fu,11p05e of the t-Incn p.pe41111; ;;;-; C1-Jtsid IOCMI&R pttsonn11. The M&R personnel! adu!!<!!d the crew, of the purpose Of Il C1-Jtsid line 1md wlat w: 11.1ld h!!! happened in the crew's 1d been broken.

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Figure-1 is a schematic diagram of the experimental setup. The control lines are connected to the input of the 10-bit DAC. The DAC output is connected to the input of the 10-bit ADC. The ADC output is connected to the input of the 10-bit DAC. The DAC and ADC are connected to the input of the 10-bit DAC. The DAC and ADC are connected to the input of the 10-bit DAC.

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As a result of the near miss that occurred on 11/10/2011, the City of Towson, Maryland, is conducting an investigation into the incident. The investigation is ongoing and the City is committed to ensuring the safety of its residents and employees. The City is also reviewing its safety protocols and procedures to prevent such incidents from occurring again.

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Operational Notice

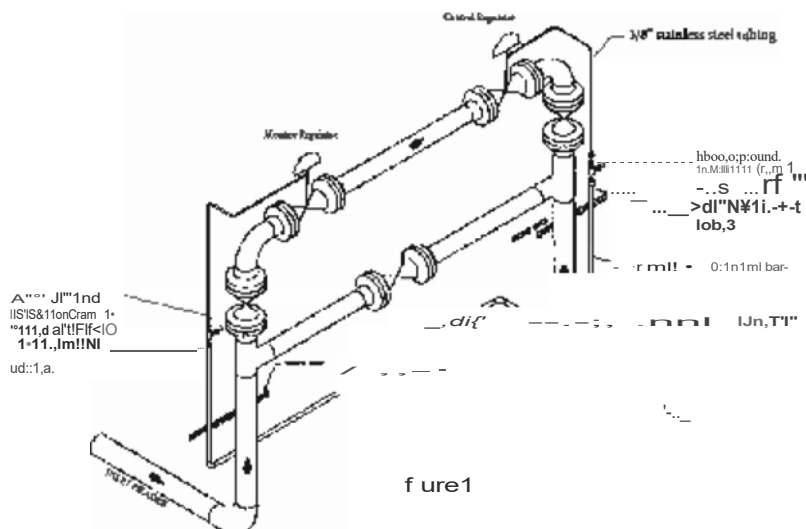
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Occasionally, buried odorant lines, which transport odorant from the odorizer to an inject point into the downstream piping system, are lost within the footprint of a City Gate/Inlet/Town Border/POD Station. If an odorant line is damaged causing an odorant spill, the clean-up end impact on the public may be costly. Although odorizers are typically located at City Gate/Town Border/POD Stations, buried odorant lines may also exist at odorant locations at other sites. The District Reinjector Stations or Customer M&R Stations

References

- AGA (American Gas Association). 2018. *Leading Practices to Reduce the Possibility of a Natural Gas Over-Pressurization Event*. (Washington, DC: AGA).
- American Council of Engineering Companies of Massachusetts. 2019. "DPU Issues Inquiry for Regulation Development: MA Passes Law Requiring Professional Engineers on Natural Gas Projects." Accessed May 25, 2019.
<https://www.acecma.org/about/news/massachusetts-passes-law-requiring-professional-engineers-on-natural-gas-projects-2340>.
- API (American Petroleum Institute). 2015. *Pipeline Safety Management Systems*. API RP-1173. (Washington, DC: API).
- ASME (The American Society of Mechanical Engineers). 2012. *Gas Transmission & Distribution Piping*. ASME B31.8. (New York: ASME).
- Coester, Adam. 2004. "Dillon's Rule or Not?" *National Association of Counties Research Brief* Vol. 2, no. 1. (Washington, DC: National Association of Counties).
- Commonwealth of Massachusetts. 2019. "About the DPU." Accessed June 30, 2019.
<https://www.mass.gov/about-the-dpu>.
- 2019a. "Pipeline Safety Information." Accessed March 19, 2019.
<https://www.mass.gov/pipeline-safety-information>.
- 2019b. "Executive Office of Public Safety and Security." Accessed July 9, 2019.
<https://www.mass.gov/orgs/executive-office-of-public-safety-and-security>.
2018. "Governor Baker Declares State of Emergency Regarding Incidents in Lawrence, Andover and North Andover." Accessed June 20, 2019.
<https://www.mass.gov/news/governor-baker-declares-state-of-emergency-regarding-incidents-in-lawrence-andover-and-north-andover>.
2015. "Statewide Communications Interoperability Plan." Accessed July 15, 2019.
<https://archives.lib.state.ma.us/handle/2452/208169?show=full>.
- FEMA (Federal Emergency Management Agency). 2006. *Multi-jurisdictional Mitigation Planning*. FEMA 386-8. (Washington, DC: Department of Homeland Security, Federal Emergency Management Agency).
- Kittby, J.G., Cannalite, R.P., Hicks, D.K., and Japel, E.J. 1989. *Constructability and Design Reviews: Analysis and Recommendations for Improvement*. US Army Corps of Engineers Construction Engineering Research Library Technical Report, P-89/15 (Washington, DC: US Army Corps of Engineers).

- MEMA (Massachusetts Emergency Management Agency). 2018. *MEMA Reports*, "Special Edition Covering August - October 2018." Vol. 17, no. 7. (Framingham, Massachusetts: MEMA).
- NCEES (National Council of Examiners for Engineering and Surveying). 2019. "Advancing Licensure for Engineers and Surveyors." Accessed July 14, 2019. <https://ncees.org/>.
- NiSource, Inc. 2018. *NiSource Emergency Manual*. (Menillville, Indiana: NiSource).
- . 2015. *Below Grade Regulator Control Lines: Caution When Excavating Near Regulator Stations or Regulator Buildings*. ON 15-05. (MelTillville, Indiana: NiSource).
- NSPE (National Society of Professional Engineers). 2019. "Champion, Guide, Advance, Unite." Accessed July 14, 2019. <https://www.nspe.org/>.
- NTSB (National Transportation Safety Board). 2019. *Building Explosion and Fire, Silver Spring, Maryland, August 10, 2016*. PAR-19/01. (Washington, DC: NTSB).
2018. *Natural Gas Distribution System Project Development and Review (Urgent)*. PSR-18/02. (Washington, DC: NTSB).
- . 2012. *Enbridge Incorporated Hazardous Liquid Pipeline Rupture and Release, Marshall, Michigan, January 25, 2010*. PAR-12/01. (Washington, DC: NTSB).
- . 1993. *Over-Pressure of Peoples Gas Light and Coke Company Low-Pressure Distribution System, Chicago, Illinois, January 17, 1992*. PAR-93/01-SUM. (Washington, DC: NTSB).
1982. *Missouri Power and Light Company Natural Gas Fires, Centralia, Missouri, January 28, 1982*. PAR-82/03. (Washington, DC: NTSB).
- . 1978. *Pipeline Accident Reports-BriefFonnat*. PAB-78/01. (Washington, DC: NTSB).
- . 1969a. *Low-Pressure Natural Gas Distribution System, Burlington, Iowa, November 6, 1969*. PAR-70/01. (Washington, DC: NTSB).
1969. *Low-Pressure Natural Gas Distribution System, Gary Indiana, June 3, 1969*. (Washington, DC: NTSB).
- PHMSA (Pipeline and Hazardous Materials Safety Administration). 2019. "State Programs Overview." Accessed June 13, 2019. <https://www.phmsa.dot.gov/working-phmsa/state-programs/state-programs-overview>.

Guidelines for States Participating in the Pipeline Safety Program

Appendix S

EXAMPLE STATE PIPELINE SAFETY PROGRAM PLAN

INSPECTION, ENFORCEMENT AND

INCIDENT INVESTIGATION PROCEDURES

Rev. December 2016

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DRAFT

I. PURPOSE

The Pipeline and Hazardous Materials Safety Administration (PHMSA) guidelines for state programs, Section 5.0, requires that State Programs have a current, written plan for conducting its pipeline safety inspection and enforcement program.

The purpose of this example document is to provide State agencies with additional specificity regarding PHMSA's expectations for the content of such plans.

Specific example statements and requirements are shown for illustration only and are not to be construed or interpreted as mandatory PHMSA requirements for State Programs. Refer to the official PHMSA Guidelines for State Programs for a complete description of program requirements.

Caution: This example document is not comprehensive. Absence of specific topics in this example should not be construed as an indication that missing topics need not be addressed in the state program manual. Activities or requirements described in the official PHMSA State Guidelines should be addressed in the requisite level-of-detail similar to the topics illustrated in this document.

II. MISSION STATEMENT

Each state pipeline safety agency should include a mission statement or policy statement similar to the example below.

The mission of the [State Pipeline Safety Program Agency] is to ensure the safe construction, operation and maintenance of intrastate natural gas pipelines and/or intrastate hazardous liquid pipelines in [insert State name]. This is accomplished through education, inspection, enforcement and investigation of incidents/accidents. Our ultimate responsibility is protecting the public and the environment from the dangers of natural gas and/or hazardous liquids in transportation.

DRAFT

III. [STATE] PIPELINE SAFETY PROGRAM

Each state pipeline safety agency should include a brief overview of its pipeline safety program and its role in oversight of pipeline safety, similar to the example below.

A. Background

The [State Pipeline Safety Program] is a Federal Program under the direct responsibility of the U.S. Department of Transportation (“DOT”). The Pipeline Safety Act (“Federal Act”) gave jurisdiction over all gas [or hazardous liquid] pipeline safety in the U.S. to the Secretary of Transportation (“Secretary”). However, the Federal Act also provides that any state with a law comparable to the Federal Act in scope and intent could enter into an agreement (“Certification”) with the Secretary to carry out safety enforcement in that state. The [State] legislature passed the [insert State statute] and gave the [insert State Pipeline Safety agency] jurisdiction over all intrastate gas [and/or hazardous liquid] pipeline safety in [insert State]. [Insert State] operators own over

- [xxxx] miles of gas transmission lines,
- [xxxx] miles of gas distribution mains
- [xxxx] million individual service lines
- [xx] LNG facilities
- [xxxx] miles of hazardous liquid transmission lines

B. Congressional Intent

Chapter 601 of the Federal Act provides the statutory basis for the State’s Pipeline Safety Program. Chapter 601 establishes a framework for promoting pipeline safety through exclusive Federal authority for regulation of *interstate* pipeline facilities and Federal delegation to the states of all or part of the responsibility for *intrastate* pipeline facilities under annual certification or agreement. Chapter 601 authorizes Federal grants-in-aid of up to 80 percent of a state agency's personnel, equipment, and activity costs for its pipeline safety program. The resulting federal/state partnership is the cornerstone for ensuring uniform implementation of the pipeline safety program nationwide.

C. Federal Role and Organizational Structure

DOT’s Pipeline and Hazardous Materials Safety Administration (PHMSA) is responsible for protecting the people and the environment in the United States through a comprehensive pipeline safety program. PHMSA directly administers the program, develops issues, and enforces minimum safety regulations for interstate and intrastate pipelines. These regulations are written to ensure safety in (1) the design, construction, testing, operation, and maintenance of pipeline facilities and in (2) the siting, construction, operation, and maintenance of liquefied natural gas facilities. PHMSA ensures compliance with regulations through operator inspections, enforcement actions, and incident investigations. PHMSA also administers grant-in-aid funding to states, conducts research, and collects and analyzes safety data.

PHMSA Headquarters is located in Washington, D.C. Headquarters administers the grant-in-aid program to support state agencies conducting gas and hazardous liquid pipeline safety programs. In addition to collecting, compiling, and analyzing pipeline safety and operating data, PHMSA manages the risk-based

pipeline inspection plan. PHMSA Headquarters also supports the work of five Regional Offices.

PHMSA Regional Offices serve as the focal point for compliance activities. Staff at each regional office provides technical assistance and support to state agency programs and conducts the annual evaluation of those programs.

D. State Program Oversight

Goals are set for all state programs by PHMSA and enforcement of those goals is attained by reductions in Federal grant-in-aid funding and the potential loss of our Federal Certification if those goals are not met. If state certification is lost, responsibility for pipeline safety within the state falls back to DOT PHMSA. Each state is required to have standards at least as stringent as the Federal Standards. *[insert State name's]* response to that requirement is to adopt the Federal Standard itself *[or other ...please describe if other]*. In order to stay current, *[insert State]* readopts the Federal Standard every *[x]* years *[or other description as applicable]*.

[Include citation to federal and state statute and regulations]

Federal and state statutes and regulations are attached in Appendices E, F, G, and H.

E. PHMSA Monitored Goals

A formula was developed by PHMSA to determine the proper level of performance for each state. The formula considers the number of gas *[or hazardous liquid]* system operators, the miles of transmission pipeline, gas main distribution pipelines, and the number of gas service lines in a state. For *[insert State name]*, this formula finds that we need *[xx]* full-time inspectors and that we should be spending a minimum of *[xxx]* person-days per year in the field inspecting facilities. Our current allocated staff is at *[xx]* and the minimum inspection-day requirements are being met with that number of inspectors.

F. Training

DOT provides training for our Pipeline Safety Program staff primarily at its PHMSA Training and Qualification ("T&Q") facilities in Oklahoma City, OK. To ensure that each inspector has knowledge of minimum Federal pipeline safety regulations, each individual must attend all required courses within a period of 3 years (successfully complete within 5 years) of completion of the first course in the pipeline safety program. The first course should be scheduled as soon as practical after employment of the inspector.. The courses are approximately 40 hours long and the subjects for those courses are listed below. Some of the courses listed also require additional computer-based training prior to course attendance.

	Course Code	Course Title
1	PHMSA-PL1250	<i>Safety Evaluation of Gas Pipeline Systems Course</i>
2	PHMSA-PL1255	<i>Gas Pressure Regulation & Overpressure Protection Course</i>
3	PHMSA-PL1310	<i>Plastic and Composite Materials Course</i>
4	PHMSA-PL3242	<i>Welding and Welding Inspection of Pipeline Materials Course</i>
5	PHMSA-PL3256	<i>Failure Investigation Pipeline Failure Investigation Techniques Course</i>
6	PHMSA-PL3293	<i>Corrosion Control of Pipeline Systems Course</i>
7	PHMSA-PL3257	<i>Pipeline Safety Regulation Application and Compliance Procedures Course</i>

Additionally, the following courses are required for Pipeline Integrity Management Inspections as a result of newly adopted Federal rules.

8	PHMSA-PL3267	<i>Fundamentals of Integrity Management Course</i>
9	PHMSA-PL1297	<i>Gas Integrity Management (IM) Protocol Course</i>
10	PHMSA-PL3291	<i>Fundamentals of (SCADA) System Technology and Operation Course</i>
11	PHMSA-PL3292	<i>Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course</i>
12	PHMSA-PL3306	<i>External Corrosion Direct Assessment (ECDA) Field Course</i>
13	PHMSA-PL3IC	<i>Investigating and Managing Internal Corrosion of Pipelines WBT</i>
14	PHMSA-PL 1245	<i>Inspections of Distribution Integrity Management Programs</i>

[Note: Example course listing is specific to gas pipeline inspector qualifications. Additional courses apply for hazardous liquid pipeline inspector qualification.]

IV. INSPECTION PLANNING

The PHMSA State Guidelines, section 5.1.1 through 5.1.2, require that state agencies have written procedures that provide for maintaining a current list of operators under its jurisdiction and prioritizing inspection activities based on operator-specific information. This section contains examples of administrative procedures which provide State agencies with additional specificity regarding PHMSA's expectations for the level-of-detail appropriate for such procedures.

A. Listing of Operators

In accordance with the PHMSA State Guidelines, section 5.1.1, each State agency must maintain a list of the name and mailing address of each jurisdictional operator. The official address for each operator should be the one to which all pipeline-safety-related correspondence is sent and considered the official notice to the operator.

In addition, information about the pipeline location and/or service areas should be maintained. The list should also document the type of operator (e.g., LDC, master meter, etc.).

Each State agency should have a written process and procedure it uses to assure that it becomes aware of new operators, mergers, acquisitions, system expansions, new construction, etc., such that the list is maintained current.

See Appendix A for an example listing of operators.

B. Inspection Priorities

In accordance with the PHMSA State Guidelines, section 5.1.2, each State agency must establish Inspection priorities. Inspection priorities are determined in accordance with the following process and procedure. The resulting list will address both the priority of operators (i.e., which operators should be inspected sooner or more frequently), and the focus areas to concentrate the inspection for all operators (i.e., identify riskier or problematic aspects for each operator to focus inspections on the units or topics where needed most).

