

# INTEGRATED CONTINGENCY PLAN



## Kinder Morgan Galena Park Terminal

906 Clinton Drive  
Galena Park, Texas 77547

**EPA: TXD026481523**

**Owner/Operator:**

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Houston, TX 77002  
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**24-Hour Number:**

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**VOLUME 1 OF 1**

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## I-1 PURPOSE AND SCOPE OF PLAN

This Integrated Contingency Plan (ICP) is designed to follow the National Response Team's (NRT) Integrated Contingency Plan Guidance (Federal Register # 61: 28641-28664). This ICP is a mechanism to consolidate multiple plans that the Terminal is required to maintain.

The purpose of this Plan is to help Terminal personnel prepare for and respond quickly and safely to a spill incident originating at the Terminal. The Plan's primary purpose is to ensure an effective, comprehensive response and prevent injury or damage to Terminal employees, the public and the environment.

The specific objectives of the Plan are to:

- Define alert and notification procedures to be followed when a spill incident occurs.
- Document equipment, manpower and other resources available to assist with a spill incident response.
- Describe an oil spill response team, assign individuals to fill the positions on the team, and define the roles and responsibilities of team members.
- Define organizational lines of responsibility to be adhered to during a spill incident response.
- Outline response procedures and techniques to be used during a spill incident.
- Provide guidelines for handling a spill response operation.

Herein after everything referred to as Terminal applies to both, the Kinder Morgan Pasadena and Galena Park Terminal as they relate to this portion of the core section of the Integrated Contingency Plan for both facilities.

## I-2 CONSISTENCY WITH NCP AND ACP

This ICP has been prepared and is maintained in accordance with the policies and information contained in the National Contingency Plan (NCP) as well as in the applicable Area Contingency Plans and their corresponding geographically specific requirements.

### Areas of concern regarding consistency with NCP and ACP:

•	Identification of environmentally and economically sensitive areas potentially impacted by a spill
•	Descriptions of Terminal's response strategies and responsibilities
•	Integration of Terminal's response efforts with those of the federal, state and local agencies

## I-3 PLAN IMPLEMENTATION AND UPDATE PROCEDURES

### I-3.1 Plan Implementation

The Plan and the Terminal's Spill Response Team become effective immediately upon notification of any type of spill, leak or emergency situation occurring at the Facility.

The specific action taken to control, contain and clean up a spill will vary with the type of product spilled, and type of incident that has occurred. The Incident Commander will analyze the situation and exercise good judgment in formulating the best action plan for the type of incident that occurs. For initial Emergency Response Actions, see Section II. Relevant portions of this plan will be available to the qualified individuals, and maintained at locations throughout the facilities from which response activities may be conducted.

Precautionary measures will be taken, as deemed appropriate by the Incident Commander, in consultation with the incident command structure, to prevent a release. The Commander will consider population, environmentally sensitive areas, pipeline or facility system design, and operating and maintenance practices when determining what precautionary measures to implement. These precautionary measures may include increasing patrols on pipelines, decreasing operating pressures, or shutting in lines, etc.

### I-3.2 Plan Review and Update Procedures

This spill response plan will be revised on an annual basis, critiqued after responses, and updated as deemed necessary. The EH&S Manager and/or their designee, will be responsible for updating this plan as necessary, but at least annually.

Reviewing and updating this Plan shall be the responsibility of the Terminal Manager. Revisions to the Plan may result from:

- Scheduled annual reviews
- As a result of conducting formal drills and training exercises;
- A response to an accidental discharge;
- A change in the facility's configuration that materially alters the information included in the response plan; and
- A material change at the facility (or with a contracted OSRO) which alters the required response capabilities and/or resources.

The plan will be reviewed and updated for the following:

- Review of the facility configuration which may affect the plan
- Review of the types of oil groups/substances handled at the facility
- Review of the primary OSRO and their capabilities
- Changes in the Kinder Morgan Emergency Response Team members and IMS personnel changes
- Review of dock changes and updates
- Review of compliance with the applicable Contingency Plan requirements and consistency with the Area Contingency Plan
- Update changes in worst case discharge volumes
- Update changes in response procedures
- Update changes in ownership

Changes made to the response plan shall be submitted to the appropriate agencies and organizations within 30 days of making the revisions or as required. In accordance with 49 CFR 194.121(a), the response plan shall be reviewed and resubmitted to PHMSA every 5 years from the most recent approval date of the plan. If the plan is still current, then a letter shall be submitted to PHMSA that states that the latest response plan on file with the agency is still current and serves as the resubmitted plan for PHMSA to review and approval.

Members of the emergency response team following exercises or actual incidents will perform critiques of the response plan. The results of the critique will be assessed and incorporated in the response plan as deemed necessary by the Regional EHS Manager.

All revisions to the Plan shall be distributed to all Plan holders. In addition, any material or significant changes at the Terminal that mandate a change in this Plan are described below and shall be submitted to the appropriate regulatory agency.

### **I-3.3 USCG Plan Revisions**

A Kinder Morgan Terminal must review the response plan(s) annually. This review shall incorporate any revisions to the plan, including listings of fish and wildlife and sensitive environments identified in the ACP in effect 6 months prior to plan review.

For the Marine Transportation Related (MTR) portion of the terminal, this review must occur within one month of the anniversary date of COTP approval of the plan. For that portion of the MTR identified as a "substantial harm facility" this review must occur within 1 month of the anniversary date of submission of the plan to the COTP.

The terminal shall submit any revision(s) to the response plan to the COTP and all other holders of the response plan for information or approval, as appropriate.

Along with the revisions, the terminal shall submit a cover letter containing a detailed listing of all revisions to the response plan. If no revisions are required, then the terminal shall indicate the completion of the annual review on the record of changes page.

The COTP will review the revision(s) submitted by the terminal and will give written notice to the owner or operator of any COTP objection(s) to the proposed revisions within 30 days of the date the revision(s) were submitted to the COTP. The revisions shall become effective not later than 30 days from their submission to the COTP unless the COTP indicates otherwise in writing as provided in this paragraph. If the COTP indicates that the revision(s) need to be modified before implementation, the terminal will then modify the revision(s) within the time period set by the COTP.

In a previously submitted or approved plan to the COTP and all other holders of the response plan for information or approval within 30 days, whenever there is:

- A change in the Terminal's configuration that significantly affects the information included in the response plan;
- A change in the type of oil (petroleum oil group) handled, stored or transported that affects the required response resources;
- A change in the name(s) or capabilities of the oil spill removal organization;
- A change in the Terminal's emergency response procedures;
- A change in the Terminal's operating area that includes ports or geographic area(s) not covered by the previously approved plan. A Terminal may not operate in an area not covered in a plan previously submitted or approved, as appropriate, unless the revised plan is approved or interim operating approval is received;
- Any other changes that significantly affect the implementation of the plan.

Revisions to personnel and telephone number lists included in the response plan do not require COTP approval. The COTP and all other holders of the response plan shall be advised of these revisions and provided a copy of the revisions as they occur.

The COTP may require a Terminal to revise a response plan at any time as a result of a compliance inspection if the COTP determines that the response plan does not meet the requirements or as a result of inadequacies noted in the response plan during an actual pollution incident at the Terminal.

#### **I-3.4 EPA Plan Revisions**

The Terminal for which a response plan is required shall revise and resubmit revised portions of the response plan within 60 days of each Terminal change that materially may affect the response to a worst case discharge, including:

- A change in the Terminal's configuration that materially alters the information included in the response plan;
- A change in the type of oil handled, stored or transferred that materially alters the required response resources;
- A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil;
- A material change in the Terminal's spill prevention and response equipment or emergency response procedures; and
- Any other changes that materially affect the implementation of the response plan.

For a "Complex Facility" plan EPA associated amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that does not result in a material change in support capabilities do not require approval by the Regional Administrator. Our Terminals shall provide a copy of such changes to the Regional Administrator as the revisions occur.

### **I-3.5 DOT Plan Revisions**

Each Terminal shall review its response plan at least every 5 years from the date of submission and modify the plan to address new or different operating conditions or information included in the plan.

If a new or different operating condition or information would substantially affect the implementation of a response plan, the Terminal must immediately modify its response plan to address such a change and within 30 days of making such a change, submit the change to PHMSA. Examples of changes in operating conditions that would cause a significant change to an operator's response plan are:

- An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by the previously approved plan;
- Relocation or replacement of the pipeline in a way that substantially affects the information included in the response plan, such as a change to the worst case discharge volume;
- The type of oil transported, if the type affects the required response resources, such as a change from crude oil to gasoline;
- The name of the oil spill removal organization;
- Emergency response procedures;
- The qualified individual;
- A change in the NCP or an ACP that has significant impact on the equipment appropriate for response activities; and
- Any other information relating to circumstances that may affect full implementation of the plan.

In addition, the Terminal will review and re-submit this Plan to the U.S. DOT Pipeline and Hazardous Materials Safety Administration (PHMSA) for approval every 5 years from the last Plan approval date.

## I-4 GENERAL FACILITY IDENTIFICATION INFORMATION

The Terminals geographic area and type of operations has its own unique challenges. In the guidance provided for by the National Response Teams ICP format all geographic specific operations and their corresponding regulatory requirements are found in the appropriate ICP Geographical Annexes to this plan. The corresponding terminal specific information will also be found in the applicable ICP Geographical Annex.

Required emergency response notifications will be made during any emergency response operation. Refer to the Annex Notification Section located in this plan for contact information.

Emergency response operations involve actions taken at, or in close proximity to, the site of an incident that are designed to mitigate the situation, establish unified command and control over the incident, ensure the safety of responders and general public, develop plans of action, and facilitate communications. Emergency response operations also include actions taken away from the incident scene to support on-scene response operations, facilitate planning, address the concerns of external parties, and manage the financial aspects of response operations.

This plan demonstrates the potential response capabilities available by the Terminal to respond to any product release within the United States. It is not a guarantee of what will occur or the equipment/deployment sequencing that will be used in an actual spill event. Nothing in this plan is intended to limit the discretion of Terminal employees to select any sequence of actions or to take whatever time they deem necessary to maximize the effectiveness of the response, consistent with safety considerations.

This plan represents a planning standard but is not and should not be regarded as a performance guarantee. Response operations in any spill event will be tailored to meet the actual circumstances.

This response plan contains information applicable to the Terminals. This plan applies to emergency response operations carried out by the on-site field personnel and other emergency response assets that may be utilized by contract or other means.

The plan contains prioritized procedures for personnel to follow in the event of a release or other emergency situation involving Kinder Morgan assets.



## I-5 MANAGEMENT CERTIFICATION

### MANAGEMENT CERTIFICATION

The undersigned, the owner or operator of the facility who is authorized to sign this certificate on behalf of this facility, hereby certifies that the facility has prepared a response plan which will be implemented in the event of a worst case discharge of oil. I also certify that the plan is in effect at the facility, and that facility personnel are trained in the implementation of the plan.

I further certify that the availability of private personnel and equipment necessary to response, to the maximum extent practicable, to a worst case discharge or a substantial threat of a discharge is ensured by a contract or other approved means.

I certify that the facility has reviewed the National Contingency Plan (NCP) and the applicable Regional Contingency Plan (RCP) and Area Contingency Plans (ACP) (Region VI and Central Texas Area Contingency Plan). The plan submitted is consistent with the NCP and the ACP.

CERTIFICATION SIGNATURE:

\_\_\_\_\_  
PRINTED NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

## I-6 GLOSSARY/ACRONYMS

### I-6.1 Glossary

Term	Definition
<b>A</b>	
<b>Absorbent Material</b>	Any of several materials designed to absorb oil, both hydrocarbon and non-hydrocarbon.
<b>Access/Staging Areas</b>	Designated areas offering access to spill sites for the gathering and deployment of spill response equipment and personnel.
<b>Adverse Weather</b>	The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operation environment. Factors to consider include significant wave height, ice, temperature, weather-related visibility, and currents within the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.
<b>Agency Representative</b>	Individual assigned to an incident from an assisting or cooperating agency that has been delegated full authority to make decisions on all matters affecting his/her agency's participation at the incident.
<b>Air Operations Branch Director</b>	The person primarily responsible for preparing and implementing the air operations portion of the Incident Action Plan. Also responsible for providing logistical support to helicopters assigned to the incident.
<b>Alert</b>	Means an incident has occurred at the terminal that has the potential to affect off-site locations.
<b>Allocated Resources</b>	Resources dispatched to an incident.
<b>Alteration</b>	Any work on a tank or related equipment involving cutting, burning, welding, or heating operations that changes the physical dimensions or configuration of a tank.
<b>Area</b>	The geographic area for which a separate and distinct Area Contingency Plan has been prepared as described in the Oil Pollution Act of 1990. For EPA Areas with sub-area plans or annexes to the Area Contingency Plan, the EPA Regional Administrator will decide which sub-area is to be exercised within the triennial cycle.
<b>Area Committee (AC)</b>	Area Committees are those committees comprised of Federal, State and Local officials, formed in accordance with Section 4202 of the Oil Pollution Act of 1990, whose task is to prepare an Area Contingency Plan for the Area for response to a discharge of oil or hazardous substance.
<b>Area Spill Management Team</b>	The Area Spill Management Team is the group of individuals within the Coast Guard or EPA OSC organization with responsibility for spill response management within the respective Area.

Term	Definition
<b>A (Continued)</b>	
<b>Assigned Resources</b>	Resources checked-in and assigned work tasks on an incident.
<b>Assignments</b>	Tasks given to resources to perform within a given operational period, based upon tactical objectives in the Incident Action Plan.
<b>Assistant</b>	Title for subordinates of the Command Staff positions. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions. Assistants may also be used to supervise unit activities at camps.
<b>Assisting Agency</b>	An agency directly contributing tactical or service resources to another agency.
<b>Available Resources</b>	Incident-based resources that are immediately available for assignment.
<b>Average Most Probable Discharge</b>	(Small Oil Spill) – The size of the discharge as defined in 33 CFR 154.1020 (a discharge of the lesser of 50 barrels or 1 percent of the volume of the worst case discharge), 33 CFR 155.1020 (a discharge of 50 barrels of oil from the vessel during oil transfer operations) – (for Coast Guard regulated facilities & vessels); for EPA, the tiered planning quantity of 2,100 gallons or less, provided this amount is less than the worst case discharge; for PHMSA and BOEMRE, the size of the discharge as defined in each agency’s respective regulations, as appropriate; and the size of the discharge as defined in the respective Area Contingency Plan.
<b>B</b>	
<b>Barrel</b>	42 U.S. gallons
<b>Base</b>	The location as which the primary logistics functions are coordinated and administered. The Incident Command Post may be collocated with the base. There will only be one base per incident.
<b>Boom</b>	Any number of specially designed devices that float on water and are used to contain or redirect the flow of oil on the waters surface.
<b>Boom Deployment</b>	The methodology for installing boom based on differing water depths, currents, wave heights, etc.
<b>Booming Strategies</b>	Techniques which identify the location, quantity, and type of boom required to protect differing water bodies and their shore lines. These strategies are developed by identifying potential spill scenarios and assuming certain conditions which affect oil movement on water.

Term	Definition
<b>B (Continued)</b>	
<b>Branch</b>	The organizational level having functional/geographic responsibility for major incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section.
<b>C</b>	
<b>Cache</b>	A pre-determined complement of tools, equipment, and/or supplies stored in a designated location, and available for incident use.
<b>Camp</b>	A geographical site, within the general incident area, separate from the base, equipped and staffed to provide sleeping areas, food, water, and sanitary services to incident personnel.
<b>Captain of the Port Zone (COTP)</b>	Refers to a zone specified in 33 CFR Part 3 and the seaward extension of that zone to the outer boundary of the exclusive economic zone (EEZ).
<b>CERCLA</b>	The Comprehensive Environmental Response, Compensation Liability Act regarding hazardous substance releases into the environment and the cleanup of inactive hazardous waste disposal sites.
<b>Certification</b>	The act of confirming that an exercise: 1) was completed, 2) met the required objectives, and 3) was evaluated to determine effectiveness of the response plan based on exercise performance.
<b>Check-In</b>	The process whereby resources first report to an incident response. Check-in locations include: Incident Command Post (Resources Unit), Incident Base, Camps, Staging Areas, Heli-bases and Division/Group Supervisors (for direct line assignments).
<b>CHEMTREC</b>	Chemical Transportation Emergency Center which provides information and/or assistance to emergency responders. Can be reached 24 hours a day by calling 800-424-9300.
<b>Chief</b>	The ICS title of individuals responsible for command of functional sections: Operations, Planning, Logistics, and Finance/Administration.
<b>Channel Industry Mutual Aid</b>	Mutual Aid Assistance from Channel Industry responders and local Emergency Responders
<b>Clean-up</b>	For the purposes of this document, clean-up refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Clean up includes restoration of the site and its natural resources.

