

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

GENERAL INSTRUCTIONS

All section references are to Title 49 of the Code of Federal Regulations (49 CFR). The Natural and Other Gas Transmission and Gathering Pipeline Systems Annual Report has been revised as of calendar year (CY) 2012 affecting submissions due in 2013 and beyond. This Annual Report is required per §191.17 and must be filed per §191.7. Read through the Annual Report and instructions carefully before beginning to complete the Report. Where common data elements exist between this Report and an operator's NPMS submission, the data submitted by the operator on their Annual Report should be the same as the data submitted through NPMS when possible. PHMSA encourages gas transmission operators to send their NPMS submission to PHMSA by March 15, representing pipeline assets as of December 31 of the previous year.

Each operator of a transmission or a gathering pipeline system must submit an Annual Report for that system on DOT Form PHMSA 7100.2-1. This report must be submitted each year, not later than March 15, and provide information about the pipeline system as-of December 31 of the previous year. If an operator discovers an error in a submitted annual report, a supplemental report should be filed. Changes made to the pipeline system after the end of the reporting year should not result in a supplemental report. However, if an operator finds records related to documenting gas transmission MAOP after the end of the reporting year and these records result in a change in Part Q status from incomplete records to complete records, the operator may choose to file a supplemental report to change Part Q.

The terms "operator," "distribution line," "gathering line," "Maximum Allowable Operating Pressure (MAOP)," "offshore," "Outer Continental Shelf," "pipe," "pipeline," "pipeline facility," "specified minimum yield strength (SMYS)," and "transmission line" are defined in §192.3. The terms "assessment," "high consequence area (HCA)," and "moderate consequence area (MCA)" are defined in §192.903. §192.8 describes how to identify onshore gathering lines and to determine if a gathering line is subject to regulation (i.e., is a "regulated gathering line"). If an operator determines that its pipelines fall under the definition for distribution lines, the operator should submit Form PHMSA F 7100.1-1 rather than this Form PHMSA F 7100.2-1.

If you need copies of the Form PHMSA F 7100.2-1 and/or instructions, they can be found on <https://www.phmsa.dot.gov/forms/pipeline-forms>. The documents are included in the section titled Accident/Incident/Annual Reporting Forms.

ONLINE REPORTING REQUIREMENTS

Annual Reports must be submitted online through the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>, unless an alternate method is approved (see Alternate Reporting Methods below).

You will not be able to submit reports until you have met all of the Portal registration requirements – see http://opsweb.phmsa.dot.gov/portal_message/PHMSA_Portal_Registration.pdf. Completing these registration requirements could take several weeks. Plan ahead and register well in advance of the report due date.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

REPORTING METHOD

Use the following procedure for online reporting:

1. Go to the PHMSA Portal at <https://portal.phmsa.dot.gov/portal>
2. Enter PHMSA Portal Username and Password; press *enter*
3. Select OPID; press “*continue*” button.
4. Under “**Create Reports**” on the left side of the screen, under *Annual* select “Gas Transmission and Gathering” and proceed with entering your data. Only one annual report by commodity for an OPID may be submitted per year.
5. To save intermediate work without formally submitting it to PHMSA, click **Save**. To modify a draft of an annual report that you saved, go to **Saved Reports** and click on *Gas Transmission and Gathering*. Locate your saved report by the date, report year, or commodity. Select the record by clicking on it once, and then click **Modify** above the record.
6. Once all sections of the form have been completed, click on **Validate** to ensure all required fields have been completed and data meets all other requirements. A list of errors will be generated that must be fixed prior to submitting an Annual Report.
7. Click **Submit** when you have completed the Report (for either an Initial Report or a Supplemental Report), and are ready to initiate formal submission of your Report to PHMSA.
8. A confirmation message will appear that confirms a record has been successfully submitted. To save or print a copy of your submission, go to **Submitted Reports** on the left hand side, and click on *Gas Transmission and Gathering*. Locate your submitted report by the date, report year, or Commodity Group, and then click on the PDF icon to either open the file and print it, or save an electronic copy.
9. To submit a *Supplemental Report*, go to **Submitted Reports** on the left hand side, and click on *Gas Transmission and Gathering*. Locate your submitted report by the date, report year, or Commodity Group. Select the record by clicking on it once, and then click “Create Supplemental”.

Alternate Reporting Methods

Operators for whom electronic reporting imposes an undue burden and hardship may submit a written request for an alternative reporting method. Operators must follow the requirements in §191.7(d) to request an alternative reporting method and must comply with any conditions imposed as part of PHMSA’s approval of an alternate reporting method.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

SPECIFIC INSTRUCTIONS

Make an entry in each block for which data is available. Estimate data only if necessary. Avoid entering any data as **UNKNOWN or 0 (zero)** except where zero is appropriate to indicate that there were no instances or amounts of the attribute being reported.

Do not report miles of pipe, pipe segments, or pipeline in feet. When mileage for the same set of pipelines is reported in different parts of the form, the online system will require the different parts to be consistent. Mileage values over 60 miles must be within 0.5% of the baseline and values under 60 miles must be within 0.3 miles for each of these categories: gas transmission onshore, gas transmission offshore, gas gathering onshore Type A, gas gathering onshore Type B, and gas gathering offshore. For example, if you report 60 miles of onshore gas transmission in Part J, the onshore gas transmission mileage by diameter in Part H must be within 0.3 miles of 60. Use the number of decimal places needed to satisfy these consistency checks.

Part L will serve as the baseline for gas transmission miles in HCAs. When “in HCA” data is entered in Parts Q and R, the values must be consistent with HCA miles entered in Part L. HCA mileage values over 50 must be within 0.2% of the baseline and values under 50 miles must be within 0.1 miles.

Enter the Calendar Year for which the Report is being filed, bearing in mind that the report should reflect the system as-of the end of that calendar year.

The **Initial Report** or **Supplemental Report** box will be populated by the online system.