The State's process for prioritizing inspections or inspection activities addresses the following:

1. Inspector Input/knowledge obtained from prior inspections.
2. Prior compliance performance of operators (both the number and severity of prior non-compliances)
 - a) Number, nature, and age of outstanding compliance issues that remain open
3. Data from annual reports¹ or other sources indicative of inherent pipeline system risk such as:
 - b) Prior incident history
 - c) Prior leak history
 - d) Mileage and HCA mileage

¹ See Appendix B for an example procedure that documents the system information from annual reports and incidents reports and how the information can be used to develop a relative risk index listing of operators as an aid to development of an Inspection Priority Listing.

Example Pipeline Safety Program Plan

- e) Pipe diameter
- f) Age of pipe
- g) Coating and Cathodic Protection
- h) Type of pipe (especially vintage pipe of problematic design such as LF-ERW pipe, cast iron pipe, etc.)
- 4. Time since previous inspection
- 5. Number, nature, and age of outstanding compliance issues that remain open
- 6. Pipeline system expansion (e.g., new construction, acquisitions, etc.)

[Insert State agency name] will develop an Inspection Priority List each year. Although not the sole factor in determining specific inspection plans and priorities, the factors above must be considered when establishing the ultimate Inspection Priority List. The Inspection Priority List should also account for large operators with multiple operational units to insure an adequate rotation is performed. The Inspection Priority List should be periodically updated to reflect new significant information (such as incidents) that results in changing inspection priorities.

This Inspection Priority List documents the input listed above to record the basis for the Inspection Priority List, along with any other special needs that influence the final inspection priority decisions.

C. Time Intervals for Inspections (including LNG facilities)

[Insert State agency name] has established the following maximum allowed time interval between inspections for each type of inspection.

- 1. Standard inspections..... (X years)
- 2. Operation and Maintenance Plan (X years)
- 3. Public Awareness Plan..... (X years)
- 4. Anti-Drug and Alcohol Plan (X years)
- 5. Emergency Plan..... (X years)
- 6. Operator Training Plan (X years)
- 7. Operator Qualification Plan (X years)
- 8. Distribution Integrity Management Program Plan . (X years)
- 9. Integrity Management Program Plan..... (X years)
- 10. Control Room Management Plan..... (X years)

Inspections of programmatic plans such as integrity management are performed on less frequent intervals because [insert additional rationale/justification for intervals selected].

[Insert State agency name] will conduct additional inspections or adjust the Inspection Priority List as needed in response to unplanned events such as such as leaks, incidents, compliance issues, and/or poor operator performance.

V. CONDUCTING INSPECTIONS

The PHMSA State Guidelines, section 5.1.3 through 5.1.6 requires that state agencies have written procedures that provide for methodical, systematic, comprehensive, and consistent inspections and enforcement actions. To properly conduct an inspection of an operator's facilities, an inspector shall utilize an inspection form or checklist referenced to the applicable Federal and/or State regulations. This section contains examples of administrative procedures which provide State agencies with additional specificity regarding PHMSA's expectations for the level-of-detail appropriate for such procedures.

A. Objective

Evaluate all natural gas pipeline system operators and/or hazardous liquid pipeline system operators under *[insert State name]* jurisdiction to verify compliance with the requirements of the *[insert State statute]* and the Federal Minimum Safety Standards under 49 CFR Parts 191, 192, 193, and 195, as applicable. If an operator fails to meet the minimum requirements, the necessary action will be taken to obtain compliance.

B. Pre-Inspection Activities

To properly evaluate a pipeline operator, the inspector must be familiar with the operator's plans, procedures, and processes associated with the area to be inspected.

Prior to conducting an inspection the Inspector shall become familiar with the history of the operator by reviewing office records and available databases. The Inspector should also check for any outstanding notices of probable violation and become familiar with the circumstances surrounding any outstanding issues previously identified. The inspector should also identify any special permits/waivers and any NTSB recommendations that apply to the system/segments being inspected.

C. General Inspection Guidelines – Inspection Activities

Make arrangements by telephone or electronic mail with company personnel to assist in conducting safety inspections.

Municipal and Master Meter operators will be devoted a minimum of [X] days each for standard inspection activities and additional days will be dedicated as needed.

There will be joint or multiple inspectors conducting inspections when warranted. This is an effort to promote consistency and efficiency among the entire staff. An appropriate rotation of inspectors between operators will also occur. All operators will be assigned one inspector to be the contact for questions or concerns they might have. There will also be an adequate rotation of locations inspected within each operating unit.

Each on-site inspection should be closed with an exit critique with the operator or representative of the operator, at which time the operator is advised of the inspector's findings and recommendations.

D. Records and Reports

All on-site activity will require a report to document the inspection and the results. A brief review of activities performed will need to be noted on the report with a more detailed report recorded on a designated checklist. When applicable, all inspections should be documented using the designated checklist pertaining to the activity being viewed. These checklists can be viewed in Appendix C [*or in electronic format*]. If there is not a checklist that is applicable to the activity being reviewed a detailed account of the items viewed should be noted. Checklists should be reviewed annually to insure they are up to date with the most current requirements from 49 CFR.

Records detailing the types of inspections conducted and the respective person-days devoted to each inspection will also be attached to each report using the Inspection Priority Sheet.

E. Record Inspection

Each Record Inspection should include a review of the operator's records concerning the construction, inspection, operation, and maintenance of the operator's pipeline, including pipeline facilities. If problems are found during the review, additional review will be necessary to accurately determine the scope of any deficiency found. Checklists should be used to aid the Inspector during each inspection. If the operator's records are so extensive that checking every document in a certain file is not practical, the inspector may spot check certain records from the file. If a spot check reveals something that is questionable, a more in depth study of that particular record should be conducted.

The Field Inspection (see section II.F) should include an on-site inspection of the operator's facilities to confirm that system maintenance is being performed as indicated by those items covered in the record inspection. A Record Inspection, Field Inspection, or Plan review will be considered a Standard Inspection.

On-site record inspections should be conducted at the beginning of a calendar year. System records will generally indicate the condition of the system. Any questionable records should be verified with a corresponding field inspection of any facilities in question. The records reviewed for compliance should include, but are not limited to the following:

1. **Leak Survey** (Part 192 only)- Determine Residential (5 year) and Business District (each calendar year, but at intervals not exceeding 15 months) survey dates, number of leaks found and classified, and if proper repairs were made (leak repair work orders). Refer to Sections 192.706 and 192.723. NOTE: State may have additional requirements per specific state regulations or there may be additional inspection requirements per operator compliance issue.
 - Ask operator if any sections were missed or if any known compliance issues
 - Appropriate documentation (maps) should be reviewed to determine compliance
 - Are leak survey locations documented appropriately – highlighted routes
 - Comprehensive review should be conducted every 3-5 years where ALL leak survey maps are reviewed to determine no geographic areas are missed

- Are locations of leaks found noted on maps
 - Review leak repair records of any leaks noted on survey
 - Are all leaks reported on annual report
2. **Corrosion Control** - Determine if system is cathodically protected and type of protection, anodes, rectifiers, isolation, interference bonds, etc. Determine if proper monitoring is maintained. Refer to subpart I-Requirements for Corrosion Control, of Part 192 and/or subpart H – Corrosion Control, of Part 195. Take pipe-to-soil readings, when possible, to determine compliance.
- Ask operator if any sections were missed or if any known compliance issues
 - Has operator provided you with all records
 - Try and get count of test points used in various systems (to be used for your next inspection also)
 - Ask if any test points were added or removed during last inspection cycle
 - Compare readings and looks for signs of suspicion
 - Are readings same as last reading
 - Do readings coincidentally read minimum (.85?)
 - Does main segment have more than one test point and is reading similar
 - Count of isolated service test points – count variance
3. **Odorization** - Determine type of equipment, if annual maintenance is performed and test to determine if proper odorant level is maintained. Refer to Section 192.625.
- Have odor injection levels been reviewed
 - Odorant Purchase records
 -
4. **Patrolling** - Determine if proper patrolling is done on transmission and gas distribution facilities.
- Patrolling maps – what are source documents
 - Signatures of person conducting patrol
 -
5. **Valves** - Determine if annual maintenance is performed on designated key valves on transmission and gas distribution mains. Also, refer to the O & M Plan for designated emergency valves.
- It is vital to get counts where you can compare from year to year
 - How many valve inspections were done in one day
 - Dates of records – Weekends? Holidays? April 31st?
 -

6. **Maximum Allowable Operating Pressure (MAOP) or Maximum Operating Pressure (MOP)** - The MAOP or MOP of the facilities must be determined.
7. **Regulator Stations** (Part 192 only) - Annual inspection for regulator stations is required to determine mechanical condition, correct pressure, adequate capacity and operation. If more than one regulator station is used to supply gas to any single system, telemeter or recording pressure gauges are required. Refer to Sections 192.739, 192.741 and MAOP under 192.619.
8. **Relief Devices** - Determine if relief devices are tested and if capacities are adequate and set to function at the proper pressures.
9. **Vaults** (Part 192 only) - Vaults having volumetric internal content of 200 cubic feet or more require ventilation ducts and other features and are required to be inspected annually.
10. **Customer Leak Complaints** (Part 192 only)- Determine if the operator has the recorded all necessary leak information, (e.g. time received, time dispatched, time arrived, time completed and disposition).
11. **Farm Taps** (Part 192 only)- Determine if proper odorization, regulation, and adequate overpressure protection is provided.
12. **Special Considerations for Master Meters** (Part 192 only) - Master meter system O & M Plans should consist of a brief description of the gas facilities, and procedures for leak surveys and repairs, cathodic protection monitor, system pressure, customer leak complaints, system valve maintenance, new construction procedures when applicable and procedures for personnel training.

Review of operator records should not be limited to the above list, but should include all of their specific required operation and maintenance activities. The inspection checklist selected should provide a comprehensive list of those items necessary to complete the inspection. Based on records reviewed the Inspector should select future locations for physical on-site facility inspection of Pump/Compressor stations, Regulator Stations, System Valves, C-P Test Stations, Rectifiers, Odorizers (gas only), Line Markers, Leak Repairs, and Customer Meters and Regulators (gas only), etc.

It is not necessary to obtain copies of records during routine inspections, unless a noncompliance is found and records may be needed to support an enforcement action. If any request for a copy of any record is refused, immediately telephone the Pipeline Safety Program Manager for guidance. Include a reference to the refusal in your report.

F. Field Inspections

Physically conduct an on-site inspection of existing system facilities, such as regulating stations, odorizers, commercial and industrial meters and regulators, relief devices and vents, exposed mains, peak shaving plants, system valves, C-P test stations, rectifiers, compressor stations, storage fields and gas wells, etc. Check for proper installations, over-pressure protection, security, etc. Photographs are

recommended to support any noncompliance found.

G. *Comprehensive Inspections*

A comprehensive or focused inspection should be conducted of each inspection unit at least every [X] years. The intent of the inspection is to take a snapshot of a specific area within the inspection unit. The current year Comprehensive Field Inspection checklist shall be used during the inspection. The inspection may be done independently of operator personnel but the preferred method is to perform the inspection with the assistance of operator personnel.

The area chosen for the inspection should be of a manageable size and take into consideration the criteria listed in section [X] of the checklist which includes: population density, age of system, type of piping, operating characteristics, performance history of system (i.e. incident history).

The MAOP/MOP of the system should be verified. Pressure regulation should be included and the criteria under section [X] of the checklist should be verified.

System valves should be included in the inspection. The criteria for valve inspection are included under section [X] of the checklist.

The type of cathodic protection being applied to the system piping should be verified. Pipe-to-soil potentials should be taken at predetermined test points. Pipe-to-soil potentials should be taken at randomly selected service risers to determine if unrecorded electrically isolated services exist. If applicable, rectifiers and bonds should be inspected during the inspection. Atmospheric corrosion inspections should be conducted of all above ground facilities encountered during the inspection. Pay close attention to condition of risers at the surface-to-atmosphere interface.

Odor intensity checks (gas only) should be taken in the area of the inspection. Operator owned odor intensity verification equipment should be used during the inspection. Verify odor intensity and calibration dates of equipment.

A gas leakage survey of the system piping should be conducted, if applicable. Operator owned leakage survey equipment should be used along with qualified personnel. Compare results of inspection with existing leak documentation. Verify the classifications of any known existing leaks on the system.

Customer meter sets should be inspected during the inspection. This can be done in conjunction with the leakage survey. The location of the meter set as well as the condition should be observed. Check for the presence of vent screen and vent position. Verify valve requirements are being met.

If marked pipeline facilities are encountered during the inspection verify the accuracy of the location markings. The presence of pipeline marker should be verified at all above ground mains, road and railroad crossings where applicable. The information on the marker should be checked for accuracy and code compliance.

Throughout the inspection the accuracy of the system mapping supplied by the operator should be verified when possible.

The qualifications of all operator/contractor personnel observed performing covered tasks during the inspection shall be verified and documented on the appropriate forms.

H. Design, Testing and Construction Inspection

Construction Inspection: Observing the installation of **new piping** (transmission, main or service) or an installation resulting in an **increase in capacity or size** of an existing facility accomplished through replacement.

In January of each year the inspector shall contact all pipeline system operators and request a listing of, and approximate start date for planned pipeline construction projects. The inspector shall include construction inspections when scheduling field inspection activities based on the projected dates of the projects. Follow-up contact with the operator may be required to verify actual construction project start dates.

To conduct a construction inspection, the inspector shall contact the company representative in a reasonable time period prior to the inspection. The inspector shall take the time to become familiar with the company procedures by either reviewing the procedure in advance of the inspection or by requesting a copy of the procedure from company representatives to be reviewed while observing the construction procedure.

The appropriate inspection checklist shall be used as guidance and documentation during the inspection. The checklist will also allow the inspector to document adherence to proper procedure.

If the Inspector observes that a task is not completed as required, the appropriate company official shall be notified. A review should be conducted to determine if the issue identified relates to the procedure or a training/qualification problem.

The checklist references specific code sections. If during the inspection the Inspector determines that the checklist is not correct or in need of updating, the Pipeline Safety Program Manager shall be notified. The most current copy of the checklists is maintained [*specify where checklists can be obtained*].

The Inspector shall as part of the inspection determine if the company is following their damage prevention program by verifying a ticket has been issued and the excavation is completed within the time interval allowed. The Inspector should determine if the operator approved excavation procedures are being adhered to.

The crew members qualifications (if construction tasks are included as covered tasks by the operator) should also be reviewed as part of the inspection and documented on **the Operator Qualification Field Inspection** checklist. When possible an **Element 9 Inspection Protocol** form shall be used to evaluate the effectiveness and comprehensiveness of the operators' qualification plan during the inspection.

The Inspector shall review the bulleted items below when applicable to the work being performed. The Inspector shall determine if tasks were conducted satisfactorily and document their findings on the appropriate construction checklist.

- Establish the Class Location for the area where the work is being performed (gas only).
- Establish the system MAOP/MOP and operating pressure.
- Determine if the piping and components being used are properly marked and qualified for gas piping and the pressure rating is adequate for the system MAOP/MOP.
- Establish the piping grade, specification, and wall thickness are adequate for the installation being observed.
- Determine if cathodic protection is required, the type of protection being applied (anode, rectifier or bond). Determine the level of protection by performing a pipe to soil potential measurement.
- Determine if adequate depth is being achieved for the type of installation being observed.
- Shoring or other acceptable trench protection should be used in excavations as defined by Company procedures where unstable soil is encountered and or the opening is 5 feet or more in depth.
- Ensure that the backfill being used is clean of debris that may damage coating or piping.
- If the possibility of a release of natural gas or hazardous liquid is present, ensure that a fire extinguisher is readily accessible. In the event of a planned release confirm that the area has been secured and no ignition sources are present prior to release. Verify that appropriate personal protection equipment is being used.
- Verify that individuals performing fusion or steel welding are qualified by the appropriate procedure and that qualifications are current.
- Observe fusions or welding being performed to determine if the company procedures are being followed.
- If tapping and stopping are being performed ensure that company procedures are being followed and that the employees performing the work have current qualifications.
- When new or existing pipe is being handled, transported or excavated near, ensure that the piping and coating is in good physical condition. Make certain that the crew is inspecting the piping prior to installation or backfill for gouges, dents or abrasions. If damage is observed ensure that the damaged segment is removed or repaired as defined by company procedure.
- Prior to pressure test determine if the Class Location has a bearing on the minimum test pressure (gas only).
- Adherence to pressure test duration required by company procedure and regulations should also be verified.
- Ensure that the pressure gauge or recording chart used to monitor pressure tests are in good physical condition and if required by company procedure, the calibration date is current.
- When purging is performed verify the operator has determined the area is cleared and the release is controlled and vented safely. This should include, as applicable, vent stack grounding and maintaining static control. If required by company procedure, ensure that the appropriate emergency officials have been notified of purges that may vent large quantities of material.
- If a meter set assembly is part of the installation being observed verify that the service regulator vent is located in an area where it can vent safely to atmosphere and is readily accessible. The riser valve or outside shutoff must also be accessible.
- Verify the meter set assembly has adequate support.
- If an emergency situation occurs while performing the inspection determine if the emergency procedures are followed and the tasks performed are conducted as defined by company procedure.