Term	Definition
<b>C (Continued)</b>	
<b>Clean-up Contractor</b>	Non-Terminal person contractually engaged to respond and clean up an oil spill.
<b>Clear Text</b>	The use of plain English in radio communications transmissions. No Ten Codes nor agency specific codes are used when using Clear Text.
<b>Coastal Waters</b>	All tidally influenced waters extending from the head of tide seaward to the three marine league limit of state jurisdiction; and non-tidally influenced waters extending from the head of tide in the arms inland to the point at which navigation by regulated vessels is naturally or artificially obstructed.
<b>Command</b>	The act of directing, ordering, and/or controlling resources by virtue of explicit legal, agency, or delegated authority. May also refer to the Incident Command/Unified Command.
<b>Command Post</b>	A site located in the cold zone where response decisions and activities can be planned, coordinated, and managed. The Incident Commander and regulatory On-Scene Coordinator(s) may operate from this location.
<b>Command Staff</b>	It consists of the Information Officer, Safety Officer and Liaison Officer, who report directly to the Incident Commander. They may have an assistant or assistants, as needed.
<b>Communication Equipment</b>	Equipment that will be utilized during response operations to maintain communication between employees, contractors, Federal/State/Local agencies. (Radio/telephone equipment and links).
<b>Communications Unit</b>	A vehicle (trailer or mobile van) used to provide the major part of an incident Communications Center.
<b>Complex Facility</b>	A Terminal possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under Section 311(j) of the CWA.
<b>Containment Boom</b>	A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.
<b>Contamination Reduction Zone</b>	The area between the contaminated zone and the clean zone. This area is designed to reduce the probability that a clean zone will become contaminated. Also known as the warm zone.
<b>Contingency Plan</b>	A document used by (1) Federal, State, and Local agencies to guide ties planning and response procedures regarding spill of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.

Term	Definition
<b>C (Continued)</b>	
<b>Contract or Other Approved Means</b>	<ol style="list-style-type: none"> <li>1. A written contractual agreement with a response contractor. The agreement should identify and ensure the availability of the specified personnel and equipment described under this plan within stipulated response times in the specified geographic areas;</li> <li>2. Certification by the Terminal owner or operator that the specified personnel and equipment described under this plan are owned, operated, or under the direct control of the Terminal owner or operator, and are available within the stipulated times in the specified geographic areas;</li> <li>3. Active membership in a local or regional oil spill removal organization that has identified specific personnel and equipment described under this plan that are available to respond to a discharge within stipulated times in the specified geographic areas;</li> <li>4. A document which: <ol style="list-style-type: none"> <li>a) Identifies the personnel, equipment, services, capable of being provided by the response contractor within stipulated response times in specified geographic areas;</li> <li>b) Sets out the parties' acknowledgment that the response contractor intends to commit the resources in the event of a response;</li> <li>c) Permits the Coast Guard to verify the availability of the response resources identified through tests, inspections and drills; and</li> <li>d) Is incorporated by reference in the response plan; or</li> </ol> </li> <li>5. With the written consent of the response contractor or the oil spill removal organization, the identification of a response contractor or oil spill removal organization with specified equipment and personnel which are available within stipulated response times in specific geographic areas: <ol style="list-style-type: none"> <li>a) For a Terminal that could reasonably be expected to cause substantial harm to the environment;</li> <li>b) For a Terminal that handles, stores, or transports Group V petroleum oil; and</li> <li>c) For a Terminal that handles, stores, or transports non-petroleum oil.</li> </ol> </li> </ol>
<b>Cooperating Agency</b>	An agency supplying assistance other than direct tactical, support, or service functions or resources to the incident control effort (e.g., Red Cross, telephone Terminal, etc.).

Term	Definition
<b>C (Continued)</b>	
<b>Cost Unit</b>	Functional unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.
<b>Critical Areas</b>	Areas which, if impacted by a spill, may result in threats to public health and/or safety.
<b>Crude Oil</b>	Any liquid hydrocarbon mixture occurring naturally in the earth, whether or not treated to render it suitable for transportation, and includes crude oil from which certain distillate fractions may have been removed and crude oil to which certain distillate fractions may have been added.
<b>Cultural Resources</b>	Current, historic, prehistoric, and archaeological resources which include deposits, structures, sites, ruins, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to historical or prehistoric culture of people as well as the natural history of the state.
<b>D</b>	
<b>Damage Assessment</b>	The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.
<b>Decontamination</b>	The removal of hazardous substances from personnel and equipment necessary to prevent adverse health effects.
<b>Deputy</b>	A fully qualified individual who in the absence of a superior, could be delegated the authority to manage a functional operation or perform a specific task. In some cases a Deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies can be assigned to the Incident Commander, General Staff, and Branch Directors.
<b>Demobilization Unit</b>	Functional unit within the Planning Section responsible for assuring orderly, safe and efficient demobilization of incident resources.
<b>Director</b>	The ICS title for individuals responsible for supervising a Branch.
<b>Discharge</b>	Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.
<b>Discharge Clean-up Organization</b>	A corporation, proprietorship, partnership, Refiner/Terminal organization, or association that has as its primary function, engaged itself in the response to clean up and removal of spills of oil or hazardous substance.

Term	Definition
<b>D (Continued)</b>	
<b>Dispatch</b>	To move resources from one place to another.
<b>Dispersants</b>	Those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.
<b>Diversion Boom</b>	A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert floating product towards a pick up point or away from certain areas.
<b>Division</b>	The organization level having responsibility for operation within a defined geographic area or with functional responsibility. The Division level is organizationally between the Task Force/Strike Team and the Branch.
<b>Documentation Unit</b>	Functional unit within the Planning Section responsible for collecting, recording and safeguarding all documents relevant to the incident.
<b>Duty Officer</b>	Terminal/Terminal Manager representative in off-hours that ensures adherence to established operational procedures..
<b>E</b>	
<b>Emergency Planning Zone</b>	The area designated by the jurisdiction boundaries of those communities that are within a radial distance of one-half mile from the terminal.
<b>Emergency Medical Technician (EMT)</b>	A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.
<b>Emergency Operations Center (EOC)</b>	A pre-designated Terminal established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an emergency response.
<b>Emergency Response</b>	The response to any occurrence that results, or is likely to result in a release of a hazardous substance due to an event.
<b>Emergency Management Team (EMT)</b>	Group of personnel identified by management to staff the appropriate organizational structure and manage spill response implementation in accordance with the response plans.
<b>Emergency Service</b>	Those activities provided by the state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.
<b>Environmentally Sensitive Areas (ESA)</b>	Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.
<b>Equipment Activation</b>	The movement, staging, deployment and/or operation of response equipment as determined by the plan holder in consultation with the exercise design team.
<b>Equipment Deployment Exercise</b>	An equipment deployment exercise is an exercise where response equipment is deployed to a specific site and operated in its normal operating medium.

Term	Definition
<b>E (Continued)</b>	
<b>ERT</b>	Emergency Response Team
<b>Estuary</b>	Unique environment at the mouth of coastal rivers where fresh water and sea water meet, providing important habitat for marine life, birds, and other wildlife.
<b>Exclusion Zone</b>	The area where contamination does or may occur.
<b>Exclusive Economic Zone</b>	The zone contiguous to the territorial sea of the United States extending to a distance up to 200 nautical miles from the baseline from which the breadth of the territorial sea is measured.
<b>Exercise Design Team</b>	A team comprised of federal, state and industry representatives with responsibility for designing an Area Exercise. The exercise design team is charged with working with the lead plan holder to develop the scope, parameters and exercise scenario, although the lead plan holder retains the final decision on these.
<b>F</b>	
<b>Facilities Unit</b>	Functional unit within the Support Branch of the Logistics Section that provides fixed facilities for the incident. These facilities may include the Incident Base, feeding areas, sleeping areas, sanitary facilities, etc.
<b>Facility</b>	Any pipeline, structure, equipment, or device used for handling oil including, but not limited to, underground and aboveground storage tanks, impoundments, mobile or portable drilling or workover rigs.
<b>Facility That Could Reasonably Be Expected to Cause Significant and Substantial Harm</b>	Any fixed MTR on-shore Terminal (including piping and any structures that are used for the transfer of oil between a vessel and a Terminal) that is capable of transferring oil, in bulk, to or from a vessel of 250 barrels or more, and a deepwater port. This also includes any Terminal specifically identified by the COTP.
<b>Facility That Could Reasonably Be Expected to Cause Substantial Harm</b>	Any mobile MTR Terminal that is capable of transferring oil to or from a vessel with a capacity of 250 barrels or more. This also includes any Terminal specifically identified by the COTP.
<b>Federal On-Scene Coordinator (FOSC)</b>	The pre-designated Federal On-Scene Coordinator operating under the authority of the National Contingency Plan (NCP).
<b>Finance / Administration Section</b>	The Section responsible for all incident costs and financial considerations. Includes the Time Unit, Procurement Unit, Compensation/Claims Unit and Cost Unit.
<b>First Responders, First Response Agency</b>	A public health or safety agency (i.e., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

Term	Definition
<b>F (Continued)</b>	
<b>Fish and Wildlife and Sensitive Environments</b>	Areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.
<b>Food Unit</b>	Functional unit within the Service Branch of the Logistics Section responsible for providing meals for incident personnel.
<b>Function</b>	In ICS, function refers to the five major activities in the ICS, i.e., Command, Operations, Planning, Logistics, and Finance/Administration. The term function is also used when describing the activity involved, e.g., "the planning function."
<b>G</b>	
<b>General Emergency</b>	An incident has occurred and the affected community is implementing protective actions.
<b>General Staff</b>	The group of incident management personnel comprised of: Incident Commander, Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance/Administration Section Chief.
<b>Geographic Information System (GIS)</b>	An electronic information system that provides a geo-referenced data base to support management decision-making.
<b>Geographic Response Site (GRS)</b>	Emergency planning/response geographical site.
<b>Ground Support Unit</b>	Functional unit within the Support Branch of the Logistics Section responsible for fueling, maintaining, and repairing vehicles, and the ground transportation of personnel and supplies.
<b>Group</b>	Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division.) Groups are located between Branches (when activated) and Single Resources in the Operations Section.

Term	Definition
<b>H</b>	
<b>Handle</b>	To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.
<b>Harmful Quantity of Oil</b>	The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen or discoloration upon water, shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.
<b>Hazardous Chemicals</b>	All chemicals that constitute a physical hazard or a health hazard as defined by 29 CFR 1910.1200, with the exceptions listed in section 311(e). This term comprises approximately 90 percent of all chemicals.
<b>Hazardous Material</b>	Any non-radioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.
<b>Hazardous Substance</b>	Any substance designed as such by the Administrator of the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act, regulated pursuant to Section 311 of the Federal Water Pollution Control Act, or discharged by the TWC.
<b>Hazardous Waste</b>	Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.
<b>Health Hazard</b>	A chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.
<b>Helibase</b>	A location within the general incident area for parking, fueling, maintaining, and loading helicopters.
<b>Helispot</b>	A location where a helicopter can take off and land. Some helispots may be used for temporary loading.
<b>High Consequence Area (HCA)</b>	Includes commercially navigable waterway, a high population area, other populated area, (which means a place, as defined and delineated by the Census Bureau, that contains a concentrated population, such as an incorporated or unincorporated city, town, village, or other designated residential or commercial area), and an unusually sensitive area, as defined in §195.6

Term	Definition
I	
<b>High Population Area (HPA)</b>	Urbanized area, as defined and delineated by the Census Bureau that contains 50,000 or more people and has a population density of at least 1,000 people per square mile.
<b>Immediate Response Steps</b>	The immediate steps that are to be taken by the spill observer after detection of a spill.
<b>Incident</b>	Any event that results in the spill or release of oil or hazardous materials.
<b>Incident Action Plan (IAP)</b>	Is initially prepared at the first meeting, contains general control objectives reflecting the overall incident strategy, and specific action plans for the next operational period. When complete, the Incident Action Plans will include a number of attachments.
<b>Incident Area</b>	Legal geographical area of the incident including affected area(s) and traffic route(s) to corresponding storage and disposal sites.
<b>Incident Base</b>	See "BASE"
<b>Incident Commander</b>	The individual responsible for all emergency response efforts.
<b>Incident Command Post (ICP)</b>	The location at which the primary command functions are executed; may be collocated with the incident base.
<b>Incident Command System</b>	A standardized on-scene emergency management system specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.
<b>Incident Communication Center</b>	The location of the Communications Unit and the Message Center.
<b>Incident Management Handbook (IMH)</b>	The IMH is intended to be used as an easy reference job aid for responders; designed to assist responders in the use of the National Incident Management System (NIMS) Incident Command System (ICS) during response operations.
<b>Incident Objectives</b>	Statements of guidance and direction necessary for the selection of appropriate strategies, and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.
<b>Incident Situation Display</b>	The Situation Unit is responsible for maintaining a display of status boards that communicate critical incident information vital to establishing and maintaining an effective command and control environment.

Term	Definition
<b>I (Continued)</b>	
<b>Industry</b>	For the purpose of these guidelines, industry means the oil and hazardous substance industry required to submit response plans and comply with exercise requirements, as specified in appropriate vessel, Terminal, pipeline, and Outer Continental Shelf platform regulations. The USCG, EPA, PHMSA and BOEMRE administer these regulations.
<b>Information Officer (IO)</b>	A member of the Command Staff responsible for providing incident information to the public and news media. The Information Officer may have assistants.
<b>Initial Clean-up</b>	Remedial action at a site to eliminate acute hazards associated with a spill. An initial clean-up action is implemented at a site when a spill of material is an actual or potentially imminent threat to public health or the environment, or difficulty of cleanup increases significantly without timely remedial action. All sites must be evaluated to determine whether initial cleanup is total cleanup; however, this will not be possible in all cases due to site conditions (i.e., a site where overland transport or flooding may occur).
<b>Initial Discoverer</b>	The first Terminal individual who discovers an oil spill. This individual must function as the responsible person-in-charge until relieved by an authorized supervisor.
<b>Initial Notification</b>	The process of notifying necessary Terminal personnel and Federal/State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.
<b>Injury</b>	A measurable adverse change, either long- or short-term, in the chemical or physical quality of the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.
<b>Inland Area</b>	The area shoreward of the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) defined in 80.740 – 80.850 of Title 33 of the CFR. The inland area does not include the Great Lakes.
<b>Interim Storage Site</b>	A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.
<b>Internally Reported Event</b>	Refers to an incident has occurred that does not meet the reporting criteria established for notification of off-site authorities. No evacuation has occurred.

Term	Definition
<b>J</b>	
<b>Joint Information Center (JIC)</b>	A Terminal established within, or near, the Incident Command Post where the Information Officer and staff can coordinate and provide incident information to the public, news media, and other agencies or organizations. The JIC is normally staffed with representatives from the FOSC, SOSC and RP.
<b>Jurisdiction</b>	A range or sphere of authority. At an incident, public agencies have jurisdiction related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be political/geographical (e.g., city, county, state, or Federal boundary lines), or functional (e.g., police department, health department, etc.). (See Multi-Jurisdiction).
<b>Jurisdictional Agency</b>	The agency having jurisdiction and responsibility for a specific geographical area, or a mandated function.
<b>L</b>	
<b>Landing Zone</b>	See "HELISPOT"
<b>Lead Agency</b>	The government agency that assumes the lead for directing response.
<b>Lead Federal Agency</b>	The agency that coordinates the federal response to incidents on navigable waters. The lead Federal agencies are: <ul style="list-style-type: none"> <li>• U. S. Coast Guard (USCG): Oil and chemically hazardous materials incidents on navigable waters.</li> <li>• U. S. Environmental Protection Agency (EPA): Oil and chemically hazardous materials incidents on inland waters.</li> </ul>
<b>Lead State Agency</b>	The agency that coordinates state support to Federal and/or Local governments or assumes the lead in the absence of Federal response.
<b>Leader</b>	The ICS title for an individual responsible for a Task Force/Strike Team or functional Unit.
<b>Liaison Officer (LO)</b>	A member of the Command Staff responsible for coordinating with stakeholder groups and representatives from assisting and cooperating agencies.
<b>Light Oil Terminal Operations</b>	The storage and distribution of gasoline and diesel fuel to wholesale customers.
<b>Local Emergency Planning Committees (LEPC)</b>	Provide input regarding a state's implementation of federal law. LEPC's provide local emergency planning, representing a variety of disciplines interested in hazardous materials management designed to help the State Chemical Emergency Planning and Response Commission (CEPRC) fit the needs of a particular region. CEPRC's are usually established by an Executive Order to fill the requirement in Title III, the Federal Superfund Amendments and Reauthorization Act of 1986. The act requires that each governor establish a state emergency response commission to address a variety of hazardous materials planning and community right-to-know issues.

Term	Definition
<b>L (Continued)</b>	
<b>Local On Scene Coordinator (LOSC)</b>	Local Government Representative.
<b>Location Boundaries</b>	Areas where oil may be expected to impact during the first day of a spill event.
<b>Logistics Section</b>	The Section responsible for providing facilities, services and materials for the incident.
<b>Lower Explosive Limit</b>	Air measurement to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.
<b>Lube Oil Terminal Operations</b>	The blending of lubricating oils to Terminal specifications, and the operation of filling lines for packaging the finished oils for distribution to sales outlets.
<b>M</b>	
<b>Managers</b>	Individuals within ICS organizational units who are assigned specific managerial responsibilities (e.g., Staging Area Manager or Camp Manager).
<b>Marinas</b>	Small harbors with docks, services, etc. for pleasure craft.
<b>Marine Facility</b>	Any facility used for tank vessel wharfage or anchorage, including any equipment used for the purpose of handling or transferring oil in bulk to or from a tank vessel.
<b>Marine Transportation Related Facility (MTR)</b>	An on-shore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.
<b>Maximum Extent Practicable</b>	The limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst-case discharges from onshore non-transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in 112.20 or in a specific plan approved by the Regional Administrator.
<b>Maximum Most Probable Discharge</b>	(Medium Oil Spill) - The size of the discharge as defined in 33 CFR 154.1020 (a discharge of the lesser of 1,200 barrels or 10 percent of the volume of a worst case discharge), 33 CFR 155.1020 (a discharge of 2,500 barrels of oil for vessels with an oil cargo capacity equal to or greater than 25,000 barrels, or 10 percent of the vessel's oil cargo capacity for vessels with a capacity of less than 25,000 barrels) - (for Coast Guard regulated facilities & vessels); for EPA regulated facilities, a discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less; for PHMSA and BOEMRE, the size of the discharge as defined in each agency's respective regulations, if appropriate; and the size of the discharge as defined in the respective Area Contingency Plan.