For a given OPID, a separate Annual Report is required for each Commodity Group within that OPID. The separate Annual Report is to cover all pipeline facilities – both INTERstate and INTRAsate – included within that OPID that serve to transport that Commodity Group. As an example, if an operator uses a single OPID and has one set of pipeline facilities transporting natural gas and another transporting landfill gas, this operator must file two Annual Reports – one Annual Report covering natural gas facilities and a second for the landfill gas facilities. When a pipeline facility transports two or more Commodity Groups, the pipeline facility should be reported only once under the predominantly transported Commodity Group.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Part A is completed once for each Annual Report.

PART A – OPERATOR INFORMATION

Complete all sections of Part A before continuing to the next Part.

1. Operator's 5-digit Identification Number (OPID)

For online entries, the OPID will automatically populate based on the selection you made when entering the Portal. If you have log-in credentials for multiple OPID, be sure the report is being created for the appropriate OPID. Contact PHMSA's Information Resources Manager at 202-366-8075 if you need assistance with an OPID.

2. Name of Operator

This is the company name associated with the OPID. For online entries, the name will be automatically populated based on the OPID entered in A1. If the name that appears is not correct, you need to submit an Operator Name Change (Type A) Notification.

If the company corresponding to the OPID is a subsidiary, enter the name of the parent company.

3. Reserved

4. Headquarters address

This is the headquarters address associated with the OPID. For online entries, the address will automatically populate based on the OPID entered in A1. If the address that appears is not correct, you need to change it in the online Contacts module.

5. This Report pertains to the following Commodity Group

It is a PHMSA requirement that operators submit separate Reports for each Commodity Group within a particular OPID.

File a separate Annual Report for each of the following Commodity Groups:

Natural Gas

Synthetic Gas (such as manufactured gas based on naphtha)

Hydrogen Gas

Propane Gas

Landfill Gas (includes biogas)

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Other Gas – If this Commodity Group is selected, report the name of the other gas in the space provided.

Note: When a pipeline facility transports two or more of the above Commodity Groups, the pipeline facility should be reported only once under the predominantly transported Commodity Group. For example, if an operator has a pipeline segment that is used to transport natural gas during the majority of the year and propane for a couple of weeks, that operator should only file an annual report for the natural gas. If an operator has two pipeline segments with one pipeline segment used to transport natural gas and the other pipeline segment transporting hydrogen gas, that operator should file two annual reports - 1 report for natural gas and 1 report for hydrogen gas.

6. Reserved

7. INTERstate and INTRAsate pipeline

For a given OPID, both INTERstate and INTRAsate pipeline facilities for a Commodity Group can be entered in a single report. Enter each State and portion of the Outer Continental Shelf (OCS) for both the INTERstate and INTRAsate pipeline facilities. The States and OCS options entered here create the set of Parts H, I, J, K, L, M, P, Q, and R in the online reporting system. OCS options available for selection are OCS – Alaska; OCS- Atlantic; OCS-Gulf of Mexico; and OCS – Pacific.

Interstate gas pipeline means a gas pipeline facility or that part of a gas pipeline facility that is used to transport gas and is subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act (15 U.S.C. 717 et seq.).

Intrastate gas pipeline means a gas pipeline facility or that part of a gas pipeline facility that is used to transport gas within a state and is not subject to the jurisdiction of FERC under the Natural Gas Act (15 U.S.C. 717 et seq.).

8. RESERVED

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

For the designated Commodity Group, complete Part C one time for all pipeline facilities – both INTERstate or INTRAsate – included within this OPID. Parts B, B1, and D will be populated based on information entered in Parts L, T, and P respectively.

PART B – TRANSMISSION PIPELINE HCA, MCA, and in neither HCA nor MCA MILES

In Part L of this report, the number of miles by category are reported by-State/OCS and by the INTERstate/INTERstate status of the pipeline. All Part L data will be summed and displayed in Part B.

PART B1 – HCA MILES BY DETERMINATION METHOD AND RISK MODEL TYPE

Deferred until CY 2022 data submitted during 2023

In Part T of this report, the number of miles by category are reported by-State/OCS and by the INTERstate/INTERstate status of the pipeline. All Part T data will be summed and displayed in Part B1.

PART C - VOLUME TRANSPORTED IN TRANSMISSION PIPELINES (ONLY)
IN MILLION SCF PER YEAR (excludes Transmission lines of Gas Distribution systems)

Report the volume transported in transmission pipelines during the calendar year for this Commodity Group, in millions of standard cubic feet (60°F and 14.73 psia). Include the annual total volume transported for all States and for all pipelines and/or pipeline facilities – both INTERstate or INTRAsate – included within this OPID and for this Commodity Group. Volumes of any Commodity Group transported in addition to the Commodity Group predominately transported through these pipeline facilities should also be reported in Part C within the proper row. For gas transmission pipelines within storage fields, report the volume moved out of storage. Do not report the volume placed into storage.

Note: This Part does not need to be completed if the reporting OPID includes only gathering pipelines or if the transmission line is operated by a gas distribution company as an integral part of its distribution pipeline system. Operators whose pipelines are limited to these types should select the box to so indicate.

PART D – MILES OF PIPE BY MATERIAL AND CORROSION PREVENTION STATUS

In Part P of this report, the miles of pipeline by material type and corrosion prevention status are reported by-State/OCS and by the INTERstate/INTRAsate status of the pipeline. All Part P data will be summed and displayed in Part D.

PART E – RESERVED

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Parts F and G are reported one time for INTERstate transmission assets and once for each State with INTRAstate transmission.

PART F includes inspection, assessment, and repair data both within and outside HCAs and segments subject to assessment under §192.710s. In Part L, the number of HCA and §192.710 miles is collected by-State/OCS portion and by INTERstate/INTRAstate. The online system will provide Part F for INTERSTATE assets only after an INTERstate Part L with transmission miles is created. Until HCA or §192.710 miles are entered in an INTERstate Part L, the “within HCA” and “within §192.710” portions of Part F will remain locked. For INTRAstate assets, a similar process is followed but Part F will be created for each State with INTRAstate transmission.