- Determine if line markers are required and are posted with the appropriate warning, company name, and a 24 hour contact number.
- After completing the inspection the inspector shall perform an exit interview/critique with the appropriate company official indicating any areas of probable violation or issues identified. If follow-up is necessary to confirm corrective action, attach applicable correspondence to the report identifying the steps taken to resolve the issue.

Upon completion of the inspection the Inspector shall complete the necessary documentation and checklist including a Post Inspection Memorandum and Priority Sheet. All documentation shall be submitted to the Pipeline Safety Administrator printing. Once printed the entire report package shall be reviewed by the author to ensure that the report is correct and the appropriate attachments are included. Once the Inspector has finalized the inspection, the report and associated attachments shall be presented to the Pipeline Safety Program Manager for review. Under normal circumstances the report should be submitted to the Manager within 2 weeks of the completion date of the inspection. If circumstances are encountered requiring additional time to finalize the report, notify the Manager of the reason for the delay.

I. Training and Operator Qualification (OQ) Inspections

The first round of written Operator Qualification plan inspections was completed by December 17, 2005. Element 9 Inspections are to be used during field inspections and construction inspections where applicable in order to ensure field knowledge of Operator Qualification issues. The Operator Form 15 OQ Field Inspection Protocol should be used to document the individuals and tasks observed during field inspections. The status of qualification should be noted for each task observed.

Determine if training requirements of [*insert applicable State statute or regulation*] are being met and appropriate documentation is being maintained by the operator.

J. Checklists

Checklists are to be used for all inspections. Whenever a checklist is not used, provide a detailed explanation of inspection activities in the Report or Post Inspection Memorandum. See Appendix C for checklist information.

K. Miscellaneous

During field work an Inspector may discover other systems. When these systems are identified which may be jurisdictional, a visit to the system should be scheduled to determine whether or not it is jurisdictional. If so, advise the operator of his obligations. Briefly inspect the system to assure that it is jurisdictional and that no obvious hazardous conditions exist. Leave copies of "Small Operator Guidance Manual" and the Minimum Safety Standards with the operator. A written report of findings should be submitted to the Program Manager for review.

L. Operator Training

Participation in organized training programs intended to enhance the operators knowledge of code requirements and methods used to achieve compliance is permitted. Individual operator training may be warranted in some situations. The days spent on these activities shall be recorded as On-site Operator Training.

M. Damage Prevention Activities

A damage prevention inspection can consist of review of damages the operator sustained due to third party damages per 1000 locates during the previous year. The numbers should be compared to prior years to determine if the rate is decreasing. Inspection time spent solely on verification of one-call response is also allowed.

N. Integrity Management Programs

Staff meeting the PHMSA training requirements relating to integrity management inspection will perform or lead all IMP inspections. When conducting the initial review of an operators plan, current IM Protocol Form(s) [or the PHMSA protocol form] will be used to complete the IMP plan reviews. Follow-up reviews of Integrity Management Programs will be conducted at intervals not exceeding [X] calendar years. Form [insert form number] Integrity Management Follow-up Inspection will be used for periodic inspection to verify that the operators are meeting the requirements of CFR 192 Subpart O and/or 49 CFR 195.452.

Qualified Staff will be assigned to conduct field inspections of the work being performed on pipeline facilities to meet the Subpart O and/or 49 CFR 195.452 requirements. Staff will request schedules for field activities from the operators to which they are assigned. The inspections will be adapted to the type of work being performed. Staff will verify that all work being conducted is performed in accordance with the operators operation and maintenance plan and integrity management plan. Large operators will have an annual review of Integrity Management plans to ensure operator tests and remedial actions are being conducted and staff inspectors are aware of on-going integrity management activities.

O. Liquefied Natural Gas

Standard inspection of the LNG facility will be conducted at intervals not exceeding 2 calendar years. The LNG Facility Record Inspection & Field Checklist will be used for the inspection.

P. Distribution Integrity Management Programs (DIMP)

Staff meeting the PHMSA training requirements relating to distribution integrity management inspection will perform or lead all IMP inspections. When conducting the initial review of an operators plan, current DIMP Protocol Form(s) [or the PHMSA DIMP protocol form] will be used.

Qualified Staff will be assigned to conduct field inspections of the work being performed on pipeline facilities to meet the 49 CFR Part 192, Subpart P, requirements. Staff will request schedules for field activities from the operators to which they are assigned. The inspections will be adapted to the type of

work being performed. Staff will verify that all work being conducted is performed in accordance with the operators operation and maintenance plan and integrity management plan. Large operators will have an annual review of DIMP plans to ensure operator tests and remedial actions are being conducted and staff inspectors are aware of on-going DIMP activities.

Q. *Post-Inspection Activities*

All inspection reports shall be submitted to pipeline safety program manager within 2 weeks of completing an inspection. All checklists shall be complete and accompany any inspection report with any other adequate documentation needed. Compliance issues shall be thoroughly outlined and any follow-up reports made as noted below. Any final reports not requiring further compliance action shall be reviewed by the pipeline safety program manager and filed. Probably violations or other issues discovered should follow procedures noted below for further follow-up.

R. *Notices of Probable Violations (NOPV)*

If a probable violation is observed during an inspection, a Notice of Probable Violation (NOPV) will be issued to the operator in question. A verbal notice must be given to the operator personnel assigned as a contact during the inspection. The notice must describe the regulation section or administrative code not being complied with as well as the specific details of the violation. A copy of the completed written notice must be provided to the system operator along with a copy attached to the inspector's Report. The written report and attachments should be submitted to the State Pipeline Safety Program Manager within 2 weeks of the completion of the inspection.

A letter addressed to the appropriate operator contact (which should be a company officer, system owner, mayor or other culpable party) shall be drafted by the Inspector issuing the NOPV. The letter should include the appropriate code section and a description of the violation issue. The letter shall be submitted to the Program Manager within one week of identification that the NOPV exists. A copy of each NOPV form shall be supplied to the Program Manager along with the NOPV letter. It is also acceptable to notify an operator of any NOPV via letter if required action is determined after leaving operator premise. The NOPV letter drafted by the Inspector shall be submitted to the Program Manager as described above. A final copy of each NOPV notice and letter is to be submitted to the State Pipeline Safety Program Administrator. It may be the decision of the program manager that further investigation of a questionable violation is needed, or a more in-depth study is needed to determine the extent of the deficiency. This should be completed before any formal notifications are made. *[Pipeline Administrator and program manager could be same person – or designated administrator assistant or other designee]*

The reason or reasons for the noncompliance action taken shall be recorded on the copy of the notice form kept on file at the State agency. This will be accomplished by the use of an enforcement code. The code will be one of the three steps discussed below, followed by one or more of the reasons identified by the corresponding letter of the alphabet (1A, 2B, 3C, etc.).

Example Enforcement Codes

1. Follow-up inspection to ensure correction of the deficiency.
2. More in-depth study to determine the extent of deficiency.
3. A noncompliance or warning letter will be drafted and forwarded to the operator

- requesting corrective action.
- 4. Request officials from operating unit to appear in person for conference relative to the violation.
- 5. Initiate a citation order for the operator to appear before the State agency based on seriousness of violation cited.
 - a) Violation not of a critical nature and/or not an immediate hazard to public safety.
 - b) Violation is of a critical nature and/or is an immediate hazard to public safety.
 - c) Operator is currently taking corrective action.
 - d) Long-term corrective action is required.
 - e) Prior performance indicates no repetitive violation.
 - f) Records indicate history of repetitive violations.
 - g) Numerous violations cited and require close attention.
 - h) Violation found and corrected prior to inspection.
 - i) Operator requires further guidance or training.
 - j) Additional information needed before pursuing violation.
 - k) Change in ownership in progress.
 - l) Pending response from operator.
 - m) Pending clarification of rule or law.
 - n) Insufficient corrective action.

S. Notice of Probable Violation Actions

After taking into consideration the nature of the violation and the past performance of the system operation, one or more of the following steps shall be taken to achieve compliance:

- a) A NOPV or warning letter will be drafted within 1 week and submitted to the Pipeline Safety Program Manager for forwarding to the operator. The letter must identify the specific violation(s) and request corrective action to be taken.
- b) System operator officials will be asked to appear for a conference prior to filing a formal citation order.
- c) If the operator fails to correct the violation or respond to steps a) and/or b), a citation order may be issued by the State agency, directing that the system operator appear before the State agency to show cause why it should not be found in noncompliance and subject to a penalty assessment.

T. Notice of Probable Violation Tracking

Once a Notice of Probable Violation letter has been sent, the operator will be allowed thirty days (30) from the date of the letter to respond and detail intended corrective actions. The Pipeline Safety Administrator *[or designated party]* will keep a calendar tracking the due date of each response. If a response is not received within 5 business days past the due date, the Administrator will notify the Inspector assigned to the operator involved as well as the Program Manager. The Inspector will contact the operator in an effort to ascertain why the response has not been submitted. The reason provided will be conveyed to the Administrator and the Program Manager via email to determine if further actions are warranted. Upon receipt of the response the Administrator will provide copies of the response to the Inspector assigned and the Program Manager. The original copy of the response will be filed with

the NOPV form and warning letter.

Upon completion of the associated report, the NOPV form, and NOPV letter, the violation will be logged onto an Excel spreadsheet maintained on the *[designated file location]*. The spread sheet contains multiple sheets including outstanding violations and corrected violations. Once updated the outstanding NOPV sheet is printed and posted on the Pipeline Safety bulletin board. Follow-up inquiries will be made to the violation issues. Each violation will receive follow-up on a quarterly basis. The update should be conducted on the first Monday of the new quarter. If the Inspector is absent on the first Monday of the new quarter, the follow-up shall be conducted the day the Inspector returns to the office.

The actions to be conducted during the follow-up activities shall include: a review of the NOPV form, NOPV letters and associated documents; updating the NOPV Status form stored on the *[designated file location]*; printing the updated NOPV Status form; attaching the printed copy of the NOPV Status form to the NOPV file packet, and returning the updated packet to the Pipeline Safety Administrator for logging on the Excel spread stored on the *[designated file location]*. The extent of the follow-up will be determined by the nature and severity of the violation.

Examples of follow-up actions:

- Periodic contact with the operator to determine corrective actions,
- Confirmation of corrective actions at specific time intervals determined by the Inspector or Program Manager, possibly including field verification,
- Review and confirmation during next regularly scheduled inspection,
- Citation Order/Civil Penalty.

U. Closure of a Probable Violation

Under normal circumstances closure of a notice of probable violation may be accomplished by one of the follow:

- The operators response to the NOPV letter includes documentation of correction of the deficiency;
- A follow-up inspection has been conducted to verify correction of the deficiency;
- A regularly schedule inspection of the operator has verified the violation issue no longer exists.

The process of correcting a NOPV will require the Inspector to document the corrective actions taken by the operator to correct the deficiency and actions taken by the Inspector to verify corrective actions. This can be in the form of a Report, O&M Plan review report, or updating the NOPV Status form. The Inspector will also obtain the original NOPV form from the *[state pipeline safety agency]* files and note on the form that the NOPV issue has been corrected as well as the date of verification. The entire package containing the NOPV notification form, NOPV letter, NOPV status form if applicable, and corrective action report shall be submitted to the Program Manager. The Program Manager will review all documentation to determine if acceptable actions have been taken and the violation can be removed or corrected. If the corrective actions are acceptable to the Program Manager the entire package will be provided to the Pipeline Safety Program Administrator for appropriate documentation and filing.

V. Issues Identified

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Occasionally, an Inspector may observe conditions or operating practices that are not violations at the time, but could, if not corrected, result in a future violation or an unsafe situation. On those occasions, the inspector should verbally inform the operator of the potential problem, and also include the issue in the Report or Post Inspection Memorandum. A copy of the report will be provided to the operator after review by the Pipeline Safety Program Manager.

If the Inspector uses the Issues Identified in lieu of a noncompliance form for minor violations, it should only be used after considering all potential public safety concerns (risk) and the action being taken by the operator to correct the problem.

Minor Violation Examples:

- A record keeping error when an item of maintenance was not properly recorded, but which presents no immediate safety problem unless a set series of events would occur to the gas system operation.
- An operational or maintenance deficiency, which may involve equipment or facilities, not used as the primary safety protection for the pipeline.
- A deficiency that is not considered unsafe, but has never been formally addressed before with operator.
- An issue brought to the attention of the Inspector by the operator prior to the inspection.

The Issue Identified option should only be used after the inspector has considered all safety concerns and the operator's past performance for correcting apparent violations.

VI. Investigation of Incidents

The PHMSA State Guidelines, section 5.1.3 requires that state agencies have written procedures that provide for methodical, systematic, comprehensive, and consistent investigation of incidents and accidents. This section contains examples of administrative procedures which provide State agencies with additional specificity regarding PHMSA's expectations for the level-of-detail appropriate in such procedures.

A. Background

The [insert State agency name] enforces safety standards for the transportation in [insert State name] of hazardous liquid and/or natural and other gas by pipeline pursuant to the [insert State statute]. The State agency has adopted and maintained rules establishing minimum safety standards that are at least as inclusive, as stringent, and compatible with the minimum safety standards adopted by the Secretary of Transportation under the Federal Act.

The State agency's Pipeline Safety Program conducts on-site inspections of the approximately [xxx] gas operators to determine compliance with all applicable federal and/or state regulations. Inspectors monitor operator records concerning inspection, operation, maintenance, emergency procedures, and construction. Inspectors also conduct field inspections of operator facilities to verify compliance with regulations covering design, construction, operation and maintenance of the pipeline facilities.

Under the State agency's certification agreement with the U.S. DOT, the State agency must investigate all incidents involving operator procedures or facilities resulting in (1) death, (2) injury requiring hospitalization, or (3) property damage in excess of \$50,000. Additionally, incidents which do not satisfy one of these three thresholds may be investigated if the circumstances are unclear or if staff believes operator procedures or facilities may have contributed to or caused of the incident. Where uncertainty exists, inspections are done.

B. General Procedures

Pipeline owners and operators are required to report all incidents which are the result of gas leaking from their facilities and which resulted in death, personal injury requiring in-patient hospitalization, or property damage of \$50,000 or more. Additionally, gas system owners and operators must inform the Pipeline Safety Program of incidents which do not meet these criteria, but may be important to communicate for other reasons (media attention, explosions not involving natural gas, location, etc.).

When the Pipeline Safety Program is notified of such incidents, we must decide if (1) an investigation is required (three criteria above, except property damage limit for an investigation is \$50,000), (2) not required but prudent, or (3) unnecessary. The Pipeline Safety Program's role in accident investigations is to determine the cause of the incident, or probable cause, and make recommendations, which will prevent a recurrence. When it appears that a safety violation contributed to the incident, the Pipeline Safety Program may make recommendations to the State agency for enforcement actions in the form of show cause hearings and probable penalty assessment. The scope of the investigation, therefore, is important to provide assurance that the findings, recommendations and follow-up activities contribute to public safety.

The initial response involves deciding whether to make an immediate inspection, a delayed inspection

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or no inspection at all, who should make the inspection, and who should be informed. The scope of an investigation involves deciding which staff will participate, the initial activities, and then, with preliminary results in hand, developing a plan and schedule for completing the investigation and report.

(Reference Codified State Requirement if applicable), the pipeline operator is required to give telephonic notice of all incidents caused from gas escaping from pipeline facilities resulting in property damages exceeding \$50,000, injury requiring overnight hospitalization, or a fatality. The State agency has established a Pipeline Safety Emergency Line for the reporting of incidents, the number is (xxx) 555-5555. The line is monitored 24 hours a day, 365 days a year, by Pipeline Safety Program staff during working hours and a contracted answering service on nights, weekends and holidays.

The answering service takes the message and then calls the Pipeline Safety Program Manager, or, in his absence, the assigned Inspector. This is usually done within an hour of the incident. The operator is immediately contacted for more detailed information.

An hour is usually not enough time for a pipeline operator to complete all the inspections and testing of gas system facilities to confirm whether their facilities are or are not involved in a reported incident. Although additional information may not be available at the time, a communications link is established to keep Pipeline Safety Staff informed as information becomes available. Each incident is different, but the information surrounding each incident must be analyzed to determine whether an on-site inspection is necessary. This analysis is based on Federal reporting criteria, operational knowledge of the facilities and experience in these matters.