Term	Definition
<b>M (Continued)</b>	
<b>Medical Unit</b>	Functional unit within the Service Branch of the Logistics Section responsible for developing the Medical Plan, and for providing emergency medical treatment for incident response personnel.
<b>Message Center</b>	The message center is part of the Communications Center and collocated with or adjacent to it. It receives, records, and routes information about resources reporting to the incident, resource status, and handles administration and tactical traffic.
<b>Multi-Agency Coordination</b>	A generalized term which describes the functions and activities of representatives of involved agencies and/or jurisdictions who come together to make decisions regarding the prioritizing of incidents, and the sharing and use of critical resources. The MAC organization is not a part of the on-scene ICS and is not involved in developing incident strategy or tactics.
<b>Multi-Agency Incident</b>	An incident where one or more agencies assists a jurisdictional agency or agencies. May be single or Unified Command.
<b>N</b>	
<b>National Contingency Plan</b>	The plan prepared under the Federal Water Pollution Control Act (33 United State Code SS1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code SS9601 et seq), as revised from time to time.
<b>Natural Resource</b>	Land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.
<b>Natural Resource Damage Assessment (NRDA)</b>	The process of collecting and analyzing information to evaluate the nature and extent of injuries resulting from an incident, and determine the restoration actions needed to bring injured natural resources and services back to baseline and make the environment whole for interim losses. (15 CFR 990.30)
<b>Nearshore Area</b>	The area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico.
<b>Non-Crude Oil</b>	Any oil other than crude oil.
<b>Non-Persistent or Group I Oil</b>	Refers to a petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions --  a) At least 50% of which by volume, distill at a temperature of 340° C (645° F); and At least 95% of which by volume, distill at a temperature of 370° C (700° F).
<b>Non-Petroleum Oil</b>	Oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

Term	Definition
<b>O</b>	
<b>Ocean</b>	The offshore area and nearshore area as defined in this Appendix.
<b>Officer</b>	The ICS title for personnel responsible for the Command Staff positions of Safety, Liaison and Information.
<b>Oil or Oils</b>	Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by P.L. 99-499.
<b>Oil Spill Cooperative</b>	Multi-Terminal cooperative organization developed by industry to assist with oil spill response and clean up. Typically, manpower and equipment are identified by a Terminal on a voluntary basis.
<b>Oil Spill Removal Organization (OSRO)</b>	An entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.
<b>Oil Spill Response Contractors</b>	Persons/Companies contracted to undertake a response action to contain and/or clean up a spill.
<b>Oily Waste</b>	Oil-contaminated waste resulting from an oil spill or spill response operations.
<b>On Scene Coordinator (OSC)</b>	The federal official responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government.
<b>Operating Area</b>	Refers to the Rivers and Canals, Inland, Nearshore, Great Lakes or Offshore geographic location(s) in which a facility is handling, storing or transporting oil.
<b>Operating Environment</b>	Refers to Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.
<b>Operational Period</b>	The period of time scheduled for execution of a given set of operational actions specified in the Incident Action Plan. Operational Periods can be various lengths, usually not over 24 hours.

Term	Definition
<b>O (Continued)</b>	
<b>Operations Section</b>	Responsible for all operations directly applicable to the primary mission. Directs unit operational plans preparation, requests or releases resources, makes expedient changes to the Incident Action Plan (as necessary) and reports such to the Incident Commander. Includes the Recovery and Protection Branch, Emergency Response Branch, Air Operations Branch, and Wildlife Branch.
<b>Out-of-Service Resources</b>	Resources assigned to an incident but unable to respond for mechanical, rest, or personnel reasons.
<b>Owner or Operator</b>	Any person, individual, partnership, corporation, association, governmental unit or public or private organization of any character.
<b>P</b>	
<b>Persistent Oil</b>	Under OPA 90, persistent oils are petroleum-based oils that do not meet the distillation criteria for a non-persistent oil. Persistent oils are classified based on a specific gravities as follows: <ul style="list-style-type: none"> <li>• Group II – specific gravity less than .85;</li> <li>• Group III – specific gravity between .85 and less than .95;</li> <li>• Group IV – specific gravity .95 to and including 1.0.; and</li> <li>• Group V – specific gravity greater than 1.0.</li> </ul>
<b>Person</b>	Any political subdivision, government agency, municipality, industry, public or private corporation, co-partnership, association, firm, individual, or any other entity whatsoever.
<b>Plan</b>	Oil spill response, cleanup and disposal contingency plan.
<b>Planning Meeting</b>	A meeting, held as needed throughout the duration of an incident, to select specific strategies and tactics for incident control operations and for service and support planning.
<b>Planning Section</b>	Responsible for collecting, evaluating and disseminating tactical information related to the incident, and for preparing and documenting Incident Action Plans. The section also maintains information on the current and forecast situation, and on the status of resources assigned to the incident. Includes the Situation, Resource, Environmental, Documentation, and Demobilization Units, and Technical Specialists.
<b>POLREP</b>	Pollution Report
<b>Primary Response Contractor(s)</b>	An individual, Terminal, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.
<b>Post-Emergency Response</b>	The portion of a response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the sites has begun.

Term	Definition
<b>P (Continued)</b>	
<b>Procurement Unit</b>	Functional unit within the Finance/Administration Section responsible for financial matters involving vendor contracts.
<b>R</b>	
<b>Radio Cache</b>	A cache may consist of a number of portable radios, a base station, and, in some cases, a repeater stored in a predetermined location for dispatch to incidents.
<b>Recorders</b>	Individuals within ICS organizational units who are responsible for recording information. Recorders may be found in Planning, Logistics and Finance/Administration.
<b>Recreational Areas</b>	Publicly accessible locations where social/sporting events take place.
<b>Regional Response Team (RRT)</b>	A Federal response organization consisting of representatives from specific Federal and state agencies. They are responsible for regional planning and preparedness before an oil spill occurs and for providing advice to the FOSC in the event of a major or substantial spill.
<b>Regulated Vessel</b>	A vessel with a capacity to carry 10,000 U.S. gallons or more of oil as fuel or cargo.
<b>Repair</b>	Any work necessary to maintain or restore a tank or related equipment to a condition suitable for safe operation.
<b>Reporting Location</b>	Any one of six facilities/locations where incident assigned resources may be checked in. The locations are: Incident Command Post-Resources Unit, Base, Camp, Staging Area, Helibase, or Division/Group Supervisors (for direct line assignments.) Check-in for each specific resource occurs at one location only.
<b>Resources</b>	All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.
<b>Resources Unit</b>	Functional unit within the Planning Section responsible for recording the status of resources committed to the incident. The Unit also evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.
<b>Response Activities</b>	Refers to the containment and removal of oil from the water and shorelines, the temporary storage and disposal of recovered oil, or the taking of other actions as necessary to minimize or mitigate damage to the environment.
<b>Response Contractors</b>	Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

Term	Definition
<b>R (Continued)</b>	
<b>Response Guidelines</b>	Guidelines for initial response that are based on the types of product involved in the spill, these guidelines are utilized to determine clean-up methods and equipment.
<b>Response Resources</b>	The personnel, equipment, supplies and other capability necessary to perform the response activities identified in a response plan.
<b>Response Plan</b>	A practical plan used by industry for responding to a spill. Its features include (1) identifying the notification sequence, responsibilities, response techniques, etc. in an easy to use format; (2) using decision trees, flowcharts, and checklists to insure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from that required by regulatory agencies to prevent confusion during a spill incident.
<b>Responsible Party (RP)</b>	The owner/operator of the Terminal/facility that is the spill source.
<b>Responsible Party Incident Commander (RPIC)</b>	Responsible Party's designated incident commander.
<b>Restoration</b>	The actions involved in returning a site to its former condition.
<b>Rivers and Canals</b>	A body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.
<b>S</b>	
<b>Safety Officer (SO)</b>	A member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations as well as for developing measures for ensuring personnel safety. The Safety Officer may have assistants.
<b>Section</b>	The organization level having functional responsibility for primary segments of incident operation such as: Operations, Planning, Logistics, Finance/Administration. The Section level is organizationally between Branch and Incident Commander.
<b>Securing the Source</b>	Steps that must be taken to stop the spill of oil at the source of the spill.
<b>Self-Certification</b>	Self-certification involves the following action on the part of the plan holder: 1) completed the exercise, 2) ensured the exercise met the required objectives, and 3) evaluated effectiveness of the plan based on exercise performance. Documentation must be approved and signed by an appropriate official within the organization.

Term	Definition
<b>S (Continued)</b>	
<b>Self-Evaluation</b>	Self-evaluation means the plan holder evaluates effectiveness of the plan during the exercise using the stated objectives as minimum criteria and an evaluation process, which adequately measures performance. The plan holder is then responsible for correcting deficiencies identified in the evaluation process.
<b>Service Branch</b>	A Branch within the Logistics Section responsible for service activities at the incident. Includes the Communications, Medical and Food Units.
<b>Ship</b>	Any boat, ship, vessel, barge or other floating craft of any kind.
<b>Single Resource</b>	An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.
<b>Site Emergency</b>	means an incident has occurred and the entire terminal, with the exception of critical employees has been sheltered on-site or evacuated.
<b>Site Safety and Health Plan (SSHP)</b>	Site-specific document required by state and Federal OSHA regulations and specified in the Area Contingency Plan. The SSHP, at minimum, addresses, includes, or contains the following elements: health and safety hazard analysis for each site task or operation, comprehensive operations workplan, personnel training requirements, PPE selection criteria, site-specific occupational medical monitoring requirements, air monitoring plan, site control measures, confined space entry procedures (if needed), pre-entry briefings (tailgate meetings, initial and as needed), pre-operations commencement health and safety briefing for all incident participants, and quality assurance of SSHP effectiveness.
<b>Site Conditions</b>	Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.
<b>Site Security and Control</b>	Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the general public, to ensure an efficient clean-up operation.
<b>Situation Unit</b>	Functional unit within the Planning Section responsible for collecting, organizing and analyzing incident status information and for analyzing the situation as it progresses. Reports to the Planning Section Chief.
<b>Skimmers</b>	Mechanical devices used to skim the surface of water and recover floating oil. There are four basic categories of skimmers; suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices. These vary in efficiency depending on the type of oil and size of spill.

Term	Definition
<b>S (Continued)</b>	
<b>Sorbents</b>	Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.
<b>Source Control</b>	Actions necessary to control the spill source and prevent the continued release of oil or hazardous substance(s) into the environment.
<b>Span of Control</b>	On how many organizational elements may be directly managed by one person. Span of Control may vary from three to seven, and a ratio of one to five reporting elements is recommended.
<b>Spill Response</b>	All actions taken in responding to spills of oil and hazardous materials, i.e., receiving and making notifications; information gathering and technical advisory phone calls; preparation for and travel to and from spill sites; direction of clean-up activities; damage assessments; report writing, enforcement investigations and actions; cost recovery; and program development.
<b>Spill Response Personnel</b>	Federal, State, Local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be preapproved on a list maintained in each region.
<b>Staging Area</b>	The location where incident personnel and equipment are staged awaiting tactical assignment.
<b>Stakeholders</b>	Any person, group, or organization affected by or having a vested interest in the incident and/or the response operation.
<b>State Emergency Response Commission (SERC)</b>	Created by the Superfund Amendments and Reauthorization Act of 1986 (SARA). This requires the Governor of each State to appoint this commission for emergency planning and community right-to-know..
<b>State On-Scene Coordinator (SOSC)</b>	The pre-designated State On-Scene Coordinator.
<b>Strategy</b>	The general plan or direction selected to accomplish incident objectives.
<b>Strike Team</b>	Specified combinations of the same kinds and types of resources, with common communications and a leader.
<b>Substantial Threat of a Discharge</b>	Any incident or condition involving a facility that may create a risk of discharge of fuel or cargo oil. Such incidents include, but are not limited to storage tank or piping failures, above ground or underground leaks, fires, explosions, flooding, spills contained within the facility, or other similar occurrences.

Term	Definition
<b>S (Continued)</b>	
<b>Supervisor</b>	The ICS title for individuals responsible for directing the activities of a Division or Group.
<b>Supply Unit</b>	Functional unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.
<b>Support Branch</b>	A Branch within the Logistics Section responsible for providing personnel, equipment and supplies to support incident operations. Includes the Supply, Facilities, Ground Support and Vessel Support Units.
<b>Supporting Materials</b>	Refers to the several attachments that may be included with an Incident Action Plan (e.g., communications plan, map, site safety and health plan, traffic plan, and medical plan).
<b>T</b>	
<b>Tabletop Exercise (TTX)</b>	A tabletop exercise is an activity in which key members of the plan holder's staff with emergency management responsibilities are gathered together informally, usually in a conference room, to discuss actions to be taken during an oil or hazardous substance spill, based upon the response plan and their standard operating procedures. The primary characteristic is a verbal "walk through" of a response. The tabletop exercise is designed to elicit constructive discussion by the participants, usually without time constraints, as they examine and resolve problems based on the response plan. A tabletop exercise has participants practice problem solving and resolve questions of coordination and assignment of responsibilities in a non-threatening format, under minimum stress.
<b>Tactical Direction</b>	Directions given by the Operations Section Chief including: the tactics appropriate for the selected strategy; the selection and assignment of resources; tactics implementation; and performance monitoring for each operational period.
<b>Tactics</b>	Deploying and directing resources during an incident to accomplish the desired objective.
<b>Task Force</b>	A group of resources with common communications and a leader assembled for a specific mission.
<b>Technical Specialists</b>	Personnel with special skills or technical expertise who can be used anywhere within the ICS organization.

Term	Definition
<b>T (Continued)</b>	
<b>Tidal Current Charts</b>	Comprehensive charts which contain the predicted tidal current for each day of the year for designated areas. These charts specify the direction and speed of the current in the specific areas.
<b>Tidal Current Tables</b>	Tables which contain the predicted times and heights of high and low waters for each day of the year for designated areas.
<b>Time Unit</b>	Functional unit within the Finance/Administration Section responsible for recording time for incident personnel and hired equipment.
<b>Toxic Substances</b>	Substances that have the capacity to produce personal injury or illness to man through ingestion, inhalation or absorption through any of the body's surfaces.
<b>U</b>	
<b>Unauthorized Spill</b>	Spills excluding those authorized by an in compliance with a government permit, seepage from the earth solely from natural causes, and unavoidable, minute spills of oil from a properly functioning engine, of a harmful quantity of oil from a vessel or facility either: (1) into coastal water; or (2) on any waters or land adjacent to coastal waters where harmful quantity of oil may enter coastal waters or threaten to enter coastal waters if the spill is not abated, not contained and the oil is not removed.
<b>Underwriter</b>	An insurer, a surety Terminal, a guarantor, or any person other than an owner or operator who undertakes to pay all or part of the liability of an owner or operator.
<b>Unified Command (UC)</b>	A command structure consisting of the Federal On Scene Coordinator, the State On Scene Coordinator and the Responsible Party. The Unified Command is utilized during a spill response to achieve the coordination necessary to carry out an effective and efficient response.
<b>Unit</b>	The organizational element having functional responsibility for a specific incident planning, logistic, or finance/administration activity.
<b>Unusual Event</b>	Means an incident has occurred which is noticeable and dramatic from the Terminal perimeter, however, no outside assistance is required and no evacuation outside the incident scene has occurred.

Term	Definition
<b>V</b>	
<b>Verification</b>	The act of ensuring that an exercise was certified. The Coast Guard, EPA, or PHMSA will conduct verification.
<b>Vessel Support Unit</b>	Functional unit within the Support Branch of the Logistics Section responsible for implementing the Vessel Routing Plan; for fueling, maintaining, and repairing vessels and other vessel support equipment; and coordinating transportation on the water and between or among shore resources.
<b>Volunteer</b>	For purpose of the NIMS, a volunteer is any individual accepted to perform services by the lead agency, which has authority to accept volunteer services, when the individual performs services without promise, expectation, or receipt of compensation for services performed. See, e.g., 16 U.S.C. 742f(c) and 29 CFR 553.101.
<b>W</b>	
<b>Wildlife Rescue</b>	Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.
<b>Worst Case Discharge</b>	for an on-shore non-transportation-related facility means - ". . . the largest foreseeable discharge in adverse weather conditions as determined using the [EPA Final Rule] . . . worksheets . . ." (EPA Final Rule, 40 CFR 112.2, July 1, 1994).
<b>Worst Case Unauthorized Discharge</b>	The largest foreseeable unauthorized spill under adverse weather conditions. For facilities located above the high water line of coastal waters, a worst case spill includes those weather conditions most likely to cause oil spilled from the facility to enter coastal waters.
<b>Worst Case Discharge</b>	The size of the discharge as defined in 33 CFR 154.1020 (in the case of an onshore facility and deepwater port, the largest foreseeable discharge in adverse weather conditions meeting the requirements of 33 CFR 154.1029), 33 CFR 155.1020 (a discharge in adverse weather conditions of a vessel's entire oil cargo) - (for Coast Guard regulated facilities & vessels); for EPA, the size of the discharge required in 40 CFR 112.20; for PHMSA and BOEMRE, the size of the discharge as defined in each agency's respective regulations, as appropriate; and the size of the discharge as defined in the respective Area Contingency Plan.