Part G includes assessment data within an HCA or §192.710. Until HCA or §192.710 miles are entered in the applicable Part L, these sections will remain locked.

PART F – INTEGRITY INSPECTIONS CONDUCTED AND ACTIONS TAKEN BASED ON INSPECTION

This Part incorporates transmission pipeline integrity management performance measure reporting required by §192.945 and ASME/ANSI B31.8S, Section 9.4(b) (incorporated into the regulations by reference), items 1-3. Report all integrity assessments (inspections) required by PHMSA’s IM regulations which were conducted and actions which were taken during the calendar year based on inspection results. Include all inspections conducted in the reporting period calendar year including baseline assessments and re-assessments. **When Part F specifies “WITHIN AN HCA SEGMENT”, report only on transmission miles within HCA segments. Do not report on transmission pipelines** included in an IM Program as a result of Alternative MAOP under 192.620 or a PHMSA directive such as Corrective Action Order, Compliance Order, or Special Permit. Part F is subdivided into six (6) sections.

Section 1 - Mileage inspected in calendar year using the following In-Line Inspection (ILI) tools.

Report the mileage inspected using each of the listed tool types. Include total miles inspected, not just the mileage in HCA or **§192.710**. Where multiple ILI tools are used (e.g., a metal loss tool and a deformation tool), report the mileage in both categories. Where a combination tool is used (i.e., a single tool with multiple capabilities), report the mileage separately in each category included as part of the combination. Thus, the total mileage inspected during the calendar year (the sum of the mileage reported for individual tools) may be greater than the actual number of physical pipeline miles on which ILI inspections were run.

Section 2 - Actions taken in calendar year based on In-Line Inspections.

Include all actions taken during the calendar year that resulted from information obtained during an ILI inspection, including actions taken as a result of ILI inspections conducted during prior years. Do not include actions which are anticipated based on review of ILI results but which did not actually occur during the reporting year.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Report in items a. and b. the total number of anomalies excavated and repaired based on the operator's repair criteria even if those criteria are different from (i.e., require repair of damage more or less significant than) the repair criteria in IM regulations.

Anomalies not excavated and eliminated by pipe replacement are reported in Parts F6.

Report in a. the total number of anomalies excavated, recognizing that multiple anomalies may be exposed in a single excavation.

Report in b. only those anomalies actually repaired, not those for which other mitigative actions, such as recoating, were taken.

Report in c. only the anomalies in HCA pipeline segments that were repaired and were considered conditions under the repair criteria in the IM regulations. Scheduled conditions, as used in c.4, refers to anomalies that are required to be repaired in accordance with the schedule in ASME/ANSI B31.8S, section 7, Figure 4 (see §193.933(c)).

Report in d. only the conditions in **§192.710** pipeline segments that were repaired.

Report in e. only the conditions WITHIN A CLASS LOCATION 3 OR 4 and neither HCA nor **§192.710**.

Report in f. only the conditions WITHIN A CLASS LOCATION 1 OR 2 and neither HCA nor **§192.710**.

The total of repaired conditions reported in items c, d, e, and f may not exceed the total number of repaired anomalies reported in item b.

Enter a value in each row, using zero (0) as appropriate. Leave no rows blank.

Section 3 – Mileage inspected and actions taken in calendar year based on Pressure Testing.

In Section 3, report pressure tests and failures for pressure tests.

Report in a. total miles inspected by pressure testing.

b. will auto-populate with the sum of c, e, f, and g.

Report in c. the test failures (ruptures and leaks) repaired ONLY in HCA segments.

d. is not used.

Report in e. only the test failures (ruptures and leaks) repaired ONLY in **§192.710** pipeline segments.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Report in f. only the test failures (ruptures and leaks) repaired WITHIN A CLASS LOCATION 3 OR 4 and neither HCA nor §192.710.

Report in g. only the test failures (ruptures and leaks) repaired WITHIN A CLASS LOCATION 1 OR 2 and neither HCA nor §192.710.

Sections 4, 4.1, and 4.2

In section 4, report mileage inspected and actions taken in calendar year based on DA (Direct Assessment).

Include all actions taken during the calendar year that resulted from information obtained through external corrosion direct assessment, internal corrosion direct assessment, and stress corrosion cracking direct assessment inspections. Include all actions taken during the calendar year that resulted from information obtained during a DA inspection, including actions taken as a result of DA inspections conducted during prior years. Do not include actions which are anticipated based on DA inspection results but which did not actually occur during the reporting year.

In section 4.1 report mileage inspected and actions taken based on Guided Wave Ultrasonic Testing (GWUT).

Include all actions taken during the calendar year that resulted from information obtained through GWUT. Include all actions taken during the calendar year that resulted from information obtained during GWUT, including actions taken as a result of GWUT conducted during prior years. Do not include actions which are anticipated based on GWUT results but which did not actually occur during the reporting year.

In section 4.2, report mileage inspected and actions taken in calendar year based on Direct Examination.

Include all actions taken during the calendar year that resulted from information obtained through Direct Examination. Include all actions taken during the calendar year that resulted from information obtained during Direct Examination, including actions taken as a result of Direct Examination conducted during prior years. Do not include actions which are anticipated based on Direct Examination results but which did not actually occur during the reporting year.

The following instructions apply to sections 4, 4.1, and 4.2.

Report in b. the total number of anomalies excavated and repaired, not those for which other mitigative actions, such as recoating, were taken, within an HCA or §192.710 segment and outside an HCA or §192.710 segment based on the operator's repair criteria even if those criteria are different from (i.e., require repair of damage more or less significant than) the repair criteria in IM regulations.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Report in c. only the anomalies in HCA pipeline segments that were repaired and were considered conditions under the repair criteria in the IM regulations. Scheduled conditions, as used in c.4, refers to anomalies that are required to be repaired in accordance with the schedule in ASME/ANSI B31.8S, section 7, Figure 4 (see §193.933(c)).