If it is immediately evident that the probable cause of the incident was not on gas company facilities or there is indication that arson is involved, we would only investigate if the operator requests assistance. Incidents involving customer inside piping go beyond our jurisdictional responsibility and therefore do not require us to investigate.

Generally, operators notify Pipeline Safety Staff of all incidents, whether or not they meet one of the aforementioned three criteria, which require reporting (the threshold for property damage is \$50,000 for reporting purposes). This is done as a courtesy to give us prompt notice, to inform us of media coverage and is a safe approach to reporting. Ultimately, we decide, based on the information received, whether it is necessary to visit the site.

The Pipeline Safety Program is not designed to be a front line responder. The Pipeline Safety Program serves a monitoring function. Our accident investigations are designed to ensure that the gas system operator has conducted a thorough investigation into the circumstances surrounding any incident and, based on that information, the gathering of evidence from on-site inspections and from other sources, including fire and arson investigators, to determine the probable cause of an incident. To make better use of time and resource, and allow the operator time to gather the needed documentation, Pipeline Safety Staff's response may be delayed for a few days. An example of this would be an incident caused by excavator damage to a pipeline resulting in property damage.

When Pipeline Safety does decide to investigate an incident, the purpose is to determine the cause, or probable cause, as required by the Federal Pipeline Safety Act for certification, and to make

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recommendations for improvements and corrections. If an investigation reveals evidence of wrongdoing, or violation of the [insert State statute], Pipeline Safety Staff may proceed with informal hearings, or recommend formal show-cause actions including civil penalties, whichever is deemed appropriate. Pipeline Safety Staff then monitors the operator's corrective actions in response to the recommendations, and any noncompliance issued resulting from the incident, through follow-up inspections.

The Pipeline Safety Program Manager will assign an Inspector to investigate any incident deemed to qualify as a requirement as reportable under State or Federal law. If it is a major incident involving several injuries or fatalities, more than one Inspector may be assigned to investigate. Depending on the magnitude of the incident the Pipeline Safety Program Manager may coordinate the on-site investigation.

The operator may be required to perform a root cause analysis of the incident in certain situations. Examples of such situations are:

- Staff determines that the operator has done a poor evaluation of the incident cause.
- Staff does not agree with the incident cause stated by the operator.
- Staff does not agree with NTSB conclusions (if applicable).

In some instances, incidents may be reported but no on-site investigation may be warranted upon receipt of additional information. In those instances, a memo to the Incident File will be created documenting the reason(s) that an on-site investigation was not conducted.

C. Initial Issues to Note in Response to an Incident Report

1. Operator responsibility for reporting.
2. Death, or injury requiring hospitalization, damage level.
3. Scope of Incident
4. Decision to send staff to Incident site.
5. Communicating with appropriate State agency, PHMSA, and NTSB individuals if necessary.
6. Internal (agency) communication of incidents/staff response.
7. Other.

D. Incident Investigation Process and Scope

1. On-site inspection of company facilities.
2. Review of company records (odorant levels, leak calls, etc.).
3. Interviews.
4. Coordination with others (OSFM, NTSB, fire, police et al.).
5. Determination of cause/probable cause.
6. Review preliminary findings.
7. Schedule.
8. Report preparation.

9. Staff's Standard Operating and Enforcement Procedures, specifically Accident Investigations.
10. Awareness of the possibility of litigation.
11. Other.

E. Telephone Notification

Pipeline owners or operators are required to report to the State agency all accidents which result from gas leaking from gas distribution and transmission facilities and which caused death, personal injury requiring hospitalization, or property damage of \$50,000 or more. Under our certification agreement with U.S. Department of Transportation, the State agency is required to investigate and report on all accidents resulting in death, personal injury requiring hospitalization, or property damage of \$50,000 or more. *[List any other applicable state issues here]* The gas distribution system does not include fuel line or appliance piping inside the building.

F. Specific Investigation Issues - All Incidents/Accidents

All incident investigations should be completed using Incident Investigation Checklist – See Appendix C. The information collected should include, but not necessarily limited to the following items. The checklist should encourage a more thorough investigation.

1. Record the location, city, street and number, date and time, occupant name(s), name(s) of injured and/or fatalities and estimated amount of property damage.
2. Nature of accident - explosion, fire, rupture, etc.
3. Indicate cause - third party, human error, etc.
4. Date and time of notification to the company, how received, who received and who reported.
5. Time company personnel arrived at the location.
6. Conditions found at time of arrival.
7. Action taken by company personnel.
8. If gas was escaping, time and method of securing.
9. Take photographs, including close ups of any exposed gas facilities and buildings involved. It is recommended that you record the sequence of photos taken as you proceed, identifying the pictures and what you wish to depict.
10. Statements of company personnel, public and private witnesses and/or investigating or responding parties who may have information relative to the accident.
11. Determine apparent cause if determination probable cause cannot be made. (A statement that a certain piece of equipment failed is not the cause; determine what caused the failure of the particular piece of equipment). Utilize the accident investigation guide (checklist) as applicable.
12. Statement of investigation activities and recommendations for prevention of future occurrence.

G. Additional Issues, If Required

1. Make a drawing of the area showing the boundaries of gas in the ground and the degree

- of the leaking gas from the point of the leak. Show bar-hole pattern description, location of pipes, buildings and streets.
2. Copies of pressure charts of the portion of the system involved.
 3. Age, size and type of facilities involved, location and condition of isolation valves.
 4. Corrosion control records and odorant test records.
 5. Leakage survey data of area involved - dates, number and class of leaks and disposition.
 6. Leak and repair history of facilities in the surrounding area.
 7. If third party damage, location and marking data, time of request for location, time and method of marking.
 8. Inspection and maintenance program relative to facilities involved and degree of compliance.
 9. Metallurgical analysis.
 10. Pressure test records.
 11. Pipe and material specifications, welding and welder qualification data.
 12. New construction specifications, contractor or company installation.
 13. Description of metal break with respect to:
 - a) Displacement and what may be the cause - measure angle and state plane of maximum deflection.
 - b) Degree of parting.
 - c) Evidence of corrosion, pitting, wall thickness uniformity, pipe coating.
 - d) Shear or tensile break or combination.

There is the possibility of litigation in all accidents, and you may be called as a witness. With this in mind, your report should contain the facts as you find them and your conclusions should be supported by accurate documentation. Our role in accident investigations is to determine the probable cause of the accident, if possible, and make recommendations, which will prevent recurrence. Accurate documentation should support any determination made. It is recommended that the inspector use the PHMSA incident investigation form.

Appendix A – Operator List

[insert operator list]

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Appendix B – Example Risk Based Inspection Prioritization Model for Gas Transmission

To prioritize gas transmission operators using a risk-based approach, a set of risk factors have been developed based on existing data readily obtained from gas operator annual reports, incident reports, leak history data, and semi-annual performance metrics. The methodology is based on the following factors:

- Actual events that have occurred on an operators system.
- Pipeline characteristics that could indicate a potential to impact HCAs.
- Historical operator performance in areas related to pipeline integrity.

Some of the indices are indicators of the likelihood of accidents and some relate to the potential consequences of accidents. The algorithm used to calculate each index is designated accordingly.

Index #1: Releases That Resulted in Major Impacts

Data on actual events that have occurred on an operator's pipelines can be found in both the Incident Report and the Annual Report. The Annual Report requires the operator to report leaks. An incident report is required to be submitted to PHMSA if there is a release of gas from a pipeline and:

- There have been fatalities, or
- There have been injuries requiring in-patient hospitalization, or
- There has been property damage exceeding \$50,000, or
- The event is significant, in the judgment of the operator, even if it did not meet any of the other criteria.

The inputs to the model from Incident Reports submitted by an operator are:

- The number of incidents in the past three years that have resulted in fatalities.
- The number of incidents in the past three years that have resulted in injuries that required inpatient hospitalization.
- The number of incidents in the past three years that have resulted in property damage reported to OPS.

The number of incidents in each of these three categories is then multiplied by a weighting factor assigned to fatalities, injuries, and property damage. The weighting factors used are:

- Fatalities - 10
- Injuries but no fatalities - 7
- Property damage only (no injuries or fatalities) – 2

Total pipeline mileage is used to normalize the incident data, since large systems will likely have more incidents than smaller systems. A comparison of the relative integrity performance among operators is therefore normalized based on total system mileage (unitized to 1000).

Index #2: Releases That Resulted in Minor Impacts

Releases that result in minor impacts are leaks that are below the threshold that would trigger an incident report. Leaks do not result in fatalities or injuries or in significant property damage. The Gas Annual Report requires that leaks be reported by cause.

The data from available annual reports is used in the risk-based prioritization methodology. The parameters to be input into the model from the Gas Annual Report are:

- The number of leaks caused by corrosion.
- The number of leaks caused by natural forces.
- The number of leaks caused by excavation.
- The number of leaks caused by other outside forces.
- The number of leaks caused by material and welds.
- The number of leaks caused by equipment and operations.
- The number of leaks caused by “other” causes.

The weighting factor for all leaks is 1. This maintains the relative importance of leaks compared to incidents which have higher weighting factor multipliers. Total pipeline mileage is again used to normalize the leak data. This index is related to the likelihood of leaks occurring in the future based on past performance.

Index Group #3: Pipeline Characteristics Indicative of Relative Risk

The Gas IM Semi-Annual Performance Metrics Report and the Annual Report require each gas operator to report on pipeline characteristics that are directly related to the potential for a pipeline to impact an HCA.

The Gas IM Semi-Annual Performance Metrics Report requires the operator to report total pipeline miles, total HCA miles, miles assessed, number of immediate repairs performed, and number of scheduled repairs performed.

The Annual Report requires the operator to report the number of miles for a range of pipe diameters; the number of miles by age of the pipeline; the number of miles of steel pipe that are cathodically protected versus unprotected; and the number of miles in each category that are bare versus coated.

All of these parameters can be correlated to the potential for an operator’s pipelines to impact an HCA. The higher the number of HCA miles, the greater the potential for an HCA to be impacted. A high number of immediate repairs could reflect a deteriorated pipeline condition and a correspondingly higher likelihood for HCA impact. Bare, unprotected steel pipe is at a higher risk of corrosion than is coated, cathodically protected pipe. Large diameter pipe results in a greater Potential Impact Radius (PIR) than does smaller diameter pipe at the same MAOP, reflecting a larger area of potential impact. The period in which a pipeline was constructed and the pipe manufactured is indicative of the type of seam weld and reliability of the manufacturing process, as well as the likelihood of injurious defects existing in the pipe.

Index #3.1: Total Covered Segment Mileage

The input into the risk model from the Gas IM Semi-Annual Performance Metrics Report is total HCA miles. Covered segment mileage in a pipeline system is directly proportional to the likelihood of (exposure to) high consequence incidents.

Index #3.2: Immediate and One-Year Repairs Made

An immediate repair is expected to be the exception rather than the rule. Immediate repairs may be indicative of deteriorating pipeline integrity. The input into the risk model from the Gas IM Report is:

- Number of Immediate Repair Conditions (NIRC)
- Number of Scheduled Repair Conditions (NOYRC)

In addition, covered segment mileage with completed assessments is used to normalize the repair data, since operators with many completed assessments will likely have reported more repairs than operators with fewer

completed assessments. A comparison of the relative integrity performance among operators is thus based on total covered segment mileage that has been assessed (unitized to 1000 total pipeline miles). Scheduled repairs are weighted 1/10 the value of immediate repairs.

Index #3.3: Diameter of Pipe

The pipeline in an operator's system is usually of various diameters. The Potential Impact Radius (PIR) is directly proportional to the diameter of the pipe. Large diameter pipe is therefore assumed to pose a higher potential risk than is smaller diameter pipe. Pipeline diameter, by miles, is reported by the operator in the annual report. The ranges reported are >28 inch, >20 to 28 inch, >10 to 20 inch, >4 to 10 inch, 4 inch or less, and unknown. The inputs into the risk model from the Annual Report and the associated assigned weighting factors are:

- The number of miles of pipe >28 inch.....10
- The number of miles of pipe >20 inch to 28 inch.....8
- The number of miles of pipe > 10 inch to 20 inch.....4
- The number of miles of pipe >4 inch to 10 inch.....2
- The number of miles of pipe 4 inch or less 1
- The number of miles of pipe of unknown size 10

The index score assigned is based on the ratio of miles of pipe in a given diameter range to the total miles of pipe in an operator's system. The index is then the sum of the index score for each populated range. Pipe of unknown diameter is conservatively assumed in the model to be in the > 28-inch range.

Index #3.4: Age of Pipe

Pipe materials and manufacturing techniques have improved steadily over time. Older pipe was generally manufactured with lower quality materials and under less strict quality control methods than those used in later years. Pipelines constructed before 1970 could have flash welded, lap welded, or Low Frequency ERW seams that are known to be less reliable. Pipelines constructed from 1970 to the present day were primarily constructed using High Frequency ERW, Single and Double Submerged Arc Welds, Spiral Welds, or are seamless.

In addition, older pipe has had more time to develop defects such as corrosion, coating deterioration, CP interruptions, undetected instances of third party damage, outside forces due to soil instability or ground movement, etc. The inputs into the risk model from the Annual Report and the associated assigned weighting factors are:

- The number of miles constructed in the period 2000-2009 2
- The number of miles constructed in the period 1990 – 1999.....5
- The number of miles constructed in the period 1980 – 1989.....5
- The number of miles constructed in the period 1970 – 1979.....5
- The number of miles constructed in the period 1960 – 1969.....8
- The number of miles constructed in the period 1950 – 1959.....8
- The number of miles constructed in the period 1940 – 1949.....8
- The number of miles constructed in the period pre 1940 10
- The number of miles of unknown construction period 10

Pipe of unknown construction period is conservatively included in the highest risk category. The index scores are calculated from the ratio of the number of miles constructed in a given time period to the total system

Index #3.5: Coating and Cathodic Protection

Cathodic protection of steel pipe is critical in preventing metal loss and the potential for pipeline leaks or failures due to corrosion. The Annual Report contains data on the external corrosion protection of steel pipe and the amount of cast iron pipe. The inputs into the risk model from the Annual Report and the associated assigned weighting factors are:

- The number of miles of cast iron pipe 10
- The number of miles of bare, unprotected steel pipe 10
- The number of miles of coated, unprotected steel pipe 5
- The number of miles of bare, cathodically protected steel pipe 4
- The number of miles of coated, cathodically protected steel pipe. 2

The index scores are calculated based on the ratio of the number of miles in each category to the total number of miles of pipe.

Index #3.6: Excavation Activity

The amount of excavation activity along the right-of-way is an indicator of third-party risk. An index has been included for excavation activity that is the normalized ratio of location-requests per 1000 services. The operator's ratio of excavation damages to excavation "one-call" notifications can be to national or regional averages to evaluate the effectiveness of their damage prevention activities.

Risk Index #4: Historical Performance

An index has been included that allows the State program manager to input a "Letter Grade" that represents an estimate of the performance of an operator. Several parameters should be considered that might reflect an operator's historical performance in areas that are related to overall safety and integrity management. These include enforcement actions taken, and the State's experience with an operator's integrity and compliance performance. The possible grades range from 1 to 10, with 1 being assigned to the best performing operators and 10 assigned to the worst performing (riskiest) operators.

Final Relative Risk Score

There are 5 statistical indices that are indicative of the relative likelihood of incidents. They are indices 1, 2, 3.2, 3.4 and 3.5. Each index is weighted equally.

There are 2 statistical indices indicative of the relative consequences of incidents. They are indices 3.1 and 3.3. The principal factor is HCA mileage (item 3.1) which is weighted by the score for pipe diameter (item 3.3).

Using the classical definition of Risk = Likelihood x Consequences, the resulting risk score using operator statistics is based on the following equation:

$$\text{Risk Index} = [\text{Index 1} + \text{Index 2} + \text{Index 3.2} + \text{Index 3.4} + \text{Index 3.5}] * [(\text{Index 3.1})(\text{Index 3.3})]$$

The total risk score based on operator statistics is further refined based on the State's experience using the historical integrity and compliance performance factor (overall risk index 4), as follows:

$$\text{Adjusted Relative Risk} = \text{Risk Index} * \text{Index 4}$$

This adjusted relative risk score can be compared among operators as an aid to prioritizing inspections. This

relative risk model is summarized in Table 1, below.

Summary

The example risk methodology presented above utilizes easily retrievable data from existing reports that are required to be submitted to PHMSA by pipeline operators. Excel spreadsheets have been created into which the data from these reports is input and which then calculate an operator-specific relative risk factor that can be used to aid in developing an Inspections Priority List.