## I-6.2 Acronyms

Acronym	Description
ACP	Area Contingency Plan
ADAPTS	Air Deliverable Anti-Pollution Transport
AFFF	Aqueous Film Forming Foam
AGT	Any Gross Tonnage (TONS)
AOR	Area of Responsibility
API	American Petroleum Institute
ARPA	Automatic Radar Plotting Aid
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AT	Airtight
ATSDR	Agency for Toxic Substances and Disease Registry
AWG	American Wire Gauge
B	Beam
BBL	Barrel (Unit of Volume Equal to 42 Gallons)
C	Degrees Centigrade
C3	Command, Control, and Communications
C & R	Cargoes and Restriction (List)
CDB	Continuous Discharge Book
CDG	Subcommittee on the Carriage of Dangerous Goods, IMO
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFM	Cubic Feet per Minute
CFR	Code of Federal Regulations
CG or USCG	Coast Guard
CGA	Compressed Gas Association
CGIS	Coast Guard Intelligence Service
CH	Cargo Hold
CHEMTREC	Chemical Transportation Emergency Center
CHRIS	Chemical Hazards Response Information System

Acronym	Description
CMA	Chemical Manufacturers Association
CMST	Crisis Management Support Team
CNG	Compressed Natural Gas
CO	Commanding Officer
COA	Certificate of Adequacy
COC	Certificate of Compliance
COE	U.S. Army Corps of Engineers (also USACE)
COF	Certificate of Fitness
COFR	Certificate of Financial Responsibility
COI	Certificate of Inspection
COIL	Central Oil Identification Laboratory
COMDTINST	Commandant Instruction
COMDTNOTE	Commandant Notice
COMDTPUB	Commandant's Publication
CONUS	Continental United States
COPH	Cargoes of Particular Hazard
CORE	Contingency Response
COTP	Captain of the Port
COW	Crude Oil Washing
C/S	General Cargo Ship
CSC	International Convention for Safe Containers, 1972
CT	Cargo Tank
C/V	Container Vessel
CVS	Commercial Vessel Safety Program
CWA	Clean Water Act
DEIS	Draft Environmental Administration
DL	Decision Letters
DOSC	Deputy On-Scene Coordinator
DOT/PHMSA	U.S. Department of Transportation/Pipeline & Hazardous Materials Safety Administration
DWT	Deadweight Tons

Acronym	Description
EEBA	Emergency Escape Breathing Apparatus
EEI	Essential Elements of Information
EERU	Environmental Emergency Response Unit
EG	Emergency Generator Room
EIS	Environmental Impact Statement
EMT	Emergency Medical Technician
EO	Executive Order
EOC	Emergency Operations Center
EOD	Explosive Ordinance Disposal
EP	Estimated Position
EPA	U.S. Environmental Protection Agency
EPR&S	TPTN Emergency Preparedness, Response & Security Group
ERAD	Environmental and Regulatory Affairs Department
ERM	Environmental Response Map
ERT	Emergency Response Team
ESA	Environmentally Sensitive Area
ESD	Emergency Shutdown
ETF	Emergency Task Force
FCC	Federal Communications Commission
FCL	Flammable Cryogenic Liquid
FMC	Federal Maritime Commission
FOIA	Freedom of Information Act
FOIL	Field Oil Identification Laboratory
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FP	Flashpoint
FPN	Federal Project Number
FR	Federal Register
FT	Fuel Tank
FTJ	Failure to Join
FWPCA	Federal Water Pollution Control Act (as amended) (33 U.S.C. 1251 et seq.)

Acronym	Description
GAL	Gallons
GMT	Greenwich Mean Time
GPM	Gallons Per Minute
GRS	Geographical Response Site
GT	Gross Tons
HAZMAT	Hazardous Materials
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCA	High Consequence Area
HP	High Pressure
HPA	High Population Area
IC	Incident Commander
ICS	Incident Command System
IDHL	Immediately Dangerous to Life and Health
IG	Inert Gas
IGS	Inert Gas System
CMST	Crisis Management Support Team
IMH	Incident Management Handbook
IOPP	International Oil Pollution Prevention Convention
IS	Intrinsically Safe
IST	Incident Support Team
JRT	Joint Response Team
JTTF	Joint Terrorism Task Force
KW	Kilowatt
LEL	Lower Exposure Limit
LEPC	Local Emergency Planning Committee
LNG	Liquefied Natural Gases
LOA	Length Overall
LOC	Letter Of Compliance
LOP	Line Of Position
LOSC	Local On Scene Coordinator
LOX	Liquefied Oxygen

Acronym	Description
LP	Low Pressure
LPG	Liquefied Petroleum Gases
LRT	Local Response Team
MAWP	Maximum Allowable Working Pressure
BOEMRE	Mineral Management Service
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
MSO	Coast Guard District Marine Safety Office
MSRC	Marine Spill Response Corporation
N/A	Not Applicable
NC	Not Certified
NCP	National Contingency Plan
NEPA	National Environmental Policy Act
NIOSH	National Institute of Standards and Technology
NLS	Noxious Liquid Substances
NM	Nautical Mile
NMT	Not More Than
NOAA	National Oceanic and Atmospheric Administration
NPRM	Notice of Proposed Rulemaking
NRC	National Response Center
NRDA	Natural Resources Damage Assessment
NRT	National Response Team
NSF	National Strike Force
NWACP	North West Area Contingency Plan
OPA 90	Oil Pollution Act of 1990
ORB	Oil Record Book
OSC	On-Scene Coordinator
OSHA	Federal Occupational Safety and Health Administration
OSRL	Oil Spill Response Limited
OSRO	Oil Spill Response Organization
OT	Oil Tight

Acronym	Description
OVA	Organic Vapor Analyzer
OVM	Organic Vapor Monitor
OWS	Oily Water Separator
PEL	Permissible Exposure Limit
PID	Photo Ionization Detector
POLREP	Pollution Report
PPE	Personal Protective Equipment
PPM	Parts Per Million
PSI	Pounds per square inch
QDC	Quick Disconnect Coupling
QI	Qualified Individual
RA	Regional Administrator
RCP	Regional Contingency Plan
RCRA	Resource Conservation and Recovery Act
RRT	Regional Response Team
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Water Drinking Act of 1986
SERC	State Emergency Response Commission
SHO	Safety and Health Official
SI	Surface Impoundment
SIC	Standard Industry Codes
SMART	Special Monitoring for Applied Response Technologies
SPCC	Spill Prevention, Control, and Countermeasures
SSC	Scientific Support Coordinator
STEL	Short-term Exposure Level
TLV	Threshold Limit Value
TLV-C	Threshold Limit Value - Ceiling
TOSC	Tribal On Scene Coordinator
TPTN	Transportation
TWA	Time-weighted Average
UEL	Upper Exposure Limit



Acronym	Description
USCG	U.S. Coast Guard
USGS	U.S. Geological Survey
U.S.	United States
U.S.C.	U.S. Code
USFWS	U.S. Fish and Wildlife Service
USPCI	U.S. Pollution Control, Incorporated
UST	Underground Storage Tank
UTV	Utility Vehicle
WT	Water Tight

**Section II – Table of Contents****II-1 Preventative Maintenance****II-2 Discovery****II-3 Initial Response Actions****II-4 Notification Responsibility and Procedures****II-5 Qualified Individual/Incident Commander****II-6 Response Procedures****II-7 Spill Assessment****II-8 Response Management System****II-9 Site Security and Control****II-10 Site Safety and Health Plan****II-11 Personal Protective Equipment****II-12 Containment and Recovery****II-13 Communication****II-14 Decontamination****II-15 Waste Management and Disposal Plan****II-16 Water Quality and Sediment Quality Analysis****II-17 Drainage Plan****II-18 Incident Documentation****II-19 Response Termination and Follow-up Procedures****II-20 Evacuation**

## II-1 PREVENTATIVE MAINTENANCE

Kinder Morgan's approach to preventing discharges is to assure that all facilities are properly designed, constructed, maintained and operated.

### II-1.1 Engineering Practices

Some examples of good engineering practices may include but are not limited to the following:

Engineering Practices	
•	Components in the pipeline system are designed and constructed in accordance with written specifications.
•	Components are inspected to ensure that quality is maintained during material procurement and construction.
•	Trained personnel are used during the construction of the facilities.
•	Various testing methods are used during construction of the facilities.
•	External and internal corrosion control methods are used to maintain the facilities in the best possible condition.
•	A preventive maintenance program reduces the potential for component malfunction or failure
•	Company personnel are properly trained to operate and maintain the pipeline system
•	Company has an extensive safety and drug testing program for its employees and requires the same for its contractors.
•	Company systems are designed and operated with safety factors in place. For example, the maximum operating pressure of a system is always less than the design pressure of the system and the test pressure of the system.
•	Pressures are monitored and controlled so that the maximum operating pressures are not exceeded.
•	When appropriate, internal inspection tools are used or lines are subjected to additional hydrostatic testing to determine and assure their integrity.
•	All wastes are stored in accordance with applicable regulatory requirements (DOT containers that are non-leaking, closed, in good condition, properly marked/labeled, inspected to ensure integrity, etc.)

## II-1.2 Visual Tank Inspection

The visual tank inspection checklist presented below has been included as guidance for inspections and monitoring. Also included in the visual tank inspection will be an inspection of the tank foundation and associated piping. All tankage, pumping equipment, piping and related terminal equipment are inspected every working day for leakage, malfunctions of seals, etc. Storage tanks are inspected monthly and annually and findings are recorded. Tank inspection forms should be maintained for a minimum of five years.

### Check tanks for leaks, specifically looking for:

- |   |                                     |
|---|-------------------------------------|
| • | Drip marks                          |
| • | Discoloration of tanks              |
| • | Puddles containing stored materials |
| • | Corrosion                           |
| • | Cracks                              |
| • | Localized dead vegetation           |

### Check foundation for:

- |   |                                     |
|---|-------------------------------------|
| • | Cracks                              |
| • | Discoloration                       |
| • | Puddles containing stored materials |
| • | Settling                            |
| • | Gaps between tank and foundation    |
| • | Damage cause by vegetation roots    |

## II-1.3 Pipeline Inspections

All pipelines within the Facility Pipeline System are monitored on a regular and routine basis. Control Center personnel monitor and control line pressures and product flow rate, operate remotely controlled valves, operate pumps and engines, and monitor the type of product currently in the line at any given point. These Control Centers are operated on a 24-hour basis. Should a leak occur, the Operators monitoring the lines can have the line shut down within minutes. The Operators can then dispatch field personnel to physically inspect the line in the area of the suspected leak.

## II-1.4 Corrosion Mitigation

External corrosion of buried pipelines is generally prevented by using approved long-life pipeline coatings supplemented with cathodic protection. Aboveground facilities are generally inspected annually and provided protective coating systems to prevent corrosive deterioration. These primarily include buildings, aboveground pipelines and tanks.

In order to prevent internal corrosion of the pipelines, chemical injection may be used, as well as pigging and corrosion inhibitors, and inspecting all pipelines. Pipelines may also be hydrostatically tested.

### **II-1.5 Exposed Buried Piping**

If a section of buried pipe is exposed for any reason, it is carefully examined for deterioration, and, if found to be deteriorated, shall be repaired or replaced. Buried piping requiring substantial reconstruction or replacement shall be rerouted above grade, if possible, or upgraded to new buried piping standards.

### **II-1.6 Buried Piping**

Most of the remaining buried, underground lines run under roadways. Some piping appears as "buried", but is really only penetrating an elevated roadway or containment berm. Even though such penetrations require sealing to not compromise the containment, any leakage from short, elevated lengths would appear where the pipe penetrates the berm/roadway, rather than migrate vertically downward through compacted clay berms/roadways. This leakage would readily be detected by personnel during routine visual inspections.

Localized pipe failures will be repaired or replaced. For extensive pipe failures requiring substantial reconstruction, the Facility will upgrade to the standard specified under the DPCC regulations. For the purposes of this plan, substantial reconstruction is defined as more than 50 percent of the replacement value of an existing pipe section from valve to valve.

Facility practices generally prohibit the installation of buried pipes, other than water and sewer lines. The need for new buried product piping is evaluated on a case-by-case basis. If such a need is identified, the Facility will install new buried piping to the standard specified under the DPCC regulations. Should new elevated roadway/containment berm penetrations be required for a project, they will be constructed according to current practices.

### **II-1.7 Out-of-Service Pipes**

If not in service for extended periods of time, terminal pipe connections are removed, blind flanged, plugged or capped and appropriately marked. This practice applies to- all piping in the terminal where an open-ended line could exist, whether or not protected by valving.

### **II-1.8 Pipe Supports**

In accordance with good engineering practice and petroleum industry standards, pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction of the pipeline.

### **II-1.9 Elevated Pipes**

Elevated pipelines to the loading racks are sufficiently high and the supports adequately protected to prevent tank trucks from accidentally hitting them. Speed limit signs posted at the entrance of each loading rack bay limit any impact damage to aboveground pipelines.

### II-1.10 Secondary Containment Inspection

The secondary containment areas shown on the site plans will be inspected on an annual basis. The inspections will include checking for the following:

#### Dike or berm system:

- |   |  |
|---|--|
| • | Level of precipitation in dike/available capacity              |
| • | Operation status of drainage valves                            |
| • | Debris   |
| • | Erosion  |
| • | Location/status of pipes, inlets, drainage beneath tanks, etc. |

#### Secondary containment:

- |   |  |
|---|--|
| • | Cracks   |
| • | Discoloration                                  |
| • | Presence of stored materials (standing liquid) |
| • | Corrosion                                      |
| • | Valve conditions                               |

#### Retention and drainage ponds:

- |   |                             |
|---|-----------------------------|
| • | Erosion                     |
| • | Available capacity          |
| • | Presence of stored material |
| • | Debris                      |
| • | Stressed vegetation         |

### II-1.11 Dike Drainage

Drainage of precipitation accumulation from dike areas is performed only after inspection of the accumulation to ensure compliance with applicable water quality standards. Any water possessing a film, sheen or discoloration on the surface is not to be discharged.

#### Drain valves are secured at all times except when there is an operator on-site who:

- |   |   |
|---|---|
| • | Inspects the water for a film, sheen, or discoloration; |
| • | Removes any film, sheen, or discoloration;              |
| • | Monitors the discharge; and,                            |
| • | Records the discharge event.                            |

### II-1.12 High Level Alarms

High level alarms on storage tanks are inspected routinely to simulate actual operating conditions to ensure that overfill during tank filling operations are adequately detected. Results of high-level alarm inspections are recorded once every six months.

### II-1.13 Rack Drain

Rack drains are inspected to ensure that any petroleum release from the loading facilities can be conveyed through clean, open drains into proper on-site containment. Results of the rack drain inspections are recorded every six (6) months.

### II-1.14 Third-Party Damage Prevention

If the systems are properly designed, constructed, operated and maintained, then the most probable source of discharge is due to third-party damage. In order to minimize the risk of damage caused by a third-party a number of steps may be taken, including, but not limited to the following:

Prevention of Third-Party Damage	
•	The facilities are designed to reduce the chance of third-party damage. For example, most of the facilities are buried or located within fenced and locked areas.
•	Areas especially sensitive to third-party damage are road, railroad, and water crossings. Pipelines in these areas usually have additional wall thickness, or burial depth, or are cased to reduce the chance of damage.
•	Facilities are normally located on well- maintained and clearly marked rights-of-way.
•	Facility facilities are normally monitored by aerial or other patrol at least once per week to check for encroachment and construction activities.
•	Facility participates in one-call pipeline locating and notification systems where available.
•	Facility conducts education programs to reduce the possibility of third-party damage.

## II-2 DISCOVERY

The primary consideration in selecting the leak detection system is public safety. Environmental pollution and property losses are important considerations, but since restoration and compensation means are available, these effects should be considered secondary to public safety.

### II-2.1 Fire Detection

Various fire detection systems are in use across the site. These systems are connected to local alarm panels that transmit an emergency signal to Site Security Dispatch.

**Normally occupied buildings across the site may contain one or more of the following detectors in the system:**

- |   |  |
|---|--|
| • | Fixed temperature  |
| • | Rate-of-rise sensors   |
| • | Smoke detectors: <ul style="list-style-type: none"> <li>• Ionization</li> <li>• Photoelectric</li> </ul> |

### II-2.2 Spill Alert

The Facility has a number of safety systems and practices in place to prevent the occurrence and mitigate the subsequent impact of accidental discharges. The systems are designed to alert Operators with alarms and provide automatic shut-in functions in the event of a discharge. Pipeline Operators are trained to respond to the various system alarms in order to identify and control releases immediately.

#### Safety System List

- |   |  |
|---|--|
| • | Prevention practices and procedures                                    |
| • | Pipeline and breakout tank inspection and testing procedures           |
| • | Discharge detection equipment and procedures                           |
| • | Recognition of emergency conditions and prediction of the consequences |
| • | Leak response actions  |
| • | Public education   |

### II-2.3 Release Detection

The systems are designed to alert Operators with alarms and provide automatic shut-in functions in the event of a release. Pipeline Operators are trained to respond to the various system alarms in order to identify and control releases immediately.

**The detection of a discharge from the Facility pipeline system may occur in a number of ways, including:**

- Discharge detection by Facility personnel, pipeline patrols, or the general public

**(b) (3), (b) (7)(F)**

- Various other procedures and practices

**The routine responsibilities that ensure releases will be detected and mitigated as soon as possible by IC/UC personnel may include, but are not limited to the following:**

- Regularly scheduled visual and aerial monitoring.
- Routine walk-through and monitoring of process equipment to ensure proper operation of all equipment at each Facility.
- Immediate response to alarms and signals that may indicate a possible release.
- Identification and control of the source as soon as safely possible.
- Notify the Person in Charge.

### II-2.4 Toxic Gas Detection

Various toxic gas detection systems are in use across the site.