Report in d. only the conditions in **§192.710** pipeline segments that were repaired.

Report in e. only the conditions WITHIN A CLASS LOCATION 3 OR 4 and neither HCA nor **§192.710**.

Report in f. only the conditions WITHIN A CLASS LOCATION 1 OR 2 and neither HCA nor **§192.710**.

The total of repaired conditions reported in items c, d, e, and f may not exceed the total number of repaired anomalies reported in item b.

Section 5 - Mileage inspected and actions taken in calendar year based on Other Inspection Techniques.

IM regulations allow operators to use other assessment techniques provided that they notify PHMSA (or states exercising regulatory jurisdiction) in advance. Report here the mileage inspected and actions taken as a result of inspections conducted using any technique other than those covered in Sections 1-4 of Part F. Describe the other technique(s) in the “specify” field.

Include all actions taken during the calendar year that resulted from information obtained during an inspection using an other technique including, actions taken as a result of inspections conducted during prior years. Do not include actions which are anticipated based on inspection results but which did not actually occur during the reporting year.

Report in b. only those anomalies actually repaired, not those for which other mitigative actions, such as recoating, were undertaken.

Report in c. only the anomalies in HCA pipeline segments that were repaired and were considered conditions under the repair criteria in the IM regulations. Scheduled conditions, as used in c.4, refers to anomalies that are required to be repaired in accordance with the schedule in ASME/ANSI B31.8S, section 7, Figure 4 (see §193.933(c)).

Report in d. only the conditions in **§192.710** pipeline segments that were repaired.

Report in e. only the conditions WITHIN A CLASS LOCATION 3 OR 4 and neither HCA nor **§192.710**.

Report in f. only the conditions WITHIN A CLASS LOCATION 1 OR 2 and neither HCA

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

nor §192.710.

The total of repaired conditions reported in items c, d, e, and f may not exceed the total number of repaired anomalies reported in item b.

Section 6 - Total Mileage Inspected (all Methods) and Actions Taken.

Items a, b, c, f, i, and l will be calculated automatically based on data entered in sections 1-5.

Items d, e, g, h, j, k, m, and n require information about actionable anomalies eliminated by pipe replacement and abandonment. An anomaly is considered actionable if it may exceed acceptable limits, based on the operator's anomaly and pipeline data analysis. Any anomaly excavated and repaired should be reported in section 2 through 5. Do not report these anomalies again in section 6. If pipeline facilities were abandoned and the operator replaced the transportation functionality with new pipeline facilities, enter the anomalies in replacement. If the transportation functionality of the abandoned facility was NOT replaced by the operator, enter the anomalies in abandonment.

PART G – MILES OF BASELINE ASSESSMENTS AND REASSESSMENTS COMPLETED IN CALENDAR YEAR (HCA, §192.710, and Outside HCA or §192.710 Segment miles)

Report the number of miles of pipeline that were assessed during the calendar year. Report separately the number of miles inspected for baseline assessments (e.g., initial baseline assessments and new baseline assessments, including those which occur due to new pipelines or facilities, new HCA, etc.) and miles for which a reassessment was conducted. For segments outside both HCA and §192.710, assessment miles are reported on a single line and are not characterized as baseline or reassessment. For the "in HCA" portions, do not include pipelines or portions of pipelines that are not in an HCA but which are included in an IM Program as a result of Alternative MAOP under 192.620 or a PHMSA directive such as Corrective Action Order, Compliance Order, or Special Permit.

Report only assessments that were completed during the calendar year. An assessment is considered complete on the ***date on which final field activities related to that assessment are performed***, not including repair activities. That is when a hydrostatic test is completed, when the last in-line inspection tool run of a scheduled series of tool runs is performed, when the last direct examination associated with direct assessment is made, or the date on which "other technology" for which an operator has provided timely notification is conducted.

Operators should report in Part G the total number of miles actually assessed. This differs from Part F where operators report the number of miles inspected by individual inspection methods and where some mileage may be reported multiple times.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

For the designated Commodity Group, complete PARTs H, I, J, K, L, M, P, Q, R, S, and T covering INTERstate pipeline facilities for each State and each Outer Continental Shelf (OCS) option in which INTERstate systems exist within this OPID. Report offshore pipelines in state waters in the State portion. Separately report offshore pipelines on the OCS under one of the four OCS options; Alaska, Atlantic, Gulf of Mexico, and Pacific. Complete all of these Parts again for INTRAstate pipeline facilities in each State in which INTRAstate systems exist within this OPID.

For example: Consider a gas pipeline system that includes INTERstate pipeline facilities in six states and the Gulf of Mexico OCS and INTRAstate pipeline facilities in three states. These Parts will be completed ten times; – seven times for INTERstate assets (once for each state and once for OCS) and once for the INTRAstate assets in three states.

Each time these Parts are completed, the online reporting system will show the INTERstate/INTRAstate and State/OCS portion for the data.

When mileage for the same set of pipelines is reported in different parts of the form, the online system will require the different parts to be consistent for each of these categories: gas transmission onshore, gas transmission offshore, gas gathering onshore Type A, gas gathering onshore Type B, and gas gathering offshore. Mileage values over 60 miles must be within 0.5% of the baseline and values under 60 miles must be within 0.3 miles. For example, if you report 60 miles of offshore gas gathering by decade of installation in Part J, the offshore gas gathering mileage by diameter in Part I must be within 0.3 miles of 60.

Part K will serve as the baseline for gas transmission miles by class location. When class location miles are entered in Parts Q and R, the values must be consistent with those entered in Part K.