The risk algorithm and related weighting factors can be fine tuned based on experience. Adjustments could include expansion of the types of data analyzed, adjustments to the normalization scale, adjustments to the weighting factors, etc.

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TABLE 1

Risk Index – Data Used – Source of Data	Risk Index Calculation
(TTM) - Total Transmission Miles	TTM
(THM) - Total HCA Miles	THM
(BAM) - Total HCA miles with completed Baseline Assessments	BAM
(TMM) – Total Miles Distribution Main	TMM
(TNS) – Total Number of Services	TNS
(TSM) – Total System Miles	TTM + TMM
Index #1: Incident History (use latest PHMSA Incident Report Data)	Weighted Incident totals
(F) - Fatalities (previous 3 years)	10(F)
(I) Injuries (previous 3 years)	7(I)
(P) Number of Incidents w property damage (previous 3 years)	2(P)
Index #1 (Incident History) =	$10(F) + 7(I) + 2(P)$
Index #2: Cause of Leaks (use latest annual report)	Normalized per 1000 miles
(Lc) - Number of leaks caused by corrosion	$(Lc)/(TSM/1000)$
(Ln) - Number of leaks caused by natural forces	$(Ln)/(TSM/1000)$
(Le) - Number of leaks caused by excavation	$(Le)/(TSM/1000)$
(Lo) - Number of leaks caused by other outside forces	$(Lo)/(TSM/1000)$
(Lm) - Number of leaks caused by material and welds	$(Lm)/(TSM/1000)$
(Lop) - Number of leaks caused by equipment and operations	$(Lop)/(TSM/1000)$
(Lothor) - Number of leaks caused by "other"	$(Lothor)/(TSM/1000)$
Index #2 (Cause of Leaks) =	$(Lc+Ln+Le+Lo+Lm+Lop+Lothor)(TSM)$
Index #3.1: HCA mileage (use IMP performance metrics report) =	THM
Index #3.2: Repairs	Weighted and Normalized per 1000 miles of completed assessments
(Ri) - Number of Immediate Repairs (all baseline assessments)	$(Ri)/(BAM/1000)$
(Rs) - Number of Scheduled Repairs (all baseline assessments)	$0.1(Rs)/(BAM/1000)$
Index #3.2 (Repairs) =	$(Ri+ 0.1Rs)/(BAM/1000)$
Index #3.3: Diameter of Pipelines (use most recent annual report)	Scored as a weighted % of total system miles
(M0) - Number of miles of pipe with diameter 4 inch or less	$1(M0)/TSM$
(M4) - Number of miles of pipe with diameter >4 inch to 10 inch	$2(M4)/TSM$
(M10) - Number of miles of pipe with diameter >10 inch to 20 inch	$4(M10)/TSM$
(M20) - Number of miles of pipe with diameter >20 inch to 28 inch	$8(M20)/TSM$
(M28) - Number of miles of pipe with diameter >28 inch	$10(M28)/TSM$
(Mu) - Number of miles of pipe with unknown diameter	$10(Mu)/TSM$
Index #3.3 (Size) =	$(1(M0) + 2(M4) + 4(M10) + 8(M20) + 10(M28) + 10(Mu))/TSM$
Index #3.4: Age of Pipelines (use most recent annual report)	Scored as a weighted % of total system miles
(Au) - Number of miles of pipe constructed in an unknown time period	$10(Au)/TSM$
(A39) - Number of miles of pipe constructed pre 1940	$10(A39)/TSM$
(A49) - Number of miles of pipe constructed in period 1940-1949	$8(A49)/TSM$
(A59) - Number of miles of pipe constructed in period 1950-1950	$8(A59)/TSM$
(A69) - Number of miles of pipe constructed in period 1960-1969	$8(A69)/TSM$
(A79) - Number of miles of pipe constructed in period 1970-1979	$5(A79)/TSM$
(A89) - Number of miles of pipe constructed in period 1980-1989	$5(A89)/TSM$
(A99) - Number of miles of pipe constructed in period 1990-1999	$5(A99)/TSM$
(A09) - Number of miles of pipe constructed in period 2000-2009	$2(A09)/TSM$
Index #3.4 (Age) =	$(10(Au+A39) + 8(A49+A59+A69) + 5(A79+A89+A99) + 2(A09))/TSM$
Index #3.5: Coating & CP (use most recent annual report)	Scored as a weighted % of total system miles
(Ic) - Number of miles of cast iron pipe	$10(Ic)/TSM$
(Bu) - Number of miles of bare unprotected steel pipe	$10(Bu)/TSM$
(Cu) - Number of miles of coated, unprotected steel pipe	$5(Cu)/TSM$
(Bp) - Number of miles of bare, cathodically protected steel pipe	$4(Bp)/TSM$
(Cp) - Number of miles of coated, cathodically protected steel pipe	$2(Cp)/TSM$
Index #3.4 (Age) =	$(10(Ic)+10(Bu) + 5(Cu) + 4(Bp) + 2(Cp))/TSM$
Index #3.6: Excavation activity (use most recent annual report) =	Normalized per 1000 services
(LOC) – Number of locate requests	$LOC/(TNS/1000)$
Index #4: Historical Operator Performance	State inspector subjective input
Subjective input of inspectors	1 (best) to 10 (worst)
Likelihood Index Total =	Index #1 + Index #2 + Index #3.2 + Index #3.4 + Index #3.5 + Index #3.6
Consequence Index Total =	Index #3.1 * Index #3.3

Appendix C – Forms

[insert forms, checklists, inspection aides, etc.]

Appendix D – Operator Contact List

[insert operator contact list]

Appendix E – Federal Statute

[insert copy of federal statute]

Appendix F – Federal Regulations

[insert copy of federal regulations]

Appendix G – State Statute

[insert copy of state statute]

Appendix H – State Regulations

[insert copy of state regulations]

Guidelines for States Participating in the Pipeline Safety Program

Appendix T

WMS Training Links and Resources

IM Notifications

[Assign Lead Person/Supervisor\(s\)](#)

[Investigation](#)

[Create New Task](#)

[Closing](#)

Pipeline Asset Management

[Manage Unit in WMS](#)

[PAM Policy March 2018 Changes](#)

[Update Unit in the WMS](#)

[WMS and IU Mod Tool Activate Unit](#)

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SRCR

[Create and Edit SRCR in WMS](#)

[Assign Lead Person/Supervisor\(s\) to SRCR](#)

[Lead Person Data Review and Follow-Up](#)

[Request Closure](#)

[Closure](#)

WMS Overview, Effort, and User Management

[WMS Overview](#)

[WMS User Management](#)

[WMS Activities](#)

[Effort in the WMS](#)

WMS Inspection and Enforcement

[Parallel Stage and RSI](#)

[IA Plan Approved Stage](#)

[Create NOA](#)

[NOPCAO, CAO, NOPSO](#)

[IA Locked and Issue Batching](#)

[Create NOPV](#)

[WMS Enforcement Model Guides](#) in SharePoint

[WMS Stakeholder Inquiry](#)

WMS Stakeholder Inquiry

Stakeholder Inquiry Video Index

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

0:40 – Program Support worklist explained

1:23 – Activities Tab explained

1:41 – Creating a new Activity

3:07 – Who What Where tab explained

3:50 – Assets table

4:41 – Staff table

5:00 – Contacts

8:58 – Notes, Documents, Effort quick review

9:17 – Tasks tab (due date explained)

10:06 – Inquiry tab (Task completion)

11:27 – Effort tab (Always Program Support Phase)

12:16 – Recipient review task Completion

12:05 – RELEASE LOCK!

12:23 – Program Support Worklist

13:04 – Closing Activity (and Supervisor Approval)

14:22 – Refresh button

15:02 – Show completed button(s)

15:14 – All Search(s) explained

WMS Inspection and Enforcement

Create NOPV Video Index

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

5:27 – Request Approval

0:27 – Case development worklist whittle

6:09 – Legal Review

0:47 – Issues tab

7:37 – CPF Approvers (Approve CPF)

1:06 – Request PCP (greyed out)

8:14 – Send Letter task completed (Commit CPF)

1:37 – Refresh button

9:06 – Enforcement tab (Commit CPF)

1:49 – Request PCP

9:42 – Regulator Comments

2:50 – PCP Incomplete task (tasks tab)

10:13 – Event History

4:12 – PCP Determination finished (Approve PCP)

10:22 – NOPV button (greyed out)

WMS Inspection and Enforcement

Create NOA Video Index

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:27 – Issues Tab

0:47 – NOA Items (Order &)

1:02 – Issue ID

2:44 – Refresh Button

2:59 – Letter templet pop-up

3:41 – Export to word

4:38 – Violation Report

5:26 – Request review

6:19 – Request review “batched data v. uploaded”

6:56 – Review complete

7:33 – Issues Tab (Request Approval)

7:55 – CPF Approvers role explained

8:40 – Tasks tab (Approve CPF)

9:59 – Tasks tab Letter Mailers (Send Letter)

10:48 – Tasks tab (Verify CPF)

11:15 – Issues tab (Verify CPF)

WMS Inspection and Enforcement

IA Locked and Issue Batching

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Video Introduction

0:31 – Navigating to the Activities tab

0:59 – Inspection tab (IA Connected YES explained)

2:10 – All enforcement sent? Check box explained

2:42 – Issues tab (issues pulled from IA explained)

3:00 – Tasks tab (Initial Case development task)

3:57 – Effort tab (Case development phase)

4:38 – Documents tab (preview of evidence docs)

4:44 – Altering Inspection phase dates

5:11 – Issues tab (View list) “Supervisor Review”

7:20 – Issues tab (View list) “Improper Code Cite”

7:50 – Issues tab (Specify Compliance Type and Letter type) > Issue ID

9:40 – Issues tab SAVE button

WMS Inspection and Enforcement

IA Plan Approved Stage Video Index

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:38 – Navigating to the Activities tab

0:50 – Who What Where tab explained

1:35 – Tasks tab (Tasks explained)

2:35 – Effort tab

3:00 – Inspection tab (IA Connected NO explained)

3:33 – Inspection tab (IA Connected YES explained)

4:14 – Planning Complete date explained

4:44 – Altering Inspection phase dates

5:14 – Inspection End date (see IA Locked video)

WMS Inspection and Enforcement

NOPCAO, CAO, NOPSO

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

4:39 – Corrective Measures

0:40 – Navigation and screen description

5:35 – Effort Tab

0:58 – Actions Tab Create NOPSO

6:20 – Enforcement Coordinator (Commit CPF)

2:15 – CPF Number

7:47 – Commit CPF (Enforcement Tab)

2:33 – Tasks tab (Letter Mailer)

8:10 – Regulator Comments

4:09 – Tasks tab (Verify CPF)

9:10 – Due Process

WMS Inspection and Enforcement

Parallel Stage and RSI

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

0:48 – Find an Activity through Activity Search

1:17 – Activity locked by another user

2:30 – Who What Where tab explained

3:39 – Tasks tab

4:00 – Effort tab

4:50 – Inspection tasks explained

6:00 – RSI types and required fields explained

8:00 – Export to word

9:30 – Request review “Modern Times”

10:12 – Request review “batched data v. uploaded file”

11:12 – Recipient review task on Tasks tab

12:16 – Recipient review task completion

12:42 – Review completed

14:30 – Case development worklist

14:45 – RSI tab for a sent RSI

15:20 – Reviews complete, Time to send the Letter

15:42 – CPF Approvers

16:00 – Letter mailers

16:18 – Operator Monitor

17:08 – Reason for workflow “Tracking”

WMS Overview, Effort, and User Management

Effort in WMS

[return to Topics](#)

[Link to Video in MS Stream](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:17 – Navigation and scenario

1:30 – Entering effort in an Activity

2:30 – Effort comments

2:50 – Save button and multiple reporting

3:57 – Effort tab (all effort)

5:26 – Adding time from Effort tab

6:05 – Magnifying glass

7:00 – Red exclamation mark explained

8:26 – Activity categories (bucket)

10:11 – Recap (time in buckets)

11:10 – Inspection time (not in buckets)

WMS Overview, Effort, and User Management

WMS User Management

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

0:27 – User Management tab

0:35 – Roles/Special Powers/Tasks xls.

1:02 – User Management special power

1:44 – Export roles

2:39 – Supervisor change

3:55 – Change Roles

4:50 – Populate Role Change

5:08 – Remove last user

5:45 – User Management Tasks explained

5:56 – Supervisor Arriving

6:36 – Complete Task (importance)

7:41 – Staff Leaving

9:05 – Change Lead Person

9:50 – Configure New Staff

WMS Overview, Effort, and User Management

WMS Activities

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

0:27 – Tasks Tab (task summary)

0:57 – Program Support

1:47 – One person at a time

2:36 – Editable activity

3:30 – Activity tabs explained

3:41 – WWW explained in detail

5:00 – Assets table (adding Units)

6:18 – Activity Staff table

7:33 – Related Activities

8:00 – Notes Tab

8:37 – Documents Tab

9:33 – Tasks tab

9:52 – Tasks tab (Create task)

11:00 – Task tab (Complete task)

11:28 – Task tab (Change task)

12:00 – Refresh Button

15:14 – Search tab (Activity & Task Search)

WMS Overview, Effort, and User Management

WMS Overview

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

0:27 – Worklists explained

1:23 – Ongoing failure investigation worklist

2:15 – Refresh button and show completed

3:38 – Activities tab (My Activity)

4:45 – Activities tab (Create Activity)

6:40 – Search tab (Unit search)

7:32 – Search tab (Activity search)

8:25 – Search tab (Save search)

9:05 – Search tab (Task search)

9:40 – Reports tab

10:04 – User Management tab

SRCR Closure

[return to Topics](#)

[Link to Video in MS Streams](#)

0:00 – Introduction and basic navigation
0:32 – Investigation worklist
0:57 – SRCR activity opened
1:24 – Notes tab (mandatory)
2:00 – Investigation tab (one Unit)

[Link to Video in YouTube](#)

2:50 – Tasks tab
3:10 – Disapprove Closure requested task
4:10 – Closure requested (closing)
4:43 – Refresh button

SRCR

Request Closure

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

2:50 – Notes tab

0:17 – Investigation worklist

2:58 – Tasks tab (Request Closure)

0:40 – Summary of Corrective Action

3:38 – Lead Person tasks closure

1:02 – Updating Staff table

4:02 – Release Lock

2:04 – Investigation tab (Investigation Unit ID)

SRCR

Lead Person Data Review and Follow-up

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

5:40 – Creating Notes

0:40 – Investigation worklist

6:46 – Investigation tab

0:47 – Release Lock explained

7:45 – Investigation tab (Unit ID)

1:42 – WWW tab explained

9:10 – Tasks tab (Investigation)

2:23 – WWW tab (Assets table)

11:00 – Assign another person

SRCR

Assign Lead Person/Supervisor(s) to SRCR

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

3:29 – Tasks tab

0:35 – Investigation worklist

3:47 – Complete task

1:14 – Activity opens

4:25 – Release lock and Refresh Button

2:05 – Activity staff table

SRCR

Create and Edit SRCR in WMS

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

4:05 – Add assets

0:40 – Activity Tab (Create SRCR)

5:25 – Documents tab (inclusions)

1:23 – Always a Region

6:12 – Investigation tab

1:41 – Submitter email (one-shot)

6:36 – RELEASE LOCK!