**Examples of these detectors are:**

- Hydrogen Sulfide
- Oxygen
- Hydrocarbons
- Carbon Monoxide

### II-2.5 Automated Discharge Detection

#### Pressure and Flow Monitors

Most pipelines have hi-low pressure and flow monitors that exercise local control or transmit data to the Control Center or both. These systems are set to alarm or shut down on preset deviations of pressure or flow. In case of an alarm, the Control Center will take action in accordance with Operating Instructions.



(b) (3), (b) (7)(F)

**General Technique**

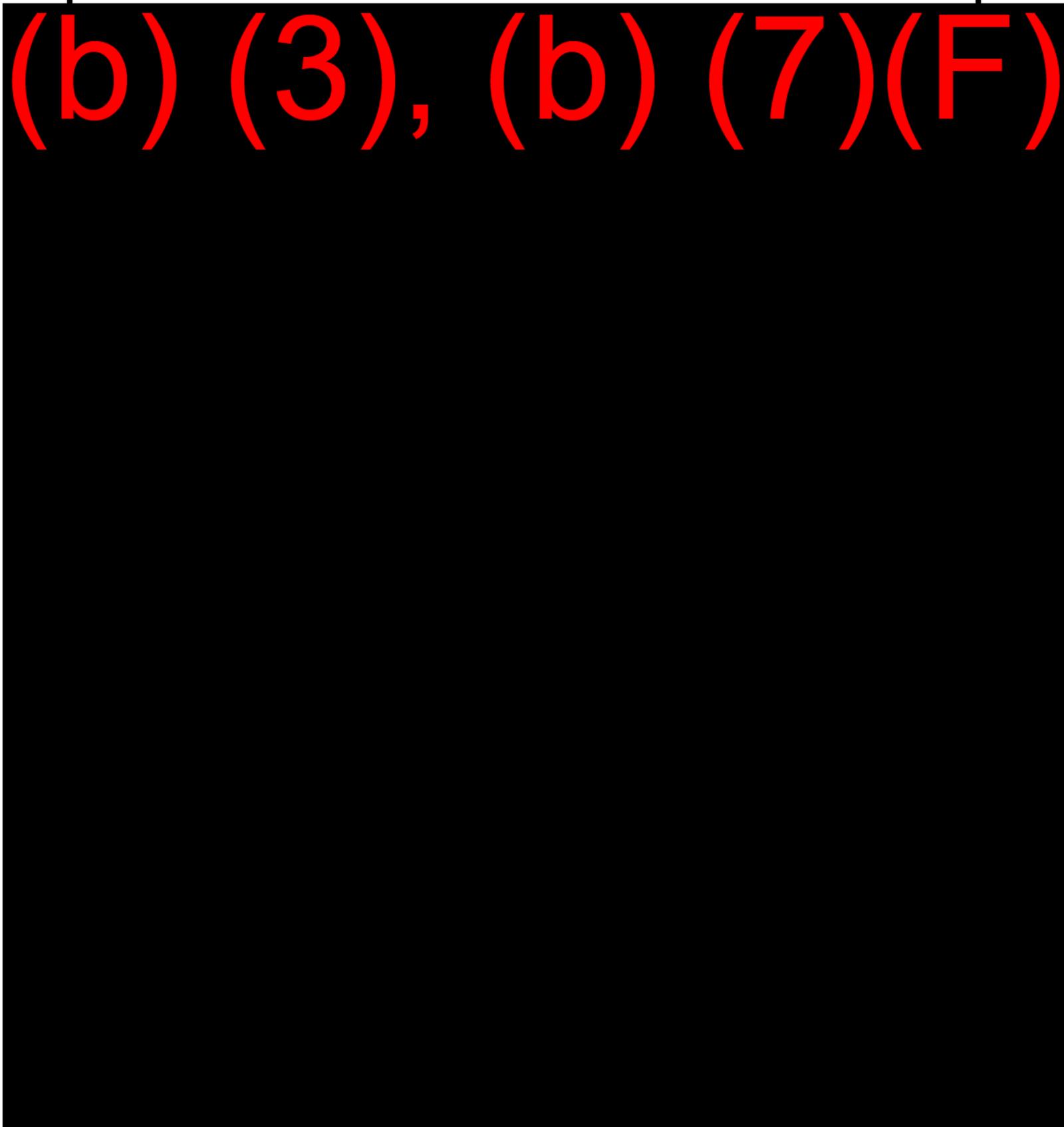
(b) (3), (b) (7)(F)

Integrated  
Contingency  
Plan



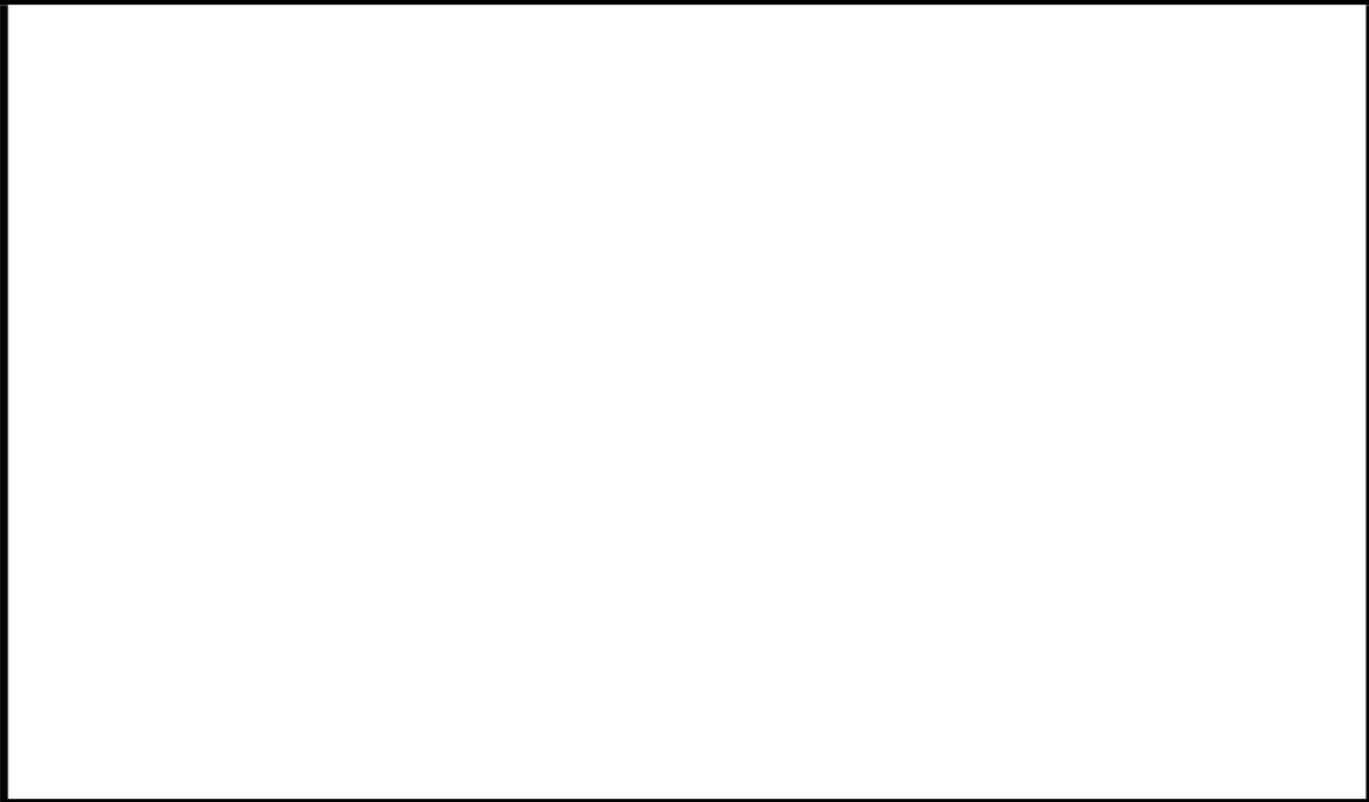
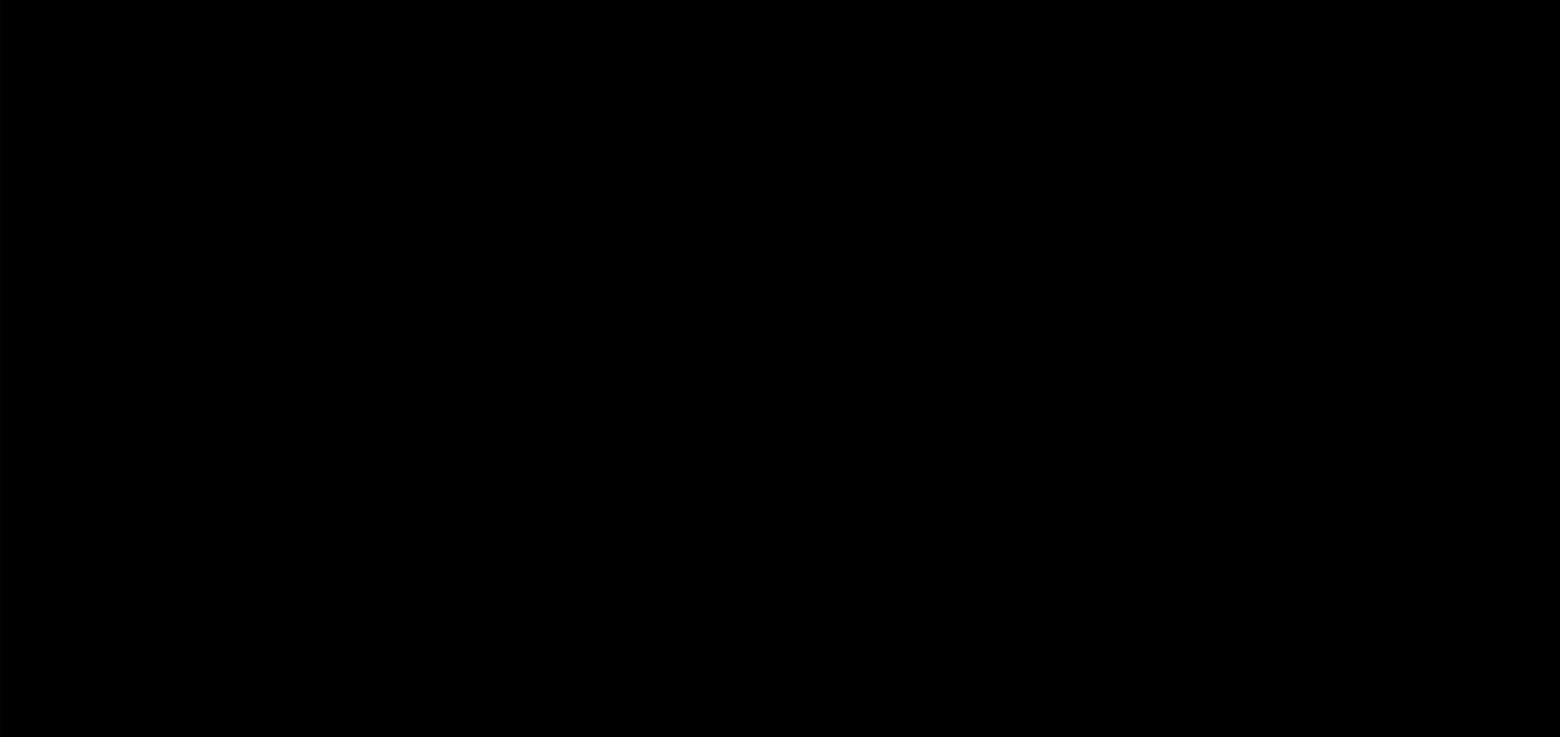
Section II:  
Core Plan  
Elements

(b) (3), (b) (7)(F)





**(b) (3), (b) (7)(F)**

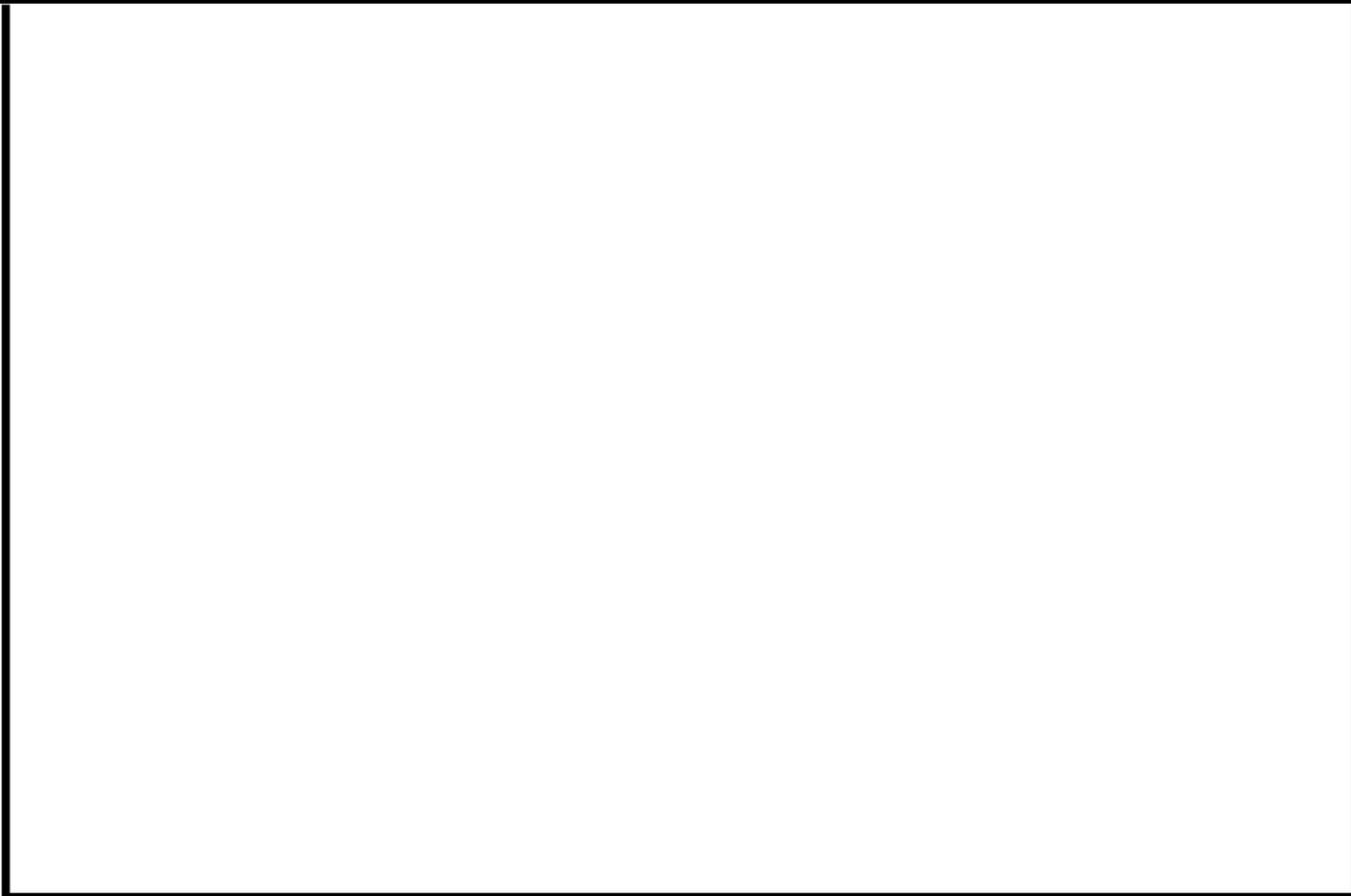


Integrated  
Contingency  
Plan



Section II:  
Core Plan  
Elements

(b) (3), (b) (7)(F)



## II-3 INITIAL RESPONSE ACTIONS

Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

The purpose of this section is to identify the response checklist/procedures to follow based on the type of incident that could occur at the facility and related pipeline systems. The checklists below are developed to allow the field personnel the ability to make sound decisions during the initial response of an incident. The checklists are not meant to substitute for emergency response knowledge, training, or sound judgment calls and do not account for all circumstances. In the event of any type of incident, it is imperative that the safety of all personnel be considered first, and then the protection of property second.