Part L will serve as the baseline for gas transmission miles in HCAs. When “in HCA” data is entered in Parts Q, R, and T, the values must be consistent with HCA miles entered in Part L. When “in MCA” data is entered in Parts Q and R, the baseline is Part Q. HCA or MCA mileage values over 50 must be within 0.2% of the baseline and values under 50 miles must be within 0.1 miles.

PART H – MILES OF TRANSMISSION PIPE BY NOMINAL PIPE SIZE (NPS)

Report the miles of transmission pipe by Nominal Pipe Size (NPS) and location for both Onshore and Offshore. Enter the appropriate mileage in the corresponding nominal size blocks. Only integers are used for NPS. For example, report 6.625” diameter pipe in the NPS 6 category.

Pipe size which does not correspond to NPS measurements should be included in the “Other Pipe Sizes Not Listed” columns. Include both the pipe size and the corresponding mileage.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

PART I – MILES OF GATHERING PIPE BY NOMINAL PIPE SIZE (NPS)

Report the miles of gathering pipe by Nominal Pipe Size (NPS) and location for both Onshore and Offshore. Report onshore Type A and Type B gathering lines (§192.8) separately. Enter the appropriate mileage in the corresponding nominal size blocks. Only integers are used for NPS. For example, report 6.625" diameter pipe in the NPS 6 category.

Pipe size which does not correspond to NPS measurements should be included in the "Other Pipe Sizes Not Listed" columns. Include both the pipe size and the corresponding mileage.

PART J – MILES OF PIPE BY DECADE INSTALLED

Report the miles of pipe by decade installed. When the decade of construction is unknown, enter estimates of the totals of such mileage in the "Unknown" section of Part J.

PART K – MILES OF TRANSMISSION PIPE BY SPECIFIED MINIMUM YIELD STRENGTH

Class locations are defined in §192.5. Report the total miles of gas transmission pipe by hoop stress (as percent of SMYS) for pipe onshore and offshore by stress range and Class Location. Report pipe for which hoop stress is unknown and all non-steel pipe, regardless of operating pressure, in the rows indicated.

Pay close attention to the classification of each pipeline. Short segments of pipeline operated by distribution systems at less than or equal to 20 percent SMYS have sometimes been inaccurately reported as transmission lines. Unless such pipelines meet the definition of transmission lines in §192.3, they should be reported as distribution pipelines (Form PHMSA F 7100.1-1). If pipelines operating at less than or equal to 20 percent SMYS meet the definition of transmission lines, they should be reported here.

Miles by class locations from this part must be consistent with class location miles entered in Parts Q and R.

PART L – MILES OF PIPE BY CLASS LOCATION

Gas transmission miles will be populated based on data entered in Part K. Report the number of Onshore and Offshore miles of gas gathering pipe in each Class Location available on the form.

Report the number of HCA miles, §192.710 miles, Class Location 3 or 4 miles that are neither in HCA nor in §192.710, and Class Location 1 or 2 miles that are neither in HCA nor in §192.710 for both Onshore and Offshore transmission pipe. For HCA miles, do not include pipelines or portions of pipelines that are not in an HCA but which are included in an IM Program as a result of Alternative MAOP under 192.620 or a PHMSA directive such as Corrective Action Order, Compliance Order, or Special Permit.

Mile data entered in this Part will be summarized in Part B and affects the ability to enter data in Parts F and G. HCA miles entered here must be consistent with HCA miles entered in Parts Q, R, and T.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

PART M – FAILURES, LEAKS, AND REPAIRS

For the designated Commodity Group, this Part includes reporting for both pipeline facilities covered by this OPID which are in HCAs, MCAs, as well as pipeline facilities that are not. Additional instructions are provided below.

PART M1 – ALL LEAKS ELIMINATED/REPAIRED IN CALENDAR YEAR; FAILURES IN HCA IN CALENDAR YEAR

This Part incorporates transmission pipeline integrity management performance measure reporting required by §192.945 and ASME/ANSI B31.8S, Section 9.4(b)(4) (incorporated into the regulations by reference), along with reporting of all leaks that has historically been part of the Annual Report.

Include all leaks repaired or eliminated including by replaced pipe or other component during the calendar year. Operators with pipe segments in HCA should report separately the number of leaks repaired or eliminated in HCA in the appropriate columns. All operators should report onshore leaks for non-HCA pipe segments in the appropriate column; either MCA, Class 3 & 4 non-HCA & non-MCA, or Class 1 & 2 non-HCA & non-MCA including all leaks on pipelines that contain no HCAs and all leaks in non-HCA locations on pipelines in which HCAs exist. Do not include test failures.

Operators with pipe segments in HCA should also report the number of failures in HCAs, as required by §192.945 and ASME/ANSI B31.8S, Section 9.4(b)(4).

Integrity management performance measures are not required for gathering pipelines. For gathering pipelines, report only leaks. Report separately the number of leaks in Type A, Type B, and offshore gathering pipelines.

Leaks are **unintentional escapes of gas from the pipeline that are not reportable as Incidents under §191.3**. A non-hazardous release that can be eliminated by lubrication, adjustment, or tightening is not a leak. Operators should report the number of leaks repaired based on the best data they have available. For sections replaced and retired in place, operators should consider leak survey information to determine, to the extent practical, the number of leaks in the replaced section.

Failure is defined in ASME/ANSI B31.8S as a general term used to imply that a part in service: has become completely inoperable, is still operable but is incapable of satisfactorily performing its intended function; or has deteriorated seriously, to the point that it has become unreliable or unsafe for continued use. Failures that result in an unintentional release of gas should be reported as leaks.

Incidents are defined in §191.3 and are reported on Form PHMSA F 7100.2.

For the purposes of this Part M1, Leaks and Failures are to be classified as one of the following:

EXTERNAL CORROSION: includes releases or failures in the pipe or other component due to galvanic, bacterial, chemical, stray current, or other corrosive action initiating on the outside surface of the pipe. This includes the “External Corrosion” sub-cause on the PHMSA Gas Transmission/Gathering Incident Report

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

form.