3:07 – Lead Regulator (corrections)

7:19 – Updating an SRCR

Pipeline Asset Management

WMS and IU Mod Tool Split/Merge Unit

[return to Topics](#)

[Link to Video in MS Streams](#)

0:00 – Introduction and basic navigation

0:40 – Initiate Manage Unit

1:02 – Splitting Unit

4:37 – Merging Unit(s)

6:05 – IU Mod Tool Split New

8:03 – Modification Notes (Split)

9:00 – Map Layers (County Boundaries)

10:05 – Submit for Final Mapping

Pipeline Asset Management

WMS and IU Mod Tool Modify Unit

[return to Topics](#)

[Link to Video in MS Streams](#)

0:00 – Introduction and basic navigation

0:29 – Initiate Manage Unit

0:57 – Modify Unit from Task

1:23 – Assign to Inspector

2:22 – NPMS question explained

3:14 – Components tab

4:30 – NPMS Mileage Change IU Mod Tool

6:00 – Opened IUMT task

6:35 – Search tab in IUMT

7:15 – Modification Notes

8:11 – Submit for final mapping

Pipeline Asset Management

WMS and IU Mod Tool Create Unit

[return to Topics](#)

[Link to Video in MS Streams](#)

0:00 – Introduction and basic navigation

0:19 – Initiate Manage Unit

1:27 – Create Unit task

1:51 – Primary tab (asterisks)

3:02 – Contacts tab

3:50 – Logging into IU Mod Tool

6:21 – Opening a Create New task

7:11 – Mapping a Create new

7:55 – Create Modification Note

9:12 – Latitude-Longitude in IUMT

10:25 – Submit for final mapping

Pipeline Asset Management

WMS and IU Mod Tool Activate

[return to Topics](#)

[Link to Video in MS Streams](#)

0:00 – Introduction and scenario

0:24 – Initiate Manage Unit

1:25 – Activate Unit (Show Inactive)

2:32 – NPMS question (explained)

3:02 – Contacts tab

4:59 – Signing into IU Mod Tool

6:01 – Map builds for Activate

6:56 – Create Modification Note

7:44 – Submit for final mapping

Pipeline Asset Management

Update Unit in the WMS

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:20 – Key documents in SharePoint

1:46 – Manage Unit vs. Update Unit

3:07 – Landing in the WMS

4:06 – Primary tab explained

4:45 – History tab explained

5:32 – Components tab explained

6:42 – Contacts tab explained

7:35 – Required fields

9:15 – Command buttons explained

10:42 – Refresh button

11:28 – Initiate Update Unit task

14:05 – Adding a contact

15:18 – All tabs explained

16:47 – Date of Operational Change explained

18:10 – NPMS question explained in detail

21:00 – Updating a Unit through search

Pipeline Asset Management

Pipeline Asset Management Policy March 2018 Changes

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:21 – SharePoint and policy location

1:14 – Unit data policy additions

1:50 – Policy Introduction redlines

2:30 – Definitions

4:30 – Policy and roles

8:35 – Unit Data Overview (in WMS)

9:15 – Accessing the WMS

10:35 – Primary Tab (2.2.1) in DETAIL

22:00 – Contacts tab

22:20 – Inspection tab

22:30 – States/Counties tab

24:20 – Components tab (2.2.6)

29:13 – Facilities

34:10 – Unit Data Updates (2.4)

36:10 – Search and magic pencil

40:00 – IU Mod Tool and NPMS (2.5)

41:21 – Inspection System Data (2.6)

Pipeline Asset Management

Manage Unit in WMS

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:17 – System generate emails

0:30 – Logging into WMS

1:38 – Initiate Manage Unit task

2:29 – Accessing Manage Unit worklist

3:37 – Create new Unit

5:27 – Assign to Inspector

6:20 – Components tab

8:22 – Manage Unit task from System

9:10 – Reassign task

9:44 – Update Unit from Search

10:52 – Update Unit vs. Manage Unit

11:52 – Adding Unit contacts

12:42 – States and Counties tab

13:00 – Components tab

13:38 – History tab explained

13:56 – Attachments tab explained

IM Notifications

Closing

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and navigation

2:49 – Complete Task

0:27 – Review available tabs

3:05 – Closure Requested

1:09 – Summary of Corrective Actions

4:38 – Disapproving task

1:36 – Investigation Tab (Notification Status)

4:56 – Adding new Supervisor

2:14 – Tasks Tab

6:51 – Close IM Notification

IM Notifications

Create New Task

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:53 – Searching Task Owner

0:19 – Tasks tab (Create Task)

1:30 – Due Date and Comments

IM Notifications

Investigation

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction and basic navigation

5:40 – Notes Tab

0:40 – Email and navigation

6:42 – Documents Tab

1:23 – Release Lock defined

7:15 – Recipient review task Completion

1:41 – Who What Where tab explained

8:26 – RELEASE LOCK!

3:07 – Assets table full explanation

IM Notifications

Assign Lead Person/Supervisor(s)

[return to Topics](#)

[Link to Video in MS Streams](#)

[Link to Video in YouTube](#)

0:00 – Introduction

0:17 – Alert email

0:27 – Logon and open activity

1:02 – Activity Interface Description

1:44 – Who What Where tab explained

1:51 – Summary of incoming documents

2:31 – Assign a Lead and Supervisor

3:36 – Tasks tab (complete task)

4:26 – RELEASE LOCK!

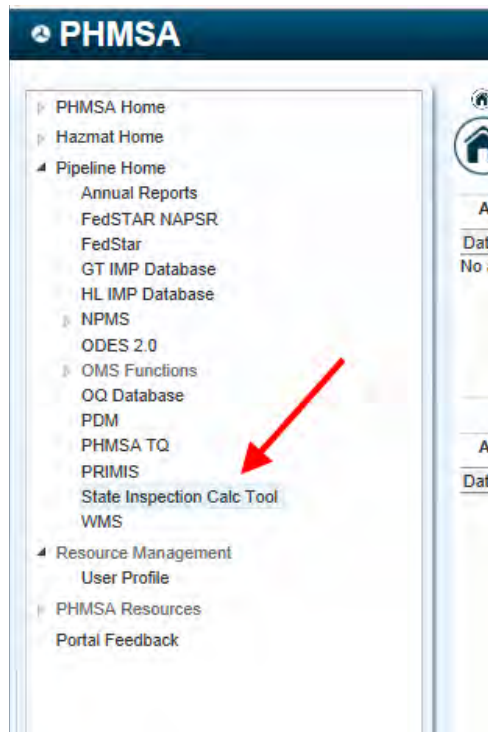
Guidelines for States Participating in the Pipeline Safety Program

Appendix U

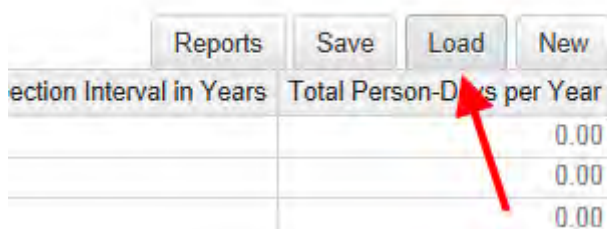
December 2022

Transferring 2022 data to 2023 – State Inspection Calc Tool

1) Access the *State Inspection Calc Tool* from the link in the PHMSA portal.



2) Click *Load* to access 2022 data.



3) Select the operator datasheet you would like to review. The most current year (2022) will appear and there should be an “N” in the review column. “Y” indicates already done.

Select Company to Load ×

Operator ID	Name	M u l t i	Inspection Type	S t a t e	Review	Year	Updated By	Updated On
13860	NORWICH DEPT OF PUBLIC UTILITIES, CITY OF (LNG)	N	LNG Operator	CT	Y	2016	karl.baker.napsr	06/07/2017
18496	SOUTHERN CONNECTICUT GAS CO	N	Local Distribution Company (LDC)	CT	Y	2016	karl.baker.napsr	06/07/2017
24015	YANKEE GAS SERVICES CO	N	Local Distribution Company (LDC)	CT	Y	2016	kevin.dowling.napsr	06/15/2017
24015	YANKEE GAS SERVICES CO (LNG)	N	LNG Operator	CT	N	2016	kevin.dowling.napsr	06/10/2016

Reset Search Close

4) Click *Review* to begin the review/transfer process.

Reports	Review	Load	New
Interval in Years	Total Person-Days per Year		
2.00	2.25		
2.00	2.25		
1.00	1.00		

5) Make the necessary changes (if any) to the 2022 data. Make sure you are inserting comments into the risk concerns/considerations -

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures	750.00	5.00	150.00
2	Standard - Records	0.75	5.00	0.15
3	Standard - Field	3.00	1.00	3.00
4	DIMP Program	0.50	5.00	0.10
5	DIMP Implementation Review	0.00	0.00	0.00
6	OQ Program (Prot. 1-8)	1.5	5.00	0.10
7	OQ Field (Prot. 9)	0.00	0.00	0.00
8	Design, Testing & Construction	0.10	1.00	0.10
9	Investigating Incidents/Accidents	0.05	1.00	0.05
10	Damage Prevention Activities	0.00	0.00	0.00
11	On-Site Operator Training	0.05	1.00	0.05
12	Compliance Follow-ups	2.00	1.00	2.00
13	PAP	0.00	0.00	0.00
14	Totals	756.95		155.55

High-Risk Pipe - Ranking

1

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If

inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

The majority of LP systems included in this category use relatively new plastic pipe and occupy a small area

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

DIMP implementation review is conducted as part of DIMP program inspections

Damage prevention is covered during standard inspections

Standard inspections include all PAP inspection activities

6) Click **Save As 2023** to complete the transfer from 2022 to 2023.

Reports	Save as 2017	Load	New
Inspection Interval in Years	5.00	Total Person-Days per Year	0.15
	5.00		0.15

Note:

If the *Review* button is clicked and the transfer to 2023 is not completed by clicking the *Save As 2023* button prior to closing the sheet, the changes will not be saved. The sheet will then need to be loaded, saved to 2023, re-loaded and edited as a 2023 entry.

State Inspection Person-Day Calculation Tool

Overview and Example



NAPSR



**Pipeline and Hazardous
Materials Safety Administration**

Purpose

- The State Inspection Person-Day Calculation Tool is an online interface where states enter data to determine the appropriate level of inspection person-days for their state.
- Additional information can be found in section 4.1 of the **Guidelines for States Participating in the Pipeline Safety Program**.

Overview

- The tool provides spreadsheet templates for each operator under the jurisdiction of a state program.
- Each template collects:
 - General information about an operator
 - The number of inspection person-days required to effectively audit that operator
 - The interval at which inspections need to be conducted
 - A relative risk ranking of the operator's pipe

Overview

- The tool provides templates for nine different operator types:
 - Local Distribution
 - Municipal Gas
 - Master Meter
 - Liquefied Petroleum Gas (LPG)
 - Gas Transmission
 - Liquefied Natural Gas (LNG)
 - Hazardous Liquid
 - Gathering
 - Other (Anhydrous, Carbon Dioxide, Ammonia, etc.)

Overview

- Once an operator type is selected, the tool provides a list of inspection types which could be applicable to that operator.
- The state then enters the number of inspection person-days required to do each type of inspection effectively and the optimum inspection interval (in years).

Walk-Through

Walk-Through

- The tool can be accessed through the PHMSA Portal at: <http://portal.phmsa.dot.gov/PHMSAPortal2>



Walk-Through

- **Login**
- Accessing the Tool
- Overview
- Creating a New Sheet
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- Additional Features

- Login using your PHMSA provided username and password.



The screenshot shows the login interface of the PHMSA Portal. It features a dark blue background with white text. The 'User Name' field is pre-filled with 'StateUser' and is pointed to by a red arrow labeled '1'. The 'Password' field is masked with dots and has a toggle icon; it is pointed to by a red arrow labeled '2'. Below the password field, there is a message: 'First time users of the PHMSA Portal must create an account'. Two buttons are visible: 'Login' (pointed to by a red arrow labeled '3') and 'Create Account'.

<http://portal.phmsa.dot.gov/PHMSAPortal2>

Walk-Through

- Login
- **Accessing the Tool**
- Overview
- Creating a New Sheet
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- Additional Features

- Review the disclaimer.

Disclaimer

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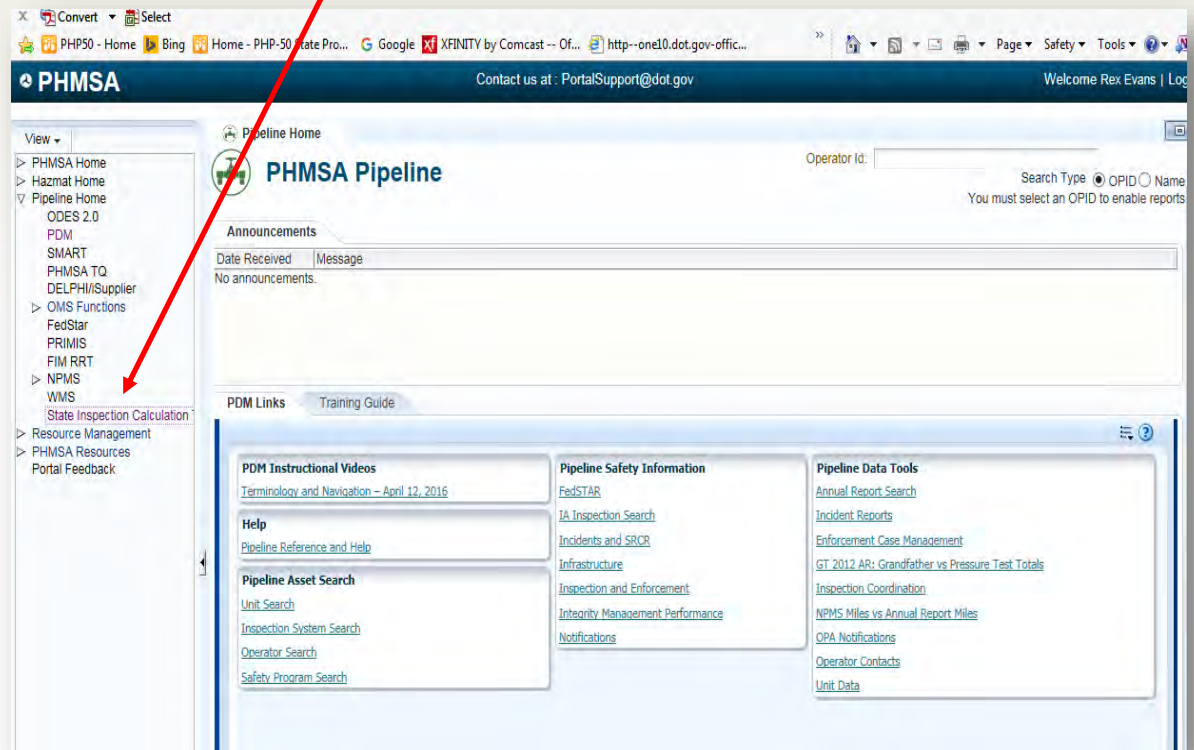
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Walk-Through

- Login
 - **Accessing the Tool**
 - Overview
 - Creating a New Sheet
 - Entering Data
 - Single Operator
 - Summary of Multiple Operators
 - Saving Data
 - Recalling Data
 - Additional Features
- Select “State Inspection Calculation Tool” from the navigation pane on the left.



Walk-Through

- Login
- Accessing the Tool
- **Overview**
- Creating a New Sheet
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- Additional Features

- The Tool is laid out as follows.

State Pipeline Inspection Calculation Tool (inspector/days)

Roles: State

State: Connecticut Reporting Year: 2016

☒ Single Operator ☐ Multiple Operators

Operator Name: Operator ID: Search

Operator Type: Local Distribution Comp Number of Service Lines:

Report Save Load New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval In Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals		0.00	0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

State Pipeline Inspection Calculation Tool (inspector/days)

Roles

State ▼

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Roles

- Use the drop down menu to select between different modes.

Options:

- *State* – Use this mode to enter data about your state's inspection plan (default setting). Sheet will be locked to the current year and state.
- *Read Only* – Use this mode to review data from other states or years.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

State and Reporting Year

- Displays current state and reporting year when using the "Read Only" role.
- These fields are locked on the current state and reporting year by default.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Single vs. Multiple Operator Radio Buttons

- Switches the current sheet between a single operator layout and a summary sheet for multiple operators.
- States should enter data for individual operators whenever possible. The multiple operator summary sheet should only be used when a large number of operators are inspected under the same plan and it would be impractical to enter data for each individual (for example: Master Meter Operators).

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Operator Name and ID

- Enter the Name and Operator ID for the current operator.
- The fields are equipped with auto-complete and search functionality. When you begin typing in the name field a drop down will appear showing known registered operators. Entering an OPID first then clicking "Search" will find the operator name automatically.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Operator Type

- Use to select from one of the nine operator types available.
- Each operator type results in a specific list of inspection types that could apply to that operator.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.
 Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Size of Operator

- This value attempts to capture the size of the operator. The value required will change based on the operator type selected.
- For example:
 - LDCs are measured by number of services
 - Transmission operators are measured by miles of pipe
- For a summary of multiple operators this field becomes a range (for example: 1 to 100 service lines).

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Save Sheet, Load Sheet, New Sheet

- Use these buttons to save data, load previously entered data or create a new sheet respectively.
- Create a new sheet for each operator inspected under your state program.
- Once data entry is complete use the save button to save your progress.
- Data can be recalled and edited after it is saved by using the load button.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Report

- Use this button to download a report showing a sum of inspection person-days for all of the operators within each state.
- Inspection Person Days per Year total from the report should match the number of inspections a state's inspectors should perform in one year.

State Pipeline Inspection Calculation Tool (inspector/days)

Roles

State ▼

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Main Data Entry Spreadsheet

- This is the area where inspection data is entered.
- Click on a cell to select it.
- Cells only accept whole numbers and decimals.
- Entering fractions, words, formulas, etc. will lock your cursor in the cell until a valid number is entered.