Initial Discovery / Response Actions Checklist	
<b>DISCOVERER</b>	Initiate Initial Response Procedures and Notifications. A list of contact numbers is located in the Contacts section of this plan.
<b>INITIAL INCIDENT COMMANDER RESPONSE GUIDELINES</b>	
The appropriate response to a particular incident may vary depending on the nature and severity of the incident.	
Action	Definition
<input type="checkbox"/> Secure the source.	Act quickly to shut-in source, close valves, etc. <b>(IF SAFE TO DO SO, PROPERLY TRAINED &amp; HAVE PROPER PPE).</b>
<input type="checkbox"/> Consider safety of personnel / call for medical assistance if needed.	Pull an alarm, push an evacuation button, use radio or call 911. <b>EVACUATE IF NECESSARY.</b>
<input type="checkbox"/> Shut off ignition sources.	Motors, open flames, electrical circuits.
<input type="checkbox"/> Coordinate rescue and medical response actions.	Perform this task only if trained to do so (i.e., member of medical & rescue teams) Refer to hospital listings in the Contacts section.
<input type="checkbox"/> Identify pollutant and assess possible hazards to human health and the environment.	Identify source and volume; characterize oxygen levels, explosive character, toxicity of air on scene, splash and ingestion hazards.
<input type="checkbox"/> Initiate containment if necessary and safe to do so.	Contact OSROs as necessary.
<input type="checkbox"/> Conduct air monitoring.	Monitor the air quality in the area near the release to ensure there are no organic vapors which may pose an inhalation or flammability hazard.
<input type="checkbox"/> Report all incidents to the Duty Officer.	Follow Notification Procedures in ICP Geographical Annex B.
Name:	

## II-3.1 Immediate Action Checklist

<b>Spill Observer / Dispatcher</b>	
•	If a pressure drop is noticed or a leak is suspected, notify the Field Controller (Initial On-scene Incident Commander) and immediately stop all product transfers.
•	To minimize damage, close all automatic isolation valves, if available.
•	Assist with initial response actions as directed.
<b>Line Flyer</b>	
•	Report all abnormal activity and dead vegetation in the vicinity of a pipeline.
•	If action requires immediate attention, report via radio.
•	In the event radio contact cannot be made; the line flyer will land and report to Company management by telephone.
<b>Initial On-scene Incident Commander</b>	
•	Determine level of response needed, hazards of product(s) involved and proper response guidelines to be followed.
•	Notify Emergency Response Team (ERT) as appropriate.
•	Work with local law enforcement to make sure all personnel/citizens are a safe distance away from the hazard area.
•	Notify Company management and activate Emergency Management Team as appropriate.
•	Dispatch response team to the site of the suspected leak and assume the position of IC. Determine the extent of spill or release, verify product type(s), identify material(s), estimate quantity spilled or released, approximate rate of discharge, estimate movement of the spill/vapor cloud, estimate the wind direction. (Report volume details within one hour per DOT regulations)
•	Instruct response team to eliminate sources of vapor cloud ignition. Shut down all engines and motors.
•	Review pipeline alignment sheets to become familiar with the location of mainline valves and elevation characteristics. Review environmentally sensitive area maps for the location of any sensitive area that may be impacted.
•	Advise response team on manual valves locations; order them closed if appropriate.
•	Note time of spill or time of first detection, location, source and cause of spill.
•	Make a note of response actions taken and by whom.
•	Instruct response team to attend to injured personnel.
•	Notify Environmental Health and Safety Department as appropriate to: <ul style="list-style-type: none"> <li>• Make appropriate notifications to local and state governmental agencies of the spill and proposed actions.</li> <li>• Collect information necessary to complete the Incident Report Form.</li> <li>• Complete the Incident Report Form and notifications.</li> <li>• Advise neighboring property owners and Operators of any threat to their property or personnel.</li> <li>• Direct initial response actions.</li> <li>• Call additional emergency response contractors as necessary.</li> </ul>

### II-3.2 Initial Eight Emergency Action Steps

In the event that an unplanned release or spill of hazardous substance (oil or chemical) of any quantity occurs at the Facility the following steps shall be taken:

Emergency Action Steps	
•	Site management and control
•	Identification of materials/hazards involved
•	Evaluation the hazards and risks
•	Selection of the proper PPE
•	Coordination information and resources
•	Control, containment, confinement of the hazard/material
•	De-contamination set up and procedures
•	Incident termination

### II-3.3 General Initial Response Procedures – Terminals

This checklist is generic to all Terminals Plans and is included as an additional checklist to supplement facility specific checklists contained in this Plan.

<b>Terminals</b>	
•	Any employee observing a spill should take emergency action to stop the release at the source in a safe manner and immediately notify their Supervisor, who should notify the Field Controller as appropriate.
•	Upon becoming aware of a spill, the Field Controller will assess the spill in terms of the location and volume and determine if the ERT and/or the EMT should be activated.
•	Once it has been determined to activate the EMT, the Field Controller will assume the role of On-Scene Incident Commander and initiate the following actions: <ol style="list-style-type: none"> <li>a) Confirm that injured personnel have been attended to and arrange for medical assistance and transportation to hospitals, if necessary, and ensure the safety of all response personnel.</li> <li>b) Confirm that personnel have been assigned to stop the release and flow of oil, and secure leaks.</li> <li>c) Assess the spill; determine parameters such as spill volume, extent, speed, and direction of movement.</li> <li>d) Integrate local evacuation plans into the Unified Command decision-making process.</li> <li>e) Confirm that containment equipment and oil spill contractors have been deployed.</li> <li>f) Notify the appropriate Company management.</li> <li>g) Notify the Environment Health and Safety Department to conduct federal, state and local government agency notifications.</li> <li>h) Begin development of an initial incident action plan.</li> </ol>
•	Once product is spilled on water, action should be taken as rapidly as possible to control and recover it to minimize damage to the environment. Physical removal of the oil is the preferred action in almost all cases. However, from a practical standpoint, much of the product spilled during a minor spill will be dispersed by wind and wave action. Effective physical removal will be dependent upon relatively calm weather and water conditions and the speed with which the slick can be corralled and removed.

**If the incident were to involve a breakout tank leak or overfill, the initial mitigation actions may include:**

•	Terminating transfer operating to the tank, if in progress
•	Ensuring associated secondary containment system drain valves are closed
•	Transferring the tank contents into available tankage or back into the pipeline
•	Patching the leak if feasible and safe
•	Water flooding the containment area, if applicable, to minimize soil penetration

### II-3.4 General Initial Response Procedures – Pipelines

These procedures have been designed to 1) provide safety to the public and Facility personnel when threatened by the release of hydrocarbons from a pipeline to the environment, and 2) to coordinate activities for prompt and safe repair of the pipeline and the return to normal operating conditions.

**In the event of a spill involving a pipeline leak or rupture, the initial mitigation actions will likely consist of:**

- |   |  |
|---|--|
| • | Shutting down the pipeline                                     |
| • | Relieving the pressure on the affected line section            |
| • | Isolating the line section by closing the appropriate valves   |
| • | Evacuating the remaining contents of the affected line section |
| • | Exposing the leak or rupture and installing a temporary patch  |

**Events that require immediate response include:**

- |   |  |
|---|--|
| • | Extreme pressure reduction on the line   |
| • | Extreme flow rate changes  |
| • | Extreme measurement losses or gains  |
| • | Receiving notices of an emergency nature such as: <ol style="list-style-type: none"> <li>a) Release of hazardous liquids from a pipeline facility</li> <li>b) Operational malfunction causing a hazardous condition</li> <li>c) Fire, explosion, or natural disaster involving pipeline facilities</li> <li>d) Notification of a potential leak or hazard</li> </ol> |

**Whenever any of the above conditions occur, the following emergency shutdown procedures should be initiated:**

- |   |  |
|---|--|
| • | Shutting in the line at the nearest block valves.  |
| • | Notifying the Control Center.  |
| • | Maintenance crewmembers should notify their immediate supervisor who will in turn notify appropriate Facility contacts.  |
| • | If the exact location of the leak is unknown, the On-Scene Incident Commander will request the suspected leaking pipeline to be walked.  |
| • | Once a leak site has been located, the following information should be obtained. <ol style="list-style-type: none"> <li>Have all ignition sources been eliminated?</li> <li>Are any schools, homes or commercial properties at risk and should they be evacuated?</li> <li>Should access to the area be restricted (roads blocked)? If so, assistance should be requested from law enforcement agencies.</li> <li>Have local response agencies been advised of the product's characteristics and handling precautions which are described in the MSDS's?</li> <li>Are railroads or utility companies in the area and have they been notified?</li> <li>Will product flow into any waterways or roadways?</li> <li>Work with Company Environmental Services to conduct a natural resource damage assessment.</li> </ol> |
| • | The Environmental Health and Safety Department contact Federal and/or state agencies if a spill or release meets the criteria outlined in this manual.   |
| • | The Control Center develops an assessment of the release site, an evaluation should be made regarding the effect of downtime on product scheduling. Appropriate Notifications will be made.  |

### II-3.5 Source Control

This section provides guidelines for controlling a release near the source and mitigating the associated consequences. Source control and mitigation involve anything from shutdown of operations to patching a leak, containing a spill, dispersing a vapor cloud, protecting a sensitive area, recovering the spilled material, or other such activities that are involved in an emergency response. Because of the infinite number of circumstances under which an incident could occur and the variety of equipment that could be involved, it is impractical to describe procedures that should be followed in all foreseeable emergency situations.

**Source control measures are implemented as close as possible to the source of a spill to minimize the extent of the affected area and generally involve:**

- |   |   |
|---|---|
| • | Construction of barriers, trenches, or earthen berms for containment      |
| • | Construction of berms or trenches for diverting spill to containment area |
| • | Deployment of containment booms in waterways down current of the source   |
| • | Deployment of recovery equipment (pumps, vacuum trucks, skimmers)         |

### II-3.6 Emergency Shutdown

In an emergency situation, it's imperative to identify where the source of the leak can be controlled. Mitigation can involve anything from shutdown of operations to patching a leak, containing a spill, dispersing a vapor cloud, protecting a sensitive area, recovering the spilled material, or other such activities that are involved in an emergency response. Because of the infinite number of circumstances under which an incident could occur and the variety of equipment that could be involved, it is impractical to describe procedures that should be followed in all foreseeable emergency situations.

## II-4 NOTIFICATION RESPONSIBILITY AND PROCEDURES

In the event that an unplanned release or spill of a hazardous substance (oil or chemical) of any quantity occurs at the Facility the following steps shall be taken:

The person discovering the release of a spilled product (caller) shall immediately contact the Field Controller (On-Scene Commander) to determine level of response needed; the hazards of product(s) involved and proper response guidelines to be followed. This may include initiating immediate containment, recovery and control of spill.

The Field Controller is responsible for initiating the incident command structure and contacting the Environmental Health and Safety person on call. The Environmental Health and Safety person on call is responsible for contacting the federal and state agencies if necessary.

The Field Controller or designee should document the following:

- Name and Title of person reporting the spill
- Name of responsible person(s) and person in charge, if spill not caused by Kinder Morgan
- Substance type and quantity discharged
- Time, location, and apparent cause/source of the spill
- If known, the location of employees, contractors or visitors who might be threatened by the release or spill
- Size of the area impacted or potentially impacted
- Nature of response actions underway and identity of person(s) conducting these activities

Information related to the incident should be captured on the Incident Report Form located in this section.

### II-4.1 Kinder Morgan Corporate Reporting Requirements

Upon discovery of an emergency or other incident the individual should first ensure their personal safety, then immediately report the incident to the Field Controller or other management/supervisory personnel via the most expedient means available (e.g. radio, telephone, etc.). The person in charge will then implement the appropriate emergency response plan and make whatever notifications are necessary.

#### Primary communications for Terminal response activities will consist of the following:

- |   |  |
|---|--|
| • | Radios, mobile phones, hard line phones, faxes, and intranet devices.                        |
| • | Communications needs beyond primary communications devices will be supplied by the Terminal. |

STARS is Kinder Morgan's electronic system that provides for the efficient and consistent incident notification, reporting and corrective action tracking of incidents. Any incidents reportable to Corporate Kinder Morgan are submitted within 24 hours of the incident. In addition, serious incidents shall be verbally reported to regional management.

The Kinder Morgan "Incident Reporting and Investigation" (Policy No TO&M-159) describes the process Kinder Morgan follows to notify, investigate, report, and follow-up on incidents. Customer Reporting Requirements Customers shall be notified if the emergency involves facilities that are likely to affect the movement of product to or from their facilities. Customers may also be notified based on their specific reporting requirements.

#### **II-4.2 Federal, State, and Local Government Notification Procedures**

When the Facility experiences spill incidents, an understanding of agency notifications is necessary to assure compliance with applicable regulations. Notification requirements vary depending on the commodity, quantity and location (land or water) of each spill incident. It is imperative that an understanding of the incident is developed prior to any determination of appropriate agency notifications.

The Environmental Health and Safety Department is responsible for assuring that all required notifications/reports are completed in a timely manner for all incidents. All contacts with Local, State, and Federal regulatory agencies must be properly documented. Upon completion of the initial notifications and the implementation of the initial response actions, periodic follow-up notifications should be made to the National Response Center and state agencies to provide updated information on the incident. The internal support teams may assist the Incident Commander with follow-up information to the agencies.

If a spill occurs which is a direct result of an activity associated with a vessel (i.e., not caused by Kinder Morgan), Kinder Morgan will convey to the vessel our intent to either notify agencies or our intent to make no notifications. To protect Kinder Morgan in the event a responsible vessel does not make necessary notifications, releases caused by vessels while docked at the Facility will be reported by the LO to the U.S. Coast Guard Marine Safety Office (Houston). A record of the phone notification should be recorded and forwarded to the Environmental Manager for permanent filing. It is imperative that we clearly identify to the U.S. Coast Guard that such notification is being provided as a courtesy and Kinder Morgan assumes no responsibility for the incident.

Kinder Morgan shall not hesitate to provide emergency response and cleanup assistance (clean-up contractors) regardless of whom was responsible. The immediate concern during any spill incident is to prevent continuing environmental damage and provide expedient cleanup of the commodity. Any disagreement or responsibility can be evaluated after the incident has been corrected.

Agency notifications will require concise information be developed prior to conducting such activity. Therefore the "Agency Notification Form" (below), should be completed prior to any notification to assure all necessary information is obtained. The notifications should be made immediately (within 1 hour of the time of discharge).

All agency telephone notification numbers are provided in Annex 2. In the event there is a catastrophic release to either land or water (i.e., complete tank rupture or major release to the Ship Channel) or if the release potentially will have off-site impacts, other agencies requiring notification include the following:

Local Emergency Planning Commission  
Harris County Public Health and Environmental Services (HCPHES)

The Environmental Health and Safety Department shall make the notifications below:

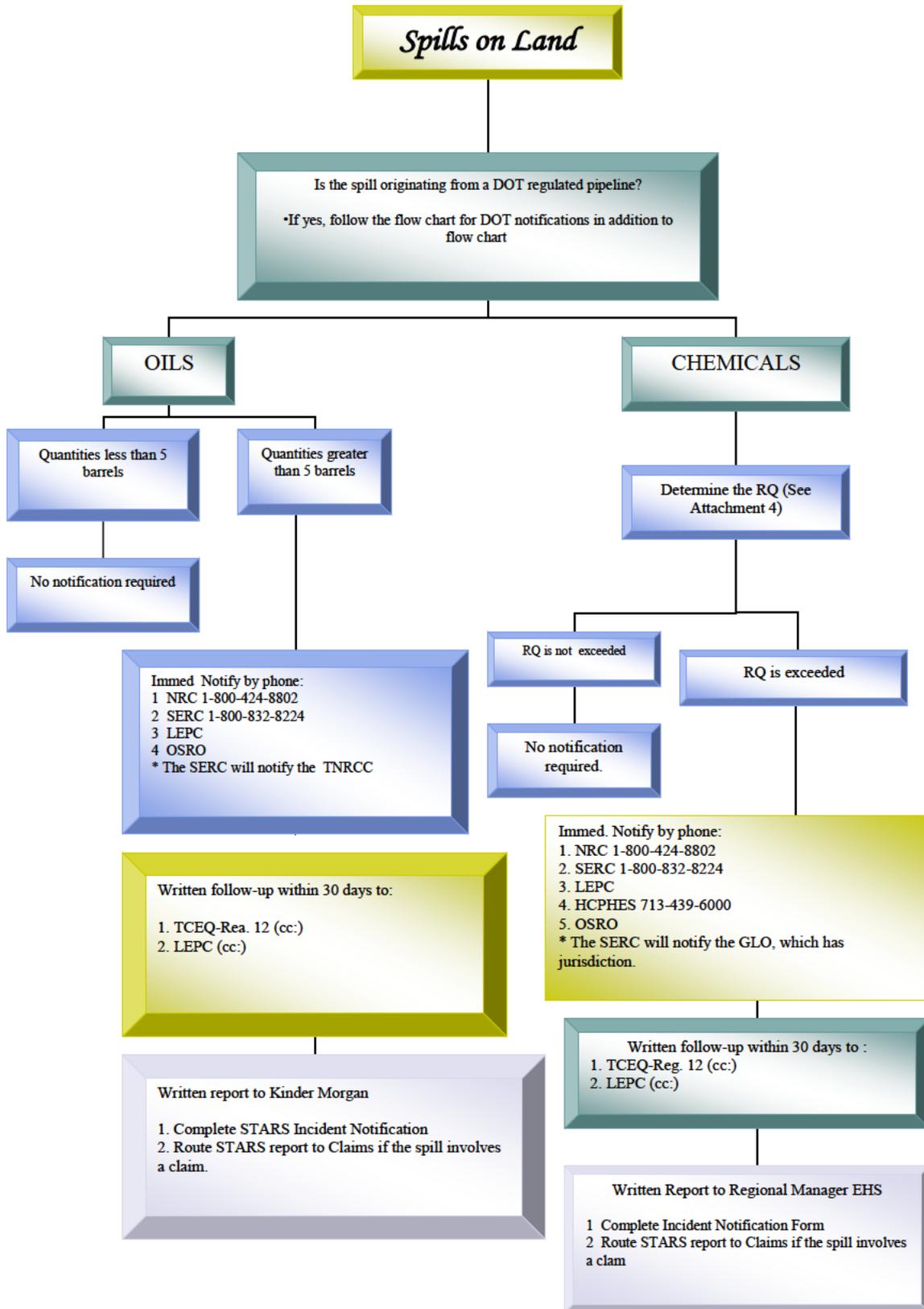
- Notify the National Response Center (NRC) if the spill or release exceeds an RQ or threatens or enters Navigable waters of the United States.
- The United States Coast Guard (USCG) requires that all petroleum discharges to surface waters or threatening surface waters be reported immediately.
- The Texas Commission on Environmental Quality (TCEQ), Texas General Land Office (GLO) and the United States Environmental Protection Agency (USEPA) require that discharges be reported depending on the volume, mass and place of the discharge.

U.S. Department of Transportation 49 CFR 195.50 (Subpart B) requires that pipeline Operators report certain types of accidents and safety-related conditions. These requirements are also included in Annex B.

The flow charts, provided below, represent the required notifications following spill incidents, depending on whether the spill was on land, water, or involved a DOT regulated pipeline.