INTERNAL CORROSION: includes releases or failures in the pipe or other component due to galvanic, bacterial, chemical, stray current, or other corrosive action initiating on the inside surface of the pipe. This includes the “Internal Corrosion” sub-cause on the PHMSA Gas Transmission/Gathering Incident Report form.

STRESS CORROSION CRACKING: includes releases or failures resulting from a form of environmental attack of the pipe metal involving an interaction of a local corrosive environment and tensile stresses in the metal resulting in formation and growth of cracks. This includes the “Environmental Cracking-related” sub-cause on the PHMSA Gas Transmission/Gathering Incident Report form.

MANUFACTURING: includes releases or failures caused by a defect or anomaly introduced during the process of manufacturing the pipe, including seam defects and defects in the pipe body or pipe girth weld. This includes the “Original Manufacturing Defect-related” sub-cause on the PHMSA Gas Transmission/Gathering Incident Report form.

CONSTRUCTION: includes releases or failures caused by a dent, gouge, excessive stress, or some other defect or anomaly introduced during the process of constructing, installing, or fabricating pipe (or welds which are an integral part of pipe), including welding or other activities performed at the facility. This includes the “Construction-, Installation-, or Fabrication-related” sub-cause on the PHMSA Gas Transmission/Gathering Incident Report form.

EQUIPMENT: includes releases from or failures of items other than pipe or welds, and includes releases or failures resulting from: malfunction of control/relief equipment including valves, regulators, or other instrumentation; compressors or compressor-related equipment; various types of connectors, connections, and appurtenances; the body of equipment, vessel plate, or other material (including those caused by: construction-, installation-, or fabrication-related and original manufacturing-related defects or anomalies; and low temperature embrittlement); and, all other equipment-related releases or failures. This includes all of the sub-causes under G6, Equipment Failure, on the PHMSA Gas Transmission/Gathering Incident Report form.

INCORRECT OPERATIONS: includes releases or failures resulting from operating, maintenance, repair, or other errors by operator or operator contractor personnel, including, but not limited to improper valve selection or operation, inadvertent overpressurization, or improper selection or installation of equipment. This includes all of the sub-causes under G7, Incorrect Operations, on the PHMSA Gas Transmission/Gathering Incident Report form.

THIRD PARTY DAMAGE/MECHANICAL DAMAGE: includes releases or failures resulting from damage caused by earth moving or other equipment, tools, or vehicles which occurs as a result of excavation activities or a release caused by vandalism or other similar intentional damage. Report separately, as indicated:

- **Excavation Damage** - includes releases or failures resulting directly from excavation damage by operator's personnel (oftentimes referred to as “first party” excavation damage) or by the operator’s contractor (oftentimes referred to as “second party” excavation damage)

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

or by people or contractors not associated with the operator (oftentimes referred to as “third party” excavation damage) This includes the Excavation Damage by Operator (First Party), Excavation Damage by Operator’s Contractor (Second Party), and Excavation Damage by Third Party sub-causes on the PHMSA Gas Transmission/Gathering Incident Report form.

- **Previous Damage (due to Excavation Activity)** - includes releases or failures that are determined to have resulted from previous damage due to excavation activity. This includes only the Previous Damage due to Excavation Activity sub-cause on the PHMSA Gas Transmission/Gathering Incident Report form.
- **Vandalism (includes all Intentional Damage)** – includes releases or failures due to willful or malicious destruction of the operator’s pipeline facility or equipment. This includes only the “Intentional Damage” sub-cause on the PHMSA Gas Transmission/Gathering Incident Report form.

WEATHER RELATED/OTHER OUTSIDE FORCE DAMAGE: includes releases or failures resulting from earth movement, earthquakes, landslides, subsidence, lightning, heavy rains/floods, washouts, flotation, mudslide, scouring, temperature, frost heave, frozen components, high winds, or similar natural causes, or a release from other, non-excavation-related outside forces, such as nearby industrial, man-made, or other fire or explosion; damage by vehicles, boats, fishing or maritime vessels or equipment; and, electrical arcing. Report separately, as indicated:

- **Natural Force Damage (all)** - This includes all of the sub-causes under G2, Natural Force Damage, on the PHMSA Gas Transmission/Gathering Incident Report form.
- **Other Outside Force Damage (excluding Vandalism and all Intentional Damage)** - This includes all of the sub-causes under G4 – Other Outside Force Damage except Intentional Damage, on the PHMSA Gas Transmission/Gathering Incident Report form.

OTHER: includes releases or failures resulting from any other cause not listed above, including those of a miscellaneous or unknown or unknowable nature. This includes both of the two sub-causes under G8, Other Incident Cause, on the PHMSA Gas Transmission/Gathering Incident Report form.

PART M2 –KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR
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Include all known leaks scheduled for elimination by repairing or by replacing pipe or some other component, indicating separately for transmission lines and gathering lines.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

PART M3 –LEAKS ON FEDERAL LAND OR OCS REPAIRED OR SCHEDULED FOR REPAIR

FEDERAL LANDS means all lands owned by the United States except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf (OCS), as defined in 30 USC 185.

Enter all leaks repaired, eliminated, or scheduled for repair during the reporting year, excluding those reported as incidents on Form PHMSA F 7100.2.

PART P – MILES OF PIPE BY MATERIAL AND CORROSION PREVENTION STATUS

For steel pipe, report the total miles of onshore and offshore transmission and gathering pipe that is cathodically protected and cathodically unprotected subdivided, in each case, into the amount that is bare and the amount that is coated pipe. **COATED** means pipe coated with an effective hot or cold applied dielectric coating or wrapper. For non-steel pipe, report the total miles of onshore and offshore pipe for each type listed.