State Pipeline Inspection Calculation Tool (inspector/days)

Roles

State

State Connecticut

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.
Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Main Data Entry Spreadsheet

- On the left is a list of inspection types which could be conducted for the selected operator type.
- The inspection types are locked based on the type of operator selected; they can not be edited.
- If any one of the inspection types is not applicable to your states inspection plan you should enter zeros (0) in that row.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures	2		0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Main Data Entry Spreadsheet

- The "Person-Days to do Each Inspection" column should be used to enter the total number of inspection person-days required to completely perform the inspection type shown in the first column, regardless of the time taken to perform said inspection.
- For example: If it takes one inspector four half-day inspections over 3 years to complete an entire audit of standard procedures, a "2" should be entered in the first row.

Main Data Entry Spreadsheet

- If filling out a summary sheet for multiple operators, be sure to enter inspection data for one operator only.
- Summary sheet data represents what it will take on average to inspect a single operator in the grouping, not all of the operators as a whole.

☐ Single Operator ☒ Multiple Operators

Group Name: Small Master Meter Operators Operator Count: 200

Comment: Small master meters with 5 - 100 service lines

Operator Type: Master Meter Operator Number of Service Lines: 5 To: 100

Report Save Load New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures	1.00	3.00	0.33
2	Standard - Records	2.00	3.00	0.67
3	Standard - Field	1.00	3.00	0.33
4	DIMP Program	1.75	3.00	0.58
5	DIMP Implementation Review	3.00	3.00	1.00
6	OQ Program (Prot. 1-8)	0.25	3.00	0.08
7	OQ Field (Prot. 9)	1.00	3.00	0.33
8	Design, Testing & Construction	1.00	3.00	0.33
9	Investigating Incidents/Accidents	0.20	3.00	0.07
10	Damage Prevention Activities	0.50	3.00	0.17
11	On-Site Operator Training	0.20	3.00	0.07
12	Compliance Follow-ups	0.20	3.00	0.07
13	PAP	0.20	3.00	0.07
14	Totals	12.30		4.10

High-Risk Pipe - Ranking
3

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.
Listing of risk concerns taken into consideration of inspection intervals

State Pipeline Inspection Calculation Tool (inspector/days)

Roles

State ▼

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures	2	2	0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Main Data Entry Spreadsheet

- The “Optimum Inspection Interval” column should be used to enter the interval, in years, that the inspection cycle should be completed at under the state inspection program.
- For example: If a standard procedure review for the operator is conducted every two years a “2” should be entered in the first row.

State Pipeline Inspection Calculation Tool (inspector/days)

Roles

State ▼

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Main Data Entry Spreadsheet

- Totals are calculated automatically.
- Use totals to verify that the values entered make sense.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00
	High-Risk Pipe - Ranking			

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.
 Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

High Risk Pipe Ranking

- Considering the characteristics of the operator's pipe, assign a value from one to ten to represent its perceived risk.
- A one represents very little risk, ten represents extremely high risk.
- For operators with higher risk pipe, the number of inspection person-days should generally be higher relative to a like operator with lower risk pipe.

State Pipeline Inspection Calculation Tool (inspector/days)

Roles

State ▼

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

Listing of Risk Concerns

- Use the "Listing of Risk Concerns" field to describe the risk considerations used to determine the optimum inspection intervals.
- For example: If risk concerns for one operator include aging infrastructure, third party damage and corrosion issues then inspectors should be allocated to that operator differently than one with new plastic pipe and an effective one-call program.

State Connecticut ▼

Reporting Year 2016

☒ Single Operator ☐ Multiple Operators

Operator Name

Operator ID

Search

Operator Type

Local Distribution Comp ▼

Number of Service Lines

Report

Save

Load

New

	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year
1	Standard - Procedures			0.00
2	Standard - Records			0.00
3	Standard - Field			0.00
4	DIMP Program			0.00
5	DIMP Implementation Review			0.00
6	TIMP Program			0.00
7	TIMP Implementation Review			0.00
8	TIMP Field			0.00
9	OQ Program (Prot. 1-8)			0.00
10	OQ Field (Prot. 9)			0.00
11	Design, Testing & Construction			0.00
12	Investigating Incidents/Accidents			0.00
13	Damage Prevention Activities			0.00
14	On-Site Operator Training			0.00
15	Compliance Follow-ups			0.00
16	CRM			0.00
17	PAP			0.00
18	Drug and Alcohol			0.00
19	Totals	0.00		0.00

High-Risk Pipe - Ranking

*On a scale of 1-10 or 0 if N/A - does the company have high risk pipe concerns - 10 is highest concern. If inspect all units every year "N/A" is an acceptable answer with explanation below.

Listing of risk concerns taken into consideration of inspection intervals -

Other Unique Considerations (Travel, Certain inspection unit issues, etc)

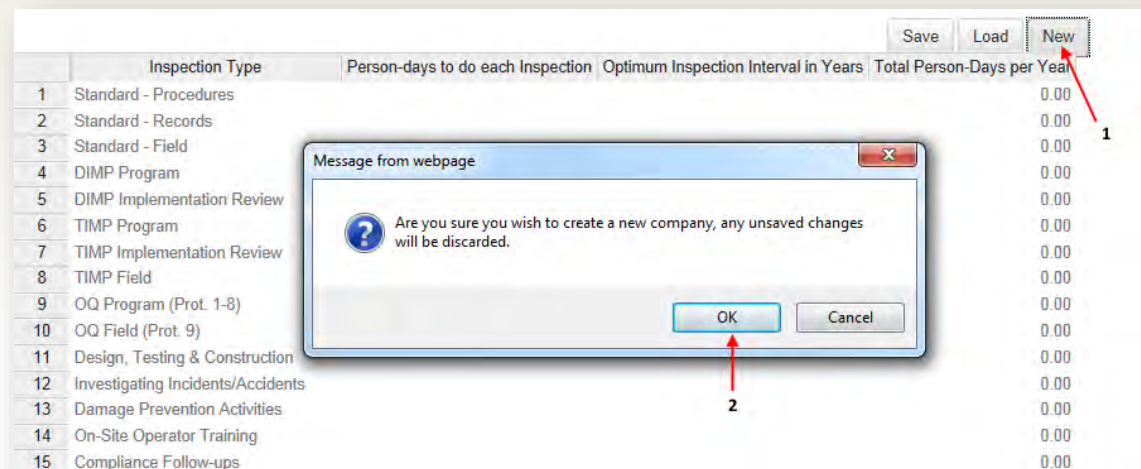
Other Unique Considerations

- Use this field to describe any other attributes that affect the amount of time it takes to inspect this operator. Include anything that may be unique to your state.
- For example: Travel time between the operator's facilities causes the inspection to take longer than it would for other similarly sized operators.

Walk-Through

- Login
- Accessing the Tool
- Overview
- **Creating a New Sheet**
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- Additional Features

- Click the “New” button to create a new sheet.



Walk-Through

- Login
 - Accessing the Tool
 - Overview
 - Creating a New Sheet
 - **Entering Data**
 - **Single Operator**
 - Summary of Multiple Operators
 - Saving Data
 - Recalling Data
 - Additional Features
- If entering data for a single operator:
 - 1) Select the “Single Operator” radio button
 - 2) Enter the name of the operator
 - 3) Enter the operator’s ID number
 - 4) Select the appropriate operator type from the drop down menu
 - 5) Enter a value to represent the size of the operator

Single Operator ☒ Multiple Operators ☐

Operator Name Example Operator Operator ID 12345 Search

Operator Type Local Distribution Comp Number of Service Lines 2300 Save Lo

Walk-Through

- Login
 - Accessing the Tool
 - Overview
 - Creating a New Sheet
 - **Entering Data**
 - Single Operator
 - **Summary of Multiple Operators**
 - Saving Data
 - Recalling Data
 - Additional Features
- If entering data for a summary of multiple operators with the same inspection requirements:
 - 1) Select the “Multiple Operators” radio button
 - 2) Provide a name for the operator grouping
 - 3) Enter the number of operators in the grouping
 - 4) Describe the grouping in the “Comment” field
 - 5) Select the appropriate operator type from the drop down menu
 - 6) Enter a range which captures the grouping of operators

The screenshot shows a web form for entering data for multiple operators. It includes the following fields and controls:

- Radio Buttons:** ☐ Single Operator, ☒ Multiple Operators (indicated by arrow 1).
- Group Name:** A text input field containing "Group A: Small Master Meter Operators" (indicated by arrow 2).
- Operator Count:** A text input field containing "100" (indicated by arrow 3).
- Comment:** A text area containing "All master meter operators with 0-100 service lines have the same inspection requirements under our states inspection plan." (indicated by arrow 4).
- Operator Type:** A dropdown menu showing "Master Meter Operator" (indicated by arrow 5).
- Number of Service Lines:** A range input with "0" in the first field and "100" in the "To" field (indicated by arrow 6).
- Buttons:** "Save" and "Load" buttons at the bottom right.

Walk-Through

- Login
- Accessing the Tool
- Overview
- Creating a New Sheet
- **Entering Data**
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- Additional Features

- Enter the required inspection person days and optimum inspection interval for each type of inspection according to your state's inspection plan.
- Enter zeros (0) in both columns if an inspection type does not apply to the operator.

					Save	Load	New
	Inspection Type	Person-days to do each Inspection	Optimum Inspection Interval in Years	Total Person-Days per Year			
1	Standard - Procedures	1.00	2.00	0.50			
2	Standard - Records	2.00	2.00	1.00			
3	Standard - Field	1.50	2.00	0.75			
4	DIMP Program	0.75	2.00	0.38			
5	DIMP Implementation Review	0.75	2.00	0.38			
6	TIMP Program	0		0.00			
7	TIMP Implementation Review			0.00			
8	TIMP Field			0.00			
9	OQ Program (Prot. 1-8)			0.00			
10	OQ Field (Prot. 9)			0.00			

Enter zeros (0) for N/A

Walk-Through

- Login
- Accessing the Tool
- Overview
- Creating a New Sheet
- **Entering Data**
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- Additional Features

- Ensure that values appear accurate in the “Totals” Cells.

14	On-Site Operator Training	14.00	1.00	14.00
15	Compliance Follow-ups	15.00	5.00	3.00
16	CRM	16.00	1.00	16.00
17	PAP	17.00	1.00	17.00
18	Drug and Alcohol	18.00	1.00	18.00
19	Totals	171.00		149.67

High-Risk Pipe - Ranking

3

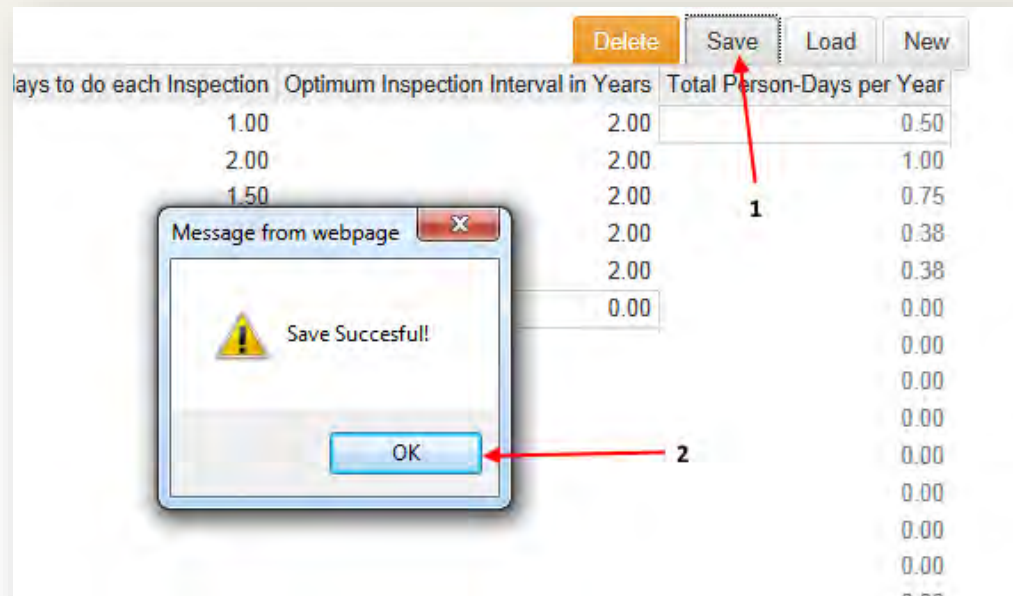
This operator requires 171 person-days (# of personnel x days spent) to inspect.

We plan to dedicate 149.67 person-days to inspecting this operator every year.

- The total in the “Person days to do each Inspection” column represents the total number of inspection person-days necessary to completely inspect that operator, regardless of the time frame of the inspections.
- The total in the “Total Person-Days per Year” column represents the total number of inspection person-days spent inspecting that operator every year.

Walk-Through

- Login
 - Accessing the Tool
 - Overview
 - Creating a New Sheet
 - Entering Data
 - Single Operator
 - Summary of Multiple Operators
 - **Saving Data**
 - Recalling Data
 - Additional Features
- Use the save button to save your progress or a completed sheet.
-
- The screenshot shows a software window with a table. The table has columns: 'Days to do each Inspection', 'Optimum Inspection Interval in Years', and 'Total Person-Days per Year'. The 'Save' button is highlighted in the top right corner with a red arrow labeled '1'. A dialog box titled 'Message from webpage' is open in the center, displaying a yellow warning icon and the text 'Save Successful!'. The 'OK' button in the dialog box is highlighted with a red arrow labeled '2'.

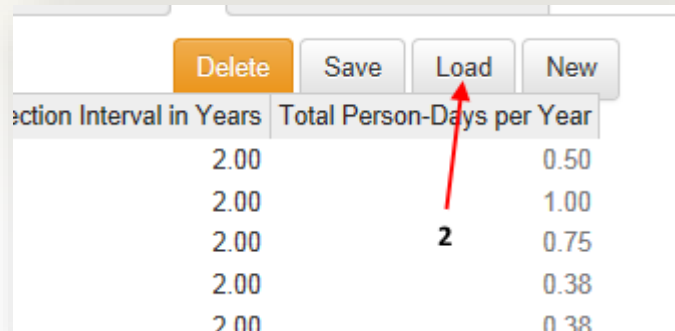


Walk-Through

- Login
- Accessing the Tool
- Overview
- Creating a New Sheet
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- **Recalling Data**
- Additional Features

To recall previously saved data:

- 1) Ensure that any progress has been saved
- 2) Press the “Load” button
- 3) Click on an operator from the pop-up list



		Delete	Save	Load	New
Selection Interval in Years		Total Person-Days per Year			
2.00					0.50
2.00					1.00
2.00	2				0.75
2.00					0.38
2.00					0.38

Walk-Through

- Login
- Accessing the Tool
- Overview
- Creating a New Sheet
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- **Recalling Data**
- Additional Features

To recall previously saved data:

- 1) Ensure that any progress has been saved
- 2) Press the “Load” button
- 3) Click on an operator from the pop-up list

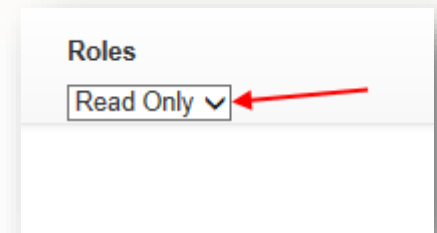
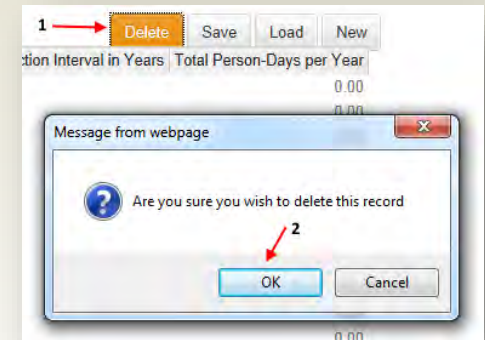
Select Company to Load

Operator ID	Name	Multi	Inspection Type	State	Risk Ranking	Year	Updated By	Updated On
	CONNECT ICUT NATURAL GAS Csdgsdfgd fgsdf	Y	Gas Transmission Operator	CT	0	2016	kevin.dowling.napsr	03/14/2016
	LDCs 0-3000 service lines	Y	Local Distribution Company (LDC)	CT	0	2016	kevin.dowling.napsr	03/03/2016
	LPGs	Y	LNG Operator	CT	0	2016	karl.baker.napsr	03/14/2016
	Test	Y	Local Distribution Company (LDC)	CT	0	2016	karl.baker.napsr	03/23/2016
	Test 2	Y	Local Distribution Company (LDC)	CT	0	2016	kevin.dowling.napsr	03/14/2016
	A	N	Municipal Gas Operator	CT	0	2016	kevin.dowling.napsr	03/03/2016
2700	CONNECT	N	LNG Operator	CT	0	2016	karl.baker.napsr	03/14/2016

Close

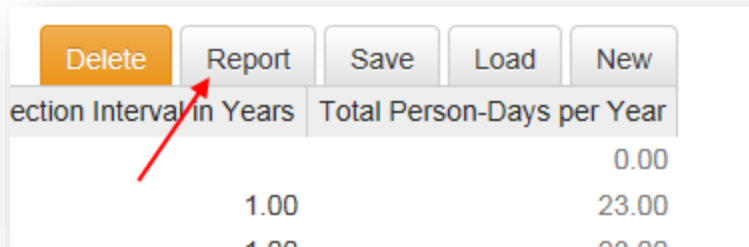
Walk-Through

- Login
 - Accessing the Tool
 - Overview
 - Creating a New Sheet
 - Entering Data
 - Single Operator
 - Summary of Multiple Operators
 - Saving Data
 - Recalling Data
 - **Additional Features**
- To delete previously saved data:
 - 1) Recall the data using the “Load” button
 - 2) Press the delete button and confirm
 - To review data in read-only mode (including data entered by other states):
 - 1) Use the “Roles” drop down menu to select “Read Only” mode
 - 2) Use the “Load” button to recall data
 - Data from all states will be displayed
 - Data will be locked to prevent editing



Walk-Through

- Login
- Accessing the Tool
- Overview
- Creating a New Sheet
- Entering Data
 - Single Operator
 - Summary of Multiple Operators
- Saving Data
- Recalling Data
- **Additional Features**
 - To view a summary of the total inspection person days for all operators, a report can be downloaded using the “Report” button.
 - The report can be used to verify that the numbers entered make sense.