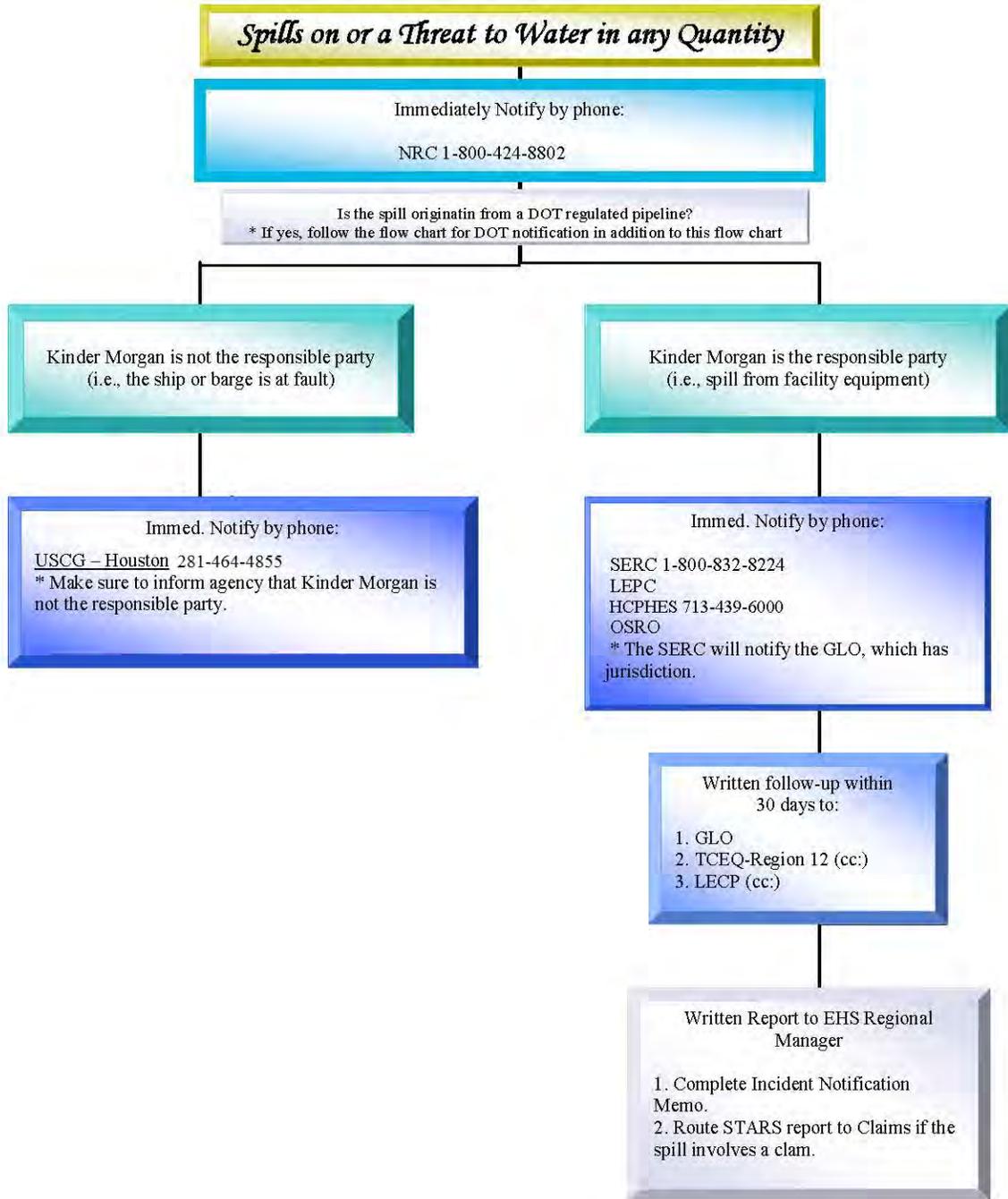
# ICP SPILLS on LAND

Figure III.2.c.ii

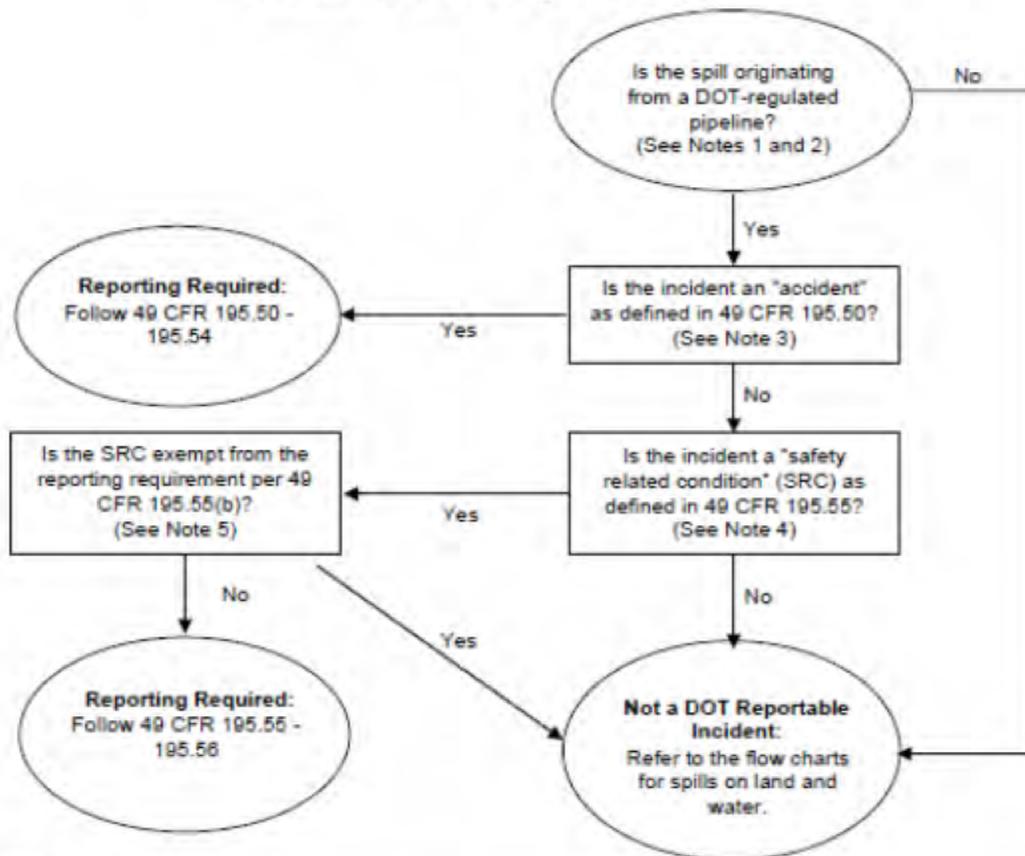


# ICP Spills on or a Threat to Water

Figure III.2.c.iii



## Incidents Involving DOT Pipelines



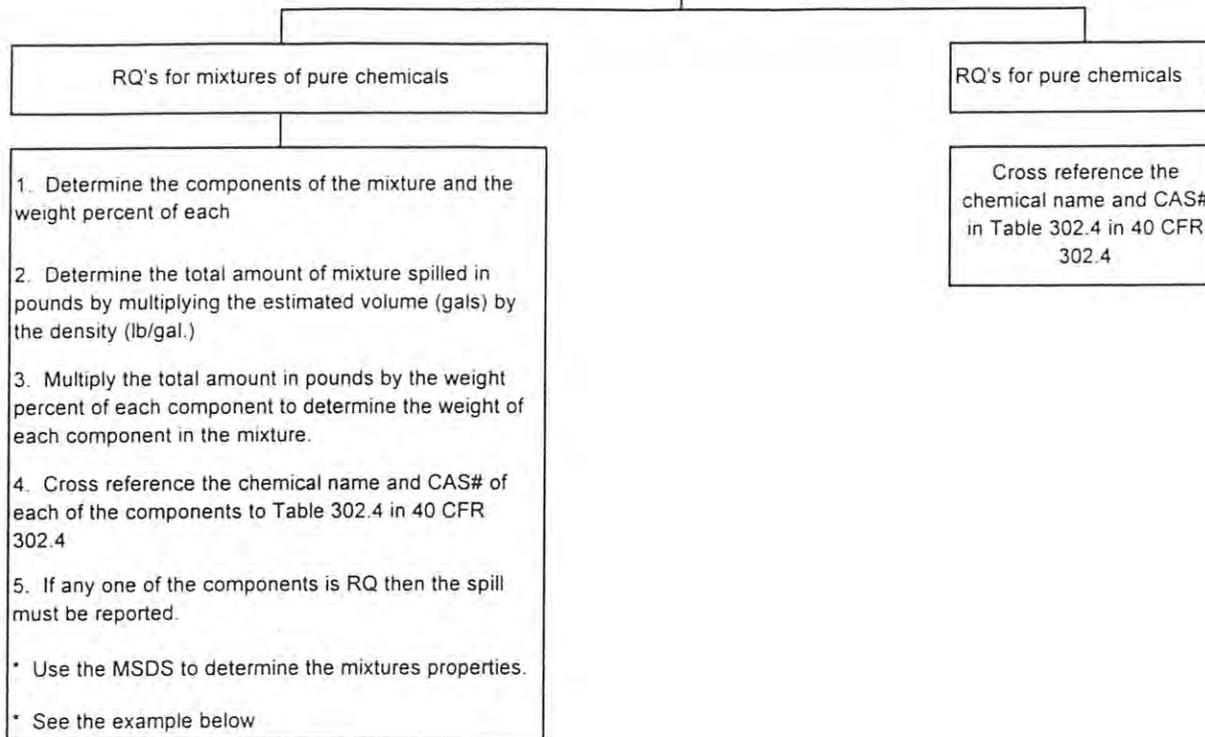
### NOTES

- 49 CFR 195.52(a)(4) requires immediate telephonic reporting to the NRC for any spill to water that "resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines."
- Accidents are defined as: a) explosion or fire not intentionally set by the operator; b) loss of 50 bbls or more of hazardous liquid or carbon dioxide, c) escape, to the atmosphere, of more than 5 bbls of highly volatile liquids\*, d) death or any person, e) bodily harm\*\* to any person, or f) estimated property damage exceeding \$50,000.00.
- SRC's are defined as: a) general corrosion that has reduced the wall thickness to less than that required for MOP, b) localized pitting to a degree where leakage might result, c) environmental causes, such as earthquakes, landslides, or floods that impairs the pipeline's serviceability, d) any material defect or physical damage that impairs serviceability of the pipeline that constitutes and emergency, or g) any SRC that could lead to an imminent hazard.
- A report is not required for an SRC that exists on a pipeline that is more than 220 yards from any building intended for human occupancy or outdoor place of assembly, except within the right-of-way of an active railroad, street, or highway, or where a body of water could be reasonably suspected to be polluted during a release.

\* Highly volatile liquid: a hazardous liquid which will form a vapor cloud when released to the atmosphere and has a vapor pressure exceeding 40 psia at 100 degrees F.

\*\* Bodily harm: loss of consciousness, necessity to carry a person from the scene, or the necessity for medical treatment.

## DETERMINING THE REPORTABLE QUANTITY (RQ)



### Example 1

An estimated 10 gallons of a mixture containing, by weight, 50% toluene, 30% benzene and 20% xylene is spilled into the tank dike area. The density of the mixture is 6.9 lbs/gal.

1. Determine the weight of the entire mixture

$$10 \text{ gal (6.9 lbs/gal)} = 69 \text{ lbs}$$

2. Determine the weight of each component

$$\text{Toluene: } 0.5 (69 \text{ lbs}) = 34.5 \text{ lbs}$$

$$\text{Benzene: } 0.3 (69 \text{ lbs}) = 20.7 \text{ lbs}$$

$$\text{Xylene: } 0.2 (69 \text{ lbs}) = 13.8 \text{ lbs}$$

$$\text{Total} = 69 \text{ lbs}$$

3. Determine the RQ of each component

From Table 302.4:

Toluene - 1000 lbs

Benzene - 10 lbs

Xylene - 1000 lbs

The spill did not exceed the RQ for either toluene or xylene, but it did exceed the RQ for benzene.

Therefore, the spill is a reportable quantity because of the amount of benzene.

### NRC

If you have a spill/release to report, contact the NRC via the toll-free number or visit the NRC Web Site (<http://www.nrc.uscg.mil>) for additional information on reporting requirements and procedures. **Refer to Annex B.**

#### Reporting Requirements

<b>Type</b>	All spills that impact or threaten navigable water or adjoining shorelines
<b>Verbal:</b>	Within 1 Hour of release
<b>Written:</b>	As requested by the agency

### EPA

**Refer to Annex B.**

#### Reporting Requirements

<b>Type</b>	All spills that impact or threaten navigable water or adjoining shorelines
<b>Verbal:</b>	As soon as possible
<b>Written:</b>	As requested by the agency



**United States Coast Guard**  
U.S. Department of Homeland Security

**Refer to Annex B.**

#### Reporting Requirements

<b>Type</b>	All spills that impact or threaten navigable water or adjoining shorelines
<b>Verbal:</b>	As soon as possible
<b>Written:</b>	As requested by the agency

### DOT/PHMSA

Refer to Annex B.

#### Reporting Requirements

In addition to the reporting of accidents to the NRC, a written/electronic accident report (DOT/PHMSA F 7000-1), must be submitted as soon as practicable but no later than 30 days after the incident for releases resulting in the following:

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Caused a death or a personal injury requiring hospitalization.  |
| <input type="checkbox"/> | Explosion or fire not intentionally set by the operator.  |
| <input type="checkbox"/> | Caused estimated property damage, including cost of cleanup and recover, value of lost product, and damage to the Facility property or others or both, exceeding \$50,000.  |
| <input type="checkbox"/> | Resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines. |
| <input type="checkbox"/> | In the judgment of the Incident Commander/Qualified Individual that the event was significant enough even though it did not meet the criteria of any of the above incidents.  |

The electronic form can be found at <https://opsweb.phmsa.dot.gov>. Notify the appropriate DOT Coordinator and complete the appropriate DOT/PHMSA F 7000 series form.

### OSHA

#### Occupational Safety & Health Administration

Refer to Annex B.

#### Reporting Requirements

Basic requirement. Within eight (8) hours after the death of any employee from a work-related incident or the in-patient hospitalization of three or more employees as a result of a work-related incident, you must orally report the fatality/multiple hospitalization by telephone or in person.

In accordance with 29 CFR 1904.39 the following information is to be supplied to OSHA when reporting an incident:

- Facility name;
- Location of the Incident;
- Time of Incident;
- Number of fatalities or hospitalized employees;
- Names of any injured employees;
- Contact person and his/her phone number;
- A brief description of the incident.

**TGLO****Texas General Land Office**

**Refer to Annex B Notifications.**

**Reporting Requirements**

Within 1 hour of discovery of a discharge, The GLO will be notified of the following:

- The substance and quantify of discharge or potential discharge
- The rate of discharge
- The time and Location of discharge
- The apparent cause
- The size of the area actually or potentially impacted
- Whether or not environmentally sensitive areas will be affected
- The name and title of the responsible person, the person in charge, and the person reporting the discharge
- How to contact the responsible person and the Facility involved.

**TCEQ****Texas Comission of Environmental Quality**

**Refer to Annex B Notifications.**

**Reporting Requirements**

No later later than 24 hours after discharge, the **TCEQ** will be notified of the following:

- The name, address and telephone number of the person making the telephone report;
- The date, time, and location of the spill or discharge;
- A specific description or identification of the oil, petroleum product, hazardous substances or other substances discharged or spilled; the name and title of the responsible person, the person in charge, and the person reporting the discharge,
- An estimate of the quantity discharged or spilled;
- The duration of the incident;
- The name of the surface water or a description of the waters in the state affected or threatened by the discharge or spill;
- A description of the extent of actual or potential water pollution or harmful impacts to the environment and an identification of any environmentally sensitive areas or natural resources at risk;
- If different from paragraph (1) of this subsection, the names, addresses, and telephone numbers of the responsible person and the contact person at the location of the discharge or spill;
- A description of any actions that have been taken, are being taken, and will be taken to contain and respond to the discharge or spill;
- Any known or anticipated health risks;
- The identity of any governmental representatives, including local authorities or third parties, responding to the discharge or spill; and
- Any other information that may be significant to the response action.