Composite means pipe consists of two or more dissimilar materials layered together to be stronger than the individual materials. Use of composite pipe requires a PHMSA Special Permit or waiver from a State. Examples include, but are not limited to, fiber reinforced thermoplastic composite pipe, fiber reinforced thermosetting plastic pipe, steel reinforced thermoplastic pipe, and metallic composite pipe. If a dissimilar material has been inserted into older pipe, report the pipe as the material that contains the pressure.

Other means a pipe made of a material not specifically designated on the form, such as copper, aluminum, etc. Describe the other material(s) in the “specify” field.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

PART Q – Gas Transmission Miles by MAOP Determination Method

In the “Total” columns, operators report transmission pipeline miles by the MAOP determination method and by each combination of class location and HCA/MCA/Neither status.

A short explanation of each § 192.619 MAOP determination method and Other is:

§ 192.619 (paragraph)	Method Description
(a)(1)	Design Pressure
(a)(2)	Post-Construction Pressure Test
(a)(3)	Highest Actual Operating Pressure during 5 years preceding July 1, 1970 – this is <u>NOT</u> the Grandfather Clause
(a)(4)	History of Pipe (primarily corrosion and actual operating pressure)
(c)	Grandfather Clause - Highest Actual Operating Pressure during 5 years preceding 1970, even if this MAOP is higher than pressures determined by other (a) methods
(d)	Alternative MAOP under § 192.620(a) and Alternative MAOP Special Permits
Other	Use this category if you did not base your MAOP on any of the paragraphs within § 192.619 or § 192.624.

A short explanation of each Class Location and HCA is:

Location	Short Description (full detail in § 192.5)
Class 1	≤10 buildings intended for human occupants.
Class 2	<46 and >10 buildings intended for human occupants.
Class 3	≥46 buildings or an area within 100 yards of building/well defined area occupied by at least 20 persons at designated intervals.
Class 4	Any location where buildings with four or more stories above ground are prevalent.
High Consequence Area (HCA)	A location which is specifically defined in § 192.903. In general, a HCA is an area where a pipeline release could have greater consequence to human health and safety or the environment.

MCA is defined in Part 192. Transmission miles may only be entered under one of the MAOP determination methods. For each combination of class location and HCA/MCA/Neither shown on the form, report a segment of pipeline under only one MAOP determination method. The sum of all “Total” columns for each class location must be consistent with the class location data reported in Parts K and R. The sum of all “Total” columns in HCA must be consistent with HCA miles entered in Part L. The sum of all “Total” columns in HCA and MCA for each class location must be consistent with HCA and MCA miles for each class location entered in Part R. If miles are entered in any row of the Other column, enter text describing the Other method(s) used to establish MAOP.

For each combination of class location and HCA/MCA/Neither, except Classes 1 and 2 Neither, report the transmission miles for which the operator lacks complete records to verify the MAOP determination

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

method in the “Incomplete Records” column. The value in the “Incomplete Records” column must be less than or equal to the value in the “Total” column for each combination of class location and HCA/MCA/Neither. For the purpose of this part, “verification records” can include traceable, verifiable, and complete records demonstrating that the criteria of the MAOP determination have been met. For 619(a)(1), the “verification records” can include pipe mill tests (mechanical and chemical properties), as-built drawings, alignment sheets, specifications, and design, construction, inspection, and maintenance documents. For 619(a)(2), the “verification records” are pressure test records. For miles of transmission pipeline for which the operator has not completed the records review, include these miles in the “Incomplete Records” column. See PHMSA Advisory Bulletin (ADB) 2012-06 for additional details: <http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Pipeline/Regulations/AdvisoryBulletins/AD-12-06.pdf>

When reporting transmission miles for which 192.619(d) was used to establish MAOP, include miles of pipeline installed pursuant to a PHMSA Alternative MAOP Special Permit allowing operation up to 80% SMYS in Class 1 areas. From 2006 through 2010, PHMSA issued fifteen of these special permits with conditions equivalent to pipeline installed under 192.619(d). Alternative MAOP pipelines with MAOP determined by the limitations in 192.611(a)(1)(ii) or (a)(3)(iii) are to be reported as 619(d).

For pipeline systems placed in operation after July 1, 1970, selecting the MAOP determination method is fairly simple. Neither 619(a)(3) nor 619(c) are viable options. When the pressures calculated under (a)(1) and (a)(2) are identical, report the miles under (a)(2).

The MAOP for certain gas transmission pipelines placed in operation after July 1, 1970 may have been affected by a class location study under 192.609. The relevant limitations on MAOP after these studies are in Part 192.611. Any gas transmission pipeline with MAOP reduced pursuant to Part 192.611 should be reported under the appropriate 619(a) section. For segments of gas transmission pipeline where the reductions in 192.611 were not implemented due to a waiver/special permit from PHMSA or a predecessor agency, report the miles under the MAOP determination method used prior to the waiver/special permit.

For pipeline systems placed in operation before July 1, 1970, the situation is more complicated. Operators could either implement 619(c) or determine a pressure under each of the 619(a) options and choose the lowest value as MAOP. For segments of pipe operating at more than 72% SMYS in class one locations, 192.619(c) is the only viable option. 192.619(c) is referred to as the Grandfather Clause and can be the MAOP determination method for pipe operated before July 1, 1970 regardless of the ability to determine pressure values under 192.619(a)(1) and (a)(2).