Delete		Report	Save	Load	New
Inspection Interval in Years		Total Person-Days per Year			
		0.00			
1.00		23.00			
1.00		23.00			

Questions and Comments

Contact:

- Rex Evans
 - phone: (217) 801-8014
 - email: rex.evans@dot.gov
- Karl Baker
 - phone: (860) 827-2661
 - email: karl.baker@ct.gov



NAPSR



**Pipeline and Hazardous
Materials Safety Administration**

Instructions for NAPSР Users to Update Account Information

Tools within the PHMSA Portal require information about a user's home state to control access to data. Because of the way some users were added to the Portal, this information may not be available. If you are able to log-in but are only able to view data in read-only mode, please follow the steps below:

1. Click the link below to access the Portal login screen:

<http://portal.phmsa.dot.gov/PHMSAPortal2>

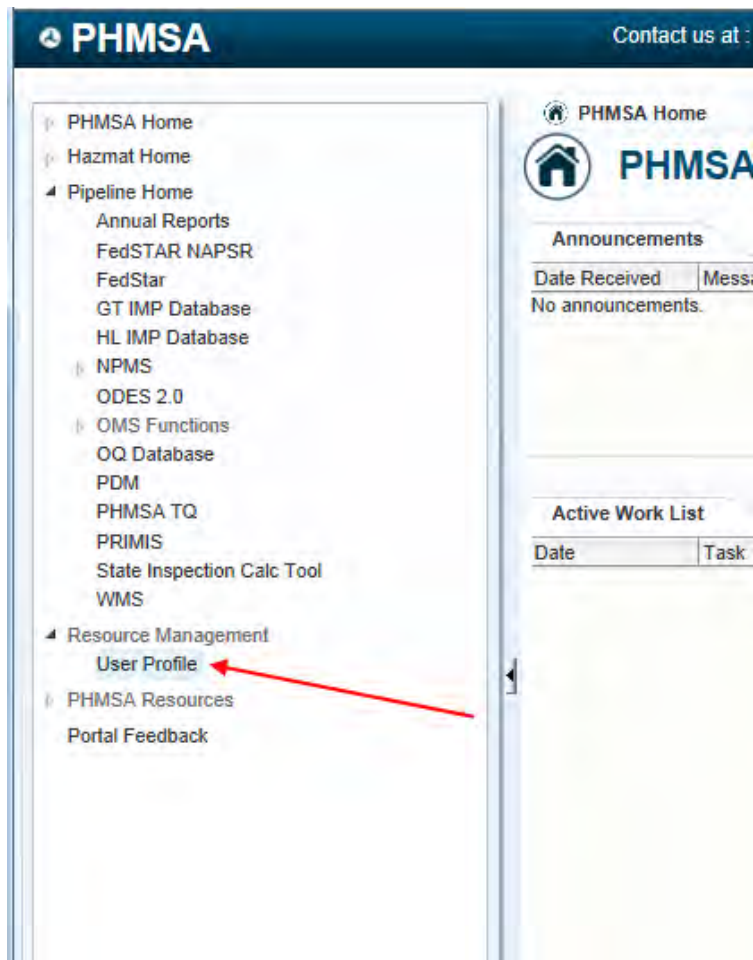
2. Enter your username and password, then click "Login".



3. Review the disclaimer.

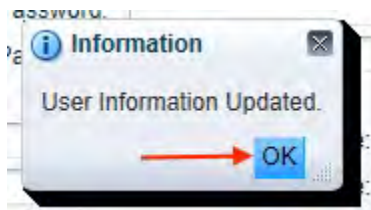


4. Click *User Profile* located under *Resource Management* in the menu that appears at left.



5. Enter any missing information, then click “*Update Profile*”.

The screenshot shows the 'User Profile' page on the PHMSA Home website. The page has a header with 'PHMSA Home' and 'User Profile'. Below the header is a section titled 'User Information' with the instruction 'Please make any updates to the information below.' The form contains several fields: 'Home Page' (dropdown menu set to 'Generic'), '* First Name' (text box with 'Kevin'), 'Middle Initial' (text box), '* Last Name' (text box with 'Dowling'), 'Change Password' (text box), and 'Confirm Password' (text box). Below these are two columns of fields: the left column includes '* Address #1' (123 EXAMPLE STREET), 'Address #2' (empty), '* City' (GENERIC CITY), '* State' (Connecticut), '* Organization' (CT_DEEP), '* Role' (Team), and '* Zip Code' (12345); the right column includes '* Work Phone' (860-827-2676), 'Alt Phone' (empty), 'Fax' (empty), '* Work Email' (NAPSR.USER@CT.gov), and '* Confirm Email' (NAPSR.USER@CT.gov). At the bottom center is a blue 'Update Profile' button, which is pointed to by a red arrow.



6. Click “*Logout*” in the upper right hand corner of the window.



7. Click "Close".



8. Repeat steps 1-3, to log back into the portal.

Guidelines for States Participating in the Pipeline Safety Program

Appendix V

State Pipeline Program Performance Metrics

Introduction

On September 26, 2011 the National Transportation Safety Board (NTSB) issued a series of safety recommendations resulting from the September 9, 2010 natural gas incident at San Bruno, California involving the facilities of Pacific Gas & Electric. The Pipeline and Hazardous Materials Safety Administration (PHMSA) was issued several recommendations as part of this communication. As a result of **Safety Recommendation P-11-20** a task group was formed in cooperation with PHMSA and the National Association of Pipeline Safety Representatives (NAPSR) to address NTSB concerns.

The NTSB recommendation P-11-20 asked PHMSA to: *Work with state public utility commissions to (1) implement oversight programs that employ meaningful metrics to assess the effectiveness of their oversight programs and make those metrics available in a centralized database, and (2) identify and then correct deficiencies in those programs.*

The task group formed consisted of Subject Matter Experts (SME) from NAPSR and PHMSA which met in February, April and September of 2013. The team looked at various possible performance measures that could assess the various state oversight programs and came up with the attached six performance metrics through group consensus. While developing the performance measures the following primary elements were considered:

- Is the performance metric measurable?
- Is the performance metric data driven?
- Is the metric essential to helping meet the goal of zero incidents and zero unintentional releases?
- Is the metric meaningful and an essential component to an effective safety program?

Once the six consensus metrics were identified, each metric was outlined and the following elements were developed:

- Description of Metric
- Why the metric is important
- Data Sources – where data will come from
- Other Unique Considerations
- Potential Accelerated Actions – Actions a state can take to improve performance
- Report output information – how data will be compiled for analysis

The results have been made available on the PHMSA Pipeline Safety Stakeholder Communication website at the following link:

<http://primis.phmsa.dot.gov/comm/states.htm>

Performance Metric One: Damage Prevention Program	
Description of Metric	This metric shows pipeline damages per 1000 locate tickets. This measure has been established as an industry benchmark on performance of damage prevention programs
Why this Metric is important	Excavation damage is the leading cause of natural gas distribution pipeline incidents, and a leading cause of other pipeline incidents, nationwide. A critical step in preventing excavation damage is for the excavator to notify pipeline operators of intent to excavate at a specific location. This is normally done by the excavator calling a one-call center. The one-call center then issues a locate ticket to inform pipeline operators and other underground utility operators with facilities located near the planned excavation activity. The pipeline operators can then locate and mark the location of their pipelines and otherwise communicate with the excavator as necessary to prevent damage to the pipelines. The number of excavation damage occurrences per 1,000 locate tickets is an established benchmark within the damage prevention industry and an important indicator of damage prevention program performance. However, note that variations among state laws regarding locate ticket size and scope, along with the length of time a locate ticket is valid, will limit any state to state comparison of this metric.
Data Sources	The data for this metric will be taken from a summary of each states distribution operator annual reports. (Form PHMSA F 7100.1-1 Part D)
Unique Considerations	This metric does not include data from transmission operators or liquid operators due to availability of data.
Potential Accelerated Actions (AA's)	• State damage prevention program (laws) enhancement • Public Awareness program enhancement (i.e. seminars, websites) • Stakeholder communications (i.e. coordinating councils etc.) • One-call center interaction • Active one-call law enforcement (i.e. training, fines etc.) • Active enforcement of 192.614/195.442 • Identification of damage reason by operator – (i.e. hand digging, no locate, etc.) • Drill down by operating area of each operator
Report output information	Average per 1000 shown by bar graph on a trend by year by state

Performance Metric Two: Inspection Activity	
Description of Metric	This metric shows level of inspection effort by each state program. This data will show inspection days per combined miles of distribution, gathering and transmission lines.
Why this Metric is important	Regulator inspection time with each pipeline operator is vital in identifying compliance issues and gaining knowledge about the condition of the operator's systems. Measurement of the level of inspection activity by the state program is based on the number of inspection days per combined miles of distribution (including mains and service lines), gathering and transmission lines. Measurement of the level of inspection activity spent on master meter and small liquid propane gas (LPG) system operators is shown separately, where applicable, as those operators are handled individually by each state due to various unique considerations.
Data Sources	State program progress report and mileage from annual reports (pipeline data mart)
Unique Considerations	This primary metric will not include inspection time spent on master meter/small LPG inspections due to lack of mileage data available. Master Meter/Small LPG operators are handled by each state on an individual basis due to unique considerations.
Potential Accelerated Actions (AA's)	• Hire and train additional staff • Utilize current staff more efficiently if needed • Inspect operators/inspection units more frequently based on individual risk factors (i.e. age of system, population density, operator history, etc.)
Report output information	Inspection person-days/mileage by bar graph on a trend by year by state Inspection person-days/master meter-small LPG unit by bar graph on a trend by year by state

Performance Metric Three: Inspector Qualification	
Description of Metric	This metric shows level of training and experience of each state program's inspection staff.
Why this Metric is important	PHMSA rates each state's inspector qualification program based on the levels of training and experience of the program's inspection staff. The level of training and experience of inspectors directly impacts the quality of pipeline inspections performed. For the ratings, PHMSA looks at three separate attributes, including the percentages of the state's inspection staff that have: 1) successfully completed the core pipeline safety training program; 2) successfully completed additional training addressing topics such as Integrity Management, Welding, and Failure Investigations; and, 3) five or more years of inspection experience. "Additional Training" primarily consists of detailed PHMSA-provided training relating to conducting integrity inspections and understanding the methods and processes used in integrity management programs.
Data Sources	Annual state program progress reports and PHMSA TQ training transcripts
Unique Considerations	This metric also considers retention of inspectors
Potential Accelerated Actions (AA's)	• Obtain additional outside training • Accelerate TQ training • Provide competitive compensation/benefits for retention • Agency support of travel to training • Succession planning • Refresher training • Develop in-house training
Report output information	This will be a bar chart showing the following information – • Percentage of inspection staff that have completed core training. • Percentage of inspection staff that have received all additional training (Integrity Management, etc.) • Percentage of inspection staff that have at least 5-years' experience.

Performance Metric Four: Leak Management	
Description of Metric	This metric shows total leaks repaired per mile, total leaks per mile and total leaks outstanding per mile for each state.
Why this Metric is important	Leak management is measured by the total number of leaks repaired per mile, the total number of hazardous leaks repaired per mile, and the total leaks scheduled for repair per mile for gas distribution systems in each state. This provides an overview of the status of gas distribution pipeline systems in each state and the efforts to locate, evaluate, and repair and mitigate leaks.
Data Sources	The data for this metric will be taken from a summary of each states distribution operator annual reports. (Form PHMSA F 7100.1-1 Part D)
Unique Considerations	Various major catastrophic events could skew results
Potential Accelerated Actions (AA's)	• State will need to analyze each operator and by leak cause • Encourage systematic and accelerated replacement programs • DIMP program analysis • Additional leak surveys • Leak classification requirements • Trending analysis by operator • Interaction and sharing of data acquired by state with operators • Additional state regulations
Report output information	Data per mile will be shown by bar graph.

Performance Metric Five: Enforcement

Description of Metric	This metric demonstrates the effectiveness of the state's regulatory enforcement program
Why this Metric is important	Effective state enforcement programs and processes are necessary to ensure all operators are in compliance with all applicable pipeline safety regulations. The effectiveness of the State agency's pipeline safety efforts depends on information obtained through inspections and evaluation of operator compliance. Each State agency must have a current written plan for its pipeline safety program. An important aspect of any State agency's compliance program involves the gathering of the necessary evidence for documenting noncompliance. Subsequent to each inspection, any findings should be documented and include an account of the situations encountered during the inspection and a copy of the inspection checklist. The documentation must identify and describe each regulation with which the operator is believed to be in noncompliance. Copies of relevant operator records, statements from operator personnel, photographs, calculations, and all other data pertaining to each issue of noncompliance should be made a part of the documentation. This metric demonstrates the effectiveness of the state's regulatory enforcement program. It is based on PHMSA's annual evaluation of the state's enforcement program, with review of the state's records and procedures. The state's performance is measured against the percentage of possible score that the state could achieve.
Data Sources	Annual state program evaluation with review of state records and procedures
Unique Considerations	There may be issues with various operator types and sizes. Alternative punitive actions may be considered by each state. (other than civil penalties)
Potential Accelerated Actions (AA's)	• Automatic adoption of federal regulations • More stringent state regulations • Effective monitoring and supervision of enforcement process (i.e. documentation and follow-up) ◦ Effective follow-up of corrective action related to regulation violations communicated to operators quantified by a ratio of corrected violations/outstanding violations at the end of each calendar year • Agency support on enforcement actions and policy • Adoption of federal civil penalty limits if needed • Self-identification process for operators • Analyze operator violations for repeat occurrence
Report output information	Bar chart based on total points received

Performance Metric Six: Incident Investigation	
Description of Metric	This metric demonstrates the effectiveness of the state's incident investigation process
Why this Metric is important	State agencies must have effective incident investigation processes and must conduct investigations of each significant or reportable incident/accident involving a jurisdictional pipeline facility. The primary objective of the investigation activity is to minimize the possibility of recurrence and to institute enforcement actions where noncompliance with the safety standards has occurred. Effective incident investigation processes are also necessary to ensure operators have and effectively implement emergency response procedures and make continuous improvements to their emergency response programs. This metric demonstrates the effectiveness of the state's incident investigation process. It is based on PHMSA's annual evaluation of the state's program, with review of the state's records and procedures. It is measured against the percentage of possible score that the state could achieve, and is measured separately for hazardous liquid and natural gas pipelines. Since individual states sometimes experience a limited number of pipeline incidents, they may not conduct a full incident investigation in a given calendar year. In these years, evaluation of a state's incident investigation performance may be limited to evaluation of the procedures the state has in place.
Data Sources	Annual state program evaluation with review of state records and procedures
Unique Considerations	Some states may have a limited amount of incidents and we would only be able to evaluate procedures in place.
Potential Accelerated Actions (AA's)	• Tabletop exercises • Share and analyze incident reports from other states with stakeholders • All staff additional training (i.e. fire schools, root cause analysis training etc.) • Periodic communication with operators and other stakeholders on lessons learned from other incidents.
Report output information	Bar chart based on total points received