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

After the original effective date of Part 192, gas pipeline operators established MAOP under the 192.619 options in the original regulations. Some of these 619 options are no longer in Part 192 or have a different section designation. The table below provides instruction for proper reporting of these original code sections:

Original Part 192 Section	Original 619 Text	Report in Part Q
619(a)(4)	For furnace butt welded steel pipe, a pressure equal to 60 percent of the mill test pressure to which the pipe was subjected.	619(a)(1)
619(a)(5)	For steel pipe other than furnace butt welded pipe, a pressure equal to 85 percent of the highest test pressure to which the pipe has been subjected, whether by mill test or by the post installation test.	619(a)(2)
619(a)(6)	The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.	619(a)(4)

The original Part 192 also required class location studies under 192.607 for certain pipelines in service before July 1, 1970. When a class location study, under either 192.607 or 192.609, finds that MAOP needs to be reduced, Part 192.611 provides guidance for determining the MAOP. Proper reporting of the MAOP determination method depends on whether the pipe was replaced with new pipe or the MAOP was reduced for existing pipe. Report any portion of new pipe under the appropriate 619(a) section, but (a)(3) is no longer a viable option. No change in MAOP determination method occurs for pipe within the class location study area whose MAOP was not reduced. When MAOP is reduced on existing pipe, report the miles under the appropriate 619(a) section, but (a)(3) is no longer a viable option.

PART R - Gas Transmission Miles by Pressure Test (PT) Range and Internal Inspection

For Part R, enter miles of gas transmission pipe in each of the five pressure test ranges with each range divided into miles able to be internally inspected and miles unable to be internally inspected. All gas transmission miles must be reported in this part. The miles entered for each class location must be consistent with the class location data entered in Parts K and Q. The sum of HCA miles must be consistent with HCA miles entered in Part L. The HCA and MCA miles in each class location must be consistent with HCA and MCA miles for each class location entered in Part Q.

If an operator is uncertain whether a gas transmission pipeline has been subjected to a post-construction pressure test, report the miles in the “1.1 MAOP > PT or No PT” section. Operators may consider elevation changes when deciding on the appropriate pressure test range and report the miles in the appropriate pressure range. During a hydrostatic pressure test, the recorded test pressure is the lowest pressure during the test calculated at the highest elevation point. This test pressure may put the bulk of the mileage in the 1.1 to 1.25 times MAOP range. Some pipeline at lower elevations could have experienced test pressures higher than 1.25 times MAOP and could be reported in the between 1.25 and 1.39 times MAOP range.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

“Miles Internal Inspection ABLE” means a length of pipeline through which commercially available devices can travel, inspect the entire circumference and wall thickness of the pipe, and record or transmit inspection data in sufficient detail for further evaluation of anomalies. If an operator is uncertain whether a gas transmission pipeline is able to be internally inspected, report the miles in the “Miles Internal Inspection NOT ABLE” column.

PART S – Gas Transmission Verification of Materials (192.607)
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For Part S, enter miles of gas transmission pipe for which the material was verified as described in 192.607 during the year. Report the miles by Class Location and HCA/MCA/Neither. Report the number of 192.607 test locations for the year by Class Location and HCA/MCA/Neither.

PART T – HCA Miles by Determination Method and Risk Model Type

Deferred until CY 2022 data submitted during 2023

HCA Method 1 and HCA Method 2 are defined in 49 CFR Part 192.903.

Descriptions of each Risk Model Type:

Subject Matter Expert (SME) models combine opinions and observations with information obtained from technical literature to provide a relative numeric value describing the likelihood of failure for each threat and the resulting consequences (Unit-less measure of risk). The SMEs analyze each pipeline segment, assign relative likelihood and consequence values, and calculate a relative risk score that can be compared to other assets modelled in the same manner.

Relative Risk models build on pipeline-specific experience and data, and include the development of risk models addressing the known threats that have historically impacted pipeline operations. Such relative or data-based methods identify and quantitatively sum values representing the threats and consequences relevant to past pipeline operations (Unit-less measure of risk). These approaches are considered relative risk models since the risk results are compared with results generated from the same model.

Quantitative models are expressed in terms of numerical quantity or involving the numerical measurement of quantity or amount. Quantitative models contain input that is quantitative and output that is quantitative and measured in units. Model logic may or may not conform to laws of probability or to represent physical and logical relationships of risk factors. A quantitative risk model may use an algorithm that models the physical and logical relationships of risk factors to estimate quantitative outputs for likelihood and consequences and represents the outputs in standard units such as frequency, probability, and expected loss. These approaches are considered quantitative models since the risk results are in quantified units and may be directly compared with results generated from other assets using the same model.

Instructions (rev 10-2021) for Form PHMSA F 7100.2-1 (rev 10-2021)
ANNUAL REPORT FOR CALENDAR YEAR 20__
NATURAL AND OTHER GAS TRANSMISSION AND GATHERING PIPELINE SYSTEMS

Probabilistic models contain inputs that are quantities or probability distributions and produce outputs that are probability distributions. Model logic attempts to adhere to laws of probability. These models provide risk output in a format that is compared to identified risk probabilities or criteria established by the operator, rather than using a comparative basis.

Scenario-Based models generate a description of an event or series of events leading to a level of risk, and includes both the likelihood and consequences of such events. This method usually includes construction of event trees, decision trees, and fault trees. From these constructs, risk mitigation strategies are identified and risk reduction values are determined.

For the designated Commodity Group, complete Part N one time for all of the pipeline facilities included within this OPID. Complete Part O one time for all the pipeline facilities included within this OPID if any Part L HCA mile value is greater than zero.

PART N – PREPARER SIGNATURE

The Preparer is the person who compiled the information and prepared the responses to the Report. Enter the Preparer's name, title, e-mail address, phone number. PHMSA will contact the Preparer if data quality checks raise questions about the report.

PART O – CERTIFYING SIGNATURE

CERTIFYING SIGNATURE must be a senior executive officer of the operator. The Pipeline Inspection, Protection, Enforcement and Safety Act (49 U.S.C. 60109(f)) requires pipeline operators to have a senior executive officer of the company sign and certify annual pipeline Integrity Management Program (IMP) performance reports - portions of Parts M1, F, G, and L. By this signature, the senior executive officer is certifying that he or she has (1) reviewed the Report and (2) to the best of his or her knowledge, believes the Report is true and complete. Entering the senior executive officer's name onto the electronic Report is equivalent to a paper submission and has the same legal authenticity and requirements.