**II-4.3 Agency Notification Form****NOTE: Initial notification must not be delayed pending collection of all information.**

INFORMATION ON DISCHARGE					
<b>INVOLVED PARTIES</b>					
(A) Reporting Party	(B) Suspected Responsible Party				
Name:	Name:				
Phone(s):	Phone(s):				
Facility: KM Liquids Terminals LLC	Facility:				
Address:	Address:				
City:	City:				
State: Texas	State:				
Zip:	Zip:				
Were Materials Released (Y/N)	Calling for Responsible Party				
<b>INCIDENT DESCRIPTION</b>					
<b>Source and/or Cause of Incident</b>					
<b>Incident Discovered</b>					
Date:	Time:				
<b>EHS Notified:</b>					
Date:	Time:				
<b>Incident Address/Location</b>					
Distance from City:	TNRCC Waste # _____; Air # _____; EPA ID # _____				
Storage Tank Container Type Above Ground (Y?N)? Below Ground (Y/N)? Unknown	Tank Capacity: Facility Capacity:				
Latitude Degrees:	Mile Post or River Mile				
Longitude Degrees:					
<b>Materials</b>					
Released Quantity/Unit of Measure:	Released Material				
Quantity in Water:	RQ per : Y/N				
<b>WEATHER CONDITIONS:</b>					
<b>REMEDIAL ACTION:</b>					
Actions Taken to Correct or Mitigate the Incident					
<b>IMPACT</b>					
Number of Injuries	Number of Facilities				
Were there evacuations (Y/N)					
Was there any damage (Y/N)?	Damage in Dollars: NOTE:				
<b>CALLER NOTIFICATIONS</b>					
<b>Footnote:</b> 1. Initial Notifications should be made within 15 minutes to NRC, SERC, USCG, & ERL 2. Notification within 24 hours to TCEQ & HCPHES 3. Only if it affects the community 4. Incidents involving DOT Pipelines (Determine reporting requirement using DOT Flow Chart) Notifications within 2 hrs.					
Agency: NRC	SERC	USCG	LEPC	HCPHES	ERL
Phone #: 800-424-8802	800-832-8824	713-671-5100	713-674-5311	713-920-2831	
Case #:					
Contact:					
Time:					
Agency: DOT	TXRCC				
Phone #: 800-424-8802	512-463-6788				
Case #:					
Contact:					
Time:					

## II-5 QUALIFIED INDIVIDUAL/INCIDENT COMMANDER

The qualified individual and all alternates identified by this plan meet the requirements set forth by 33 CFR 154.1026. The Qualified Individual or alternates:

- Speak fluent English
- Are available on a 24 hour basis
- Are able to arrive at the facility in a reasonable amount of time
- Are familiar with the implementation of this facility response plan
- Are trained in the responsibilities of the qualified individual under this response plan
- Activating and engaging in contracting with identified oil spill response organizations (OSRO)
- Act as a Liaison with the Federal On-Scene Coordinator
- Obligating, either directly or through pre-arranged contacts, funds required to carry out all necessary or directed response activities

The Qualified Individual/IC or his designee's duties and responsibilities in a response are as follows:

- Respond to releases and initiate the ICS as needed.
- Notify the ERT as needed by telephone, pager, or radio to respond to the release.
- Determine if the spill could endanger State waters or react with other substances at the facility, and/or human health and safety.
- Determine if an evacuation is necessary and activate the alarm system, what magnitude of operation is to cease (i.e. partial or complete), and traffic limitations that may be required.
- Ensure the area is secured.
- Conduct a detailed assessment of the incident, including identify character, exact source and extent of the release.
- During an emergency, take all reasonable measures necessary to ensure that releases or spills do not occur, recur or spread to other areas of the facility.
- Establish verbal contact with the Kinder Morgan ERT, CIMA, Harris County Sheriff's Department and other emergency response organizations required for the emergency incident.
- Account for all Kinder Morgan personnel, outside contractors, and visitors.
- Supervise all on-site response efforts until properly relieved of these duties.
- Provide all necessary personal protective equipment and respiratory protection to emergency response workers.
- Investigate the release cause(s) and implement recurrence prevention procedures/actions and document investigation finding and statements.

It is the Qualified Individual has absolute authority to obligate any funds necessary to carry out all required and/or directed response activities and ensure appropriate regulatory notifications have been conducted. This individual will also act as liaison with city, county, state and federal agencies. They are also responsible to direct operations of the Emergency Response Teams, activate the Facility Emergency Management Team as appropriate as appropriate.

**The minimum duties required of the QI (or PIC for Marine Terminals) include:**

•	Notify all response personnel, as needed
•	Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification
•	Notify and provide necessary information to appropriate Federal, State, and local authorities with the designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Commission
•	Assess the possible hazards to human health and the environment due as a result of the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any hazardous surface waters runoffs from water or chemical agents used to control fire and heat-induced explosion)
•	Assess and implement prompt removal actions to contain and then remove the substance released
•	Coordinate rescue and response action as previously arranged with all response personnel
•	Use authority to immediately access Company funding to initiate response, mitigation and clean-up activities
•	Direct clean-up activities until properly relieved of this responsibility



May 09, 2014

**RE: Qualified Individual Designation  
KM Liquid Terminal, LLC  
Galena Park Terminal**

To Whom It May Concern:

In accordance with 33 CFR 154.1023 (c), as a duly authorized representative of Kinder Morgan (owner/operator), the individuals identified below are hereby designated as qualified individuals and are specifically authorized to:

1. Activate and engage in contracting with oil spill removal organization(s);
2. Act as a liaison with the predestinated Federal On-Scene Coordinator (OSC);
3. Obligate funds required to carry out response activities.

The Kinder Morgan Liquid Terminals, LLC qualified individual and alternate qualified individual for the Galena Park Terminal and Pasadena Terminal are as follows:

Qualified Individual (QI):	David Nevada 713-635-4751
Alternate Qualified Individual (AQI):	Jeff Hersperger 713-202-9183

Very truly yours,

Bruce Tylock  
Environmental, Health & Safety Manager  
Kinder Morgan

Cc: File  
Integrated Contingency Plan (ICP) – Galena Park  
Integrated Contingency Plan (ICP) – Pasadena

G:\Departments\Environmental\RESPPLAN\ICP\ICP LETTER.doc

## II-6 RESPONSE PROCEDURES

Immediate actions are required at the onset of an emergency response to mitigate the extent of a release, minimize the potential hazard to human health and the environment, and implement an effective response. It is also important to act decisively and in so doing create a professional working atmosphere among Facility and regulatory authority personnel and public officials. This section is intended to provide guidance for determining the appropriate initial response and notification actions that should be carried out in the event of a release or other emergency incident.

An emergency in pipeline and facility operations often originates with the unexpected release or spill of commodities. Uncontained commodities and high vapor concentrations present substantial hazards for fires or explosions until they dissipate to safe levels. In these situations, sources of ignition must be controlled to eliminate fire and explosion hazards. The Facility has strict rules for controlling sources of ignition within the property to avoid such explosions or fires. Potential sources of ignition become more difficult to control on public property. Early detection and quick response are the best actions to reduce the hazards.

The level of required response is dependent upon the severity of the release, the size, potential environmental, social and economic impact and the expected public interest in the event.

Each response activity is driven by the type of incident, and requires varying actions. This section describes specific operational procedures to respond to potential incidents that may occur at a Kinder Morgan Terminal.

Any person who discovers a condition or witnesses an event that could potentially threaten human health or the environment shall immediately follow the emergency procedure. The IC will then assess the potential danger to the environment or public safety and shall determine if the Contingency Plan should be activated.

A person evaluating a situation must assess the circumstances surrounding an event, to determine if an emergency situation exists, and respond accordingly. Facility personnel are trained in hazards or emergency recognition procedures as described below.

**Incident Level**

- Level 0 – First Responder  
 Level 1 – First Responder – Controlled  
 Level 2 – EOC Activation – Uncontrolled, onsite  
 Level 3 – EOC Activation – Uncontrolled, offsite



## FIRE EVENT STRATEGIC / TACTICAL OBJECTIVE WORKSHEET

STATION PERSONNEL Only take on those priorities that can be safely addressed based on training, equipment, and conditions.		FIRE DEPARTMENT Only take on those priorities that can be safely addressed based on training, equipment, and conditions.		
<p style="text-align: center;"><b>GENERAL</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Report the fire to Emergency Services (911)</li> <li><input type="checkbox"/> Initiate Facility Evacuation via Alarm System</li> <li><input type="checkbox"/> Account for all personnel (Employees &amp; Contractors)</li> <li><input type="checkbox"/> Remove all non-essential personnel</li> <li><input type="checkbox"/> Assign someone to meet with Emergency Services upon arrival at gate or other designated location</li> <li><input type="checkbox"/> Secure all product movement or other operations</li> <li><input type="checkbox"/> When safe to do so, move exposed vehicles subject to radiant heat exposure or obstructing emergency response access</li> <li><input type="checkbox"/> Size up the incident:           <ul style="list-style-type: none"> <li>• Identify the tanks/pumps feeding the fire:</li> <li>• Identify the product on fire</li> <li>• Identify the equipment, tanks, piping, manifolds, and/or valves supplied by the failed pipe/equipment</li> <li>• Identify the equipment, tanks, piping, manifolds, and/or valves exposed to fire</li> </ul> </li> <li><input type="checkbox"/> Report findings of assessment to emergency services</li> <li><input type="checkbox"/> Coordinate all operations with Incident Command</li> </ul> <p style="text-align: center;"><b>INCIDENT SPECIFIC</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Reduce the fires intensity by:           <ul style="list-style-type: none"> <li>• Removing as much pressure from the failed line as possible</li> <li>• Shutdown and/or isolate pumps feeding the failed line/equipment</li> <li>• Isolate storage vessels providing head pressure</li> <li>• Isolate the failed line/equipment using the nearest block valve</li> </ul> </li> <li><input type="checkbox"/> If the leak cannot be safely isolated from the tank feeding it:           <ul style="list-style-type: none"> <li>• Prepare for pump-out operations</li> <li>• Align all valves from the involved tank to manifold. <b>Give MOV's priority over manual valves before power is lost.</b></li> <li>• Report valve alignment to Incident Command</li> <li>• Start pump-out when approved by Incident Command</li> <li>• Stop transfer once liquid level is low enough to reduce the intensity or eliminate fuel to fire. Block tank in once finished.</li> </ul> </li> </ul>	<p><b>DO NOT transfer product into cone roof (non-IFR) tanks within the same area as the incident due to potential vapor hazards.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Manage firefighting water</li> <li><input type="checkbox"/> Work with FD to recycle cooling water in containment areas if safe to do so</li> <li><input type="checkbox"/> Work with FD to operate containment drains and pump out containment areas as needed</li> <li><input type="checkbox"/> Manage fire water pump(s)</li> <li><input type="checkbox"/> Coordinate refueling as needed</li> <li><input type="checkbox"/> Observe water supply in Tank/Pond</li> <li><input type="checkbox"/> Manage oil-water separators</li> <li><input type="checkbox"/> Summon following trades to standby and assist Fire Department as needed:           <ul style="list-style-type: none"> <li>• Electrical/Power distribution</li> <li>• Pipe fitters &amp; Welders</li> <li>• Vacuum trucks/ Frac tanks/waste disposal</li> <li>• Environmental / spill response contractors</li> </ul> </li> </ul> <p style="text-align: center;"><b>SPILL RESPONSE</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Confirm identification of spilled materials and check the material safety data sheets (MSDS) emergency procedures</li> <li><input type="checkbox"/> Confirm that personnel have been assigned to stop the flow of spilling product and secure leaks if it can be done safely</li> <li><input type="checkbox"/> Assess the spill threat, site safety, and parameters such as spill volume, extent, and direction of movement</li> <li><input type="checkbox"/> Initiate actions to notify EHS On Call</li> <li><input type="checkbox"/> Establish Hot, Warm, and Cold Zones</li> <li><input type="checkbox"/> Initiate containment efforts</li> <li><input type="checkbox"/> Establish Decon prior to entering Hot Zone</li> </ul>	<p style="text-align: center;"><b>RESCUE &amp; LIFE SAFETY</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Obtain accountability report from facility representative</li> <li><input type="checkbox"/> <b>If terminal personnel cannot be located, immediately call Control Room at (713) 920-8450 to arrange for KM personnel response.</b></li> <li><input type="checkbox"/> Initiate search &amp; rescue operations (as required).</li> <li><input type="checkbox"/> Remove unnecessary persons from facility and secure against unauthorized entry</li> <li><input type="checkbox"/> Keep apparatus and personnel outside of the hot zone (foam blanket/runoff)</li> <li><input type="checkbox"/> Establish downwind atmospheric and runoff monitoring</li> <li><input type="checkbox"/> Utilize respiratory protection, as needed</li> <li><input type="checkbox"/> Shelter in place or evacuate downwind populations as appropriate</li> </ul> <p style="text-align: center;"><b>EXPOSURE PROTECTION</b></p> <p>General priorities for exposure protection</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Offsite populations &amp; properties</li> <li><input type="checkbox"/> Pressurized storage tanks</li> <li><input type="checkbox"/> Power &amp; Control infrastructure           <ul style="list-style-type: none"> <li>• Aerial wiring</li> <li>• Pole mounted transformers</li> <li>• MCC, Switch Gear, other electrical equipment buildings</li> </ul> </li> <li><input type="checkbox"/> Pumps           <ul style="list-style-type: none"> <li>• Booster, pipeline &amp; manifold pumps</li> </ul> </li> <li><input type="checkbox"/> Valve, manifolds &amp; pipeline meters</li> <li><input type="checkbox"/> Adjacent tanks           <ul style="list-style-type: none"> <li>• Cool cone roof tanks before IFR Tanks</li> <li>• Tanks downwind of the affected tank to be given top priority</li> </ul> </li> <li><input type="checkbox"/> Onsite equipment &amp; Structures</li> <li><input type="checkbox"/> Control cooling water usage to minimize accumulations in containment areas           <ul style="list-style-type: none"> <li>• Test to determine if cooling is needed. Apply a hose stream and look for steam. If no steam is present, no cooling is needed</li> <li>• Apply cooling water intermittently and only long enough for steam production to cease</li> <li>• Draft excess water from flooded containment areas and reuse for cooling water if hydrocarbons are controlled</li> </ul> </li> </ul>	<p style="text-align: center;"><b>FIRE CONTROL</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Extinguish secondary fires outside of equipment/containment areas (vegetation, vehicles, buildings)</li> <li><input type="checkbox"/> Control piping and dike area fires:           <ul style="list-style-type: none"> <li>• Extinguish pool/accumulated liquid fires</li> <li>• Apply hose streams to pressurized fires to reduce intensity until ready to extinguish</li> <li>• Coordinate shutdown of pumps and closure of block valves with facility personnel</li> <li>• Assist facility personnel by accessing and closing of block valves in locations' requiring Structural PPE and hose stream protection</li> </ul> </li> <li><input type="checkbox"/> If leak cannot be isolated from tank feeding it – Consider pump-out</li> <li><input type="checkbox"/> Protect exposures and control fire until it has burned out or is extinguished</li> </ul> <p style="text-align: center;"><b>FIRE EXTINGUISHMENT</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assess adequacy of resources on site:           <ul style="list-style-type: none"> <li>• Qty. of industrial trained personnel / advisors</li> <li>• Qty. / type of foam concentrate</li> <li>• Available water supply (flow &amp; duration)</li> <li>• Water transfer resources/equipment</li> <li>• Foam proportioning equipment</li> <li>• Foam application equipment</li> </ul> </li> <li><input type="checkbox"/> Local resources adequate – attempt extinguishment</li> <li><input type="checkbox"/> Local resources inadequate – <b>DO NOT ATTEMPT EXTINGUISHMENT</b> <ul style="list-style-type: none"> <li>• Request the facility to activate their fire response contractors. Await fire response contractors personnel and equipment</li> </ul> </li> <li><input type="checkbox"/> Block in line suction to affect extinguishment of pressurized fires by fuel control, if possible.</li> </ul> <p><i>Extinguish pressurized fires with dry chemical. ONLY if leak is very small/limited and/or if lines can be blocked in immediately following extinguishment</i></p>	<p style="text-align: center;"><b>PREPARATION FOR FIRE ATTACK</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Determine type of fire attack:           <ul style="list-style-type: none"> <li>• Water</li> <li>• Foam</li> <li>• Dry Chemical</li> <li>• Combination</li> </ul> </li> <li><input type="checkbox"/> Establish water supply (<i>see water supply plan</i>)           <ul style="list-style-type: none"> <li>• Prepare plan to shutdown cooling water operations during fire attack, if necessary</li> </ul> </li> <li><input type="checkbox"/> Establish back up hose lines / teams</li> <li><input type="checkbox"/> Establish &amp; communicate emergency evacuation signals, procedures and routes</li> <li><input type="checkbox"/> Foam Attack:           <ul style="list-style-type: none"> <li>• Proportioning equipment set up</li> <li>• Foam supply adequate and co-located with proportioning equipment</li> <li>• Material handling equipment (forklifts, cranes, trucks, pumps, etc...) &amp; sufficient space available for moving foam containers.</li> <li>• Foam solution delivery equipment and hose lines set up</li> </ul> </li> <li><input type="checkbox"/> Dry chemical attack:           <ul style="list-style-type: none"> <li>• Sufficient type, size and qty. of extinguishers sufficient for extinguishment &amp; possible re-flash</li> <li>• Equipment positioned for use</li> </ul> </li> <li><input type="checkbox"/> Eliminate ignition sources to the best extent possible</li> <li><input type="checkbox"/> Test run attack system using water only to verify           <ul style="list-style-type: none"> <li>• Water supply ready</li> <li>• Back up lines ready</li> <li>• Foam proportioning &amp; application ready</li> <li>• Dry chemical ready</li> </ul> </li> <li><input type="checkbox"/> Initiate fire attack           <ul style="list-style-type: none"> <li>• Shutdown exposure control operations, as necessary</li> </ul> </li> <li><input type="checkbox"/> Post fire attack - <b>Successful</b> <ul style="list-style-type: none"> <li>• Maintain or establish foam blanket to prevent re-ignition</li> <li>• Further tighten/close block valves</li> <li>• Contain minor leaks</li> </ul> </li> <li><input type="checkbox"/> Post fire attack - <b>Unsuccessful</b> <ul style="list-style-type: none"> <li>• Resort to fire control until additional resources arrive or fire burns out.</li> </ul> </li> </ul>

**Large Spill & Releases – It is recommended that actions highlighted in YELLOW be reserved for industrial trained incident commanders, firefighters and fire contractors.**

## II-6.1 Injury / Medical / Rescue

Medical Emergency Checklist	
Procedures	
•	<p><b>Activate professional medical care for the victim by:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Call <b>911</b> to arrange for ground or air ambulance support. Provide the 911 dispatch the following information:               <ul style="list-style-type: none"> <li><input type="checkbox"/> Your name and location</li> <li><input type="checkbox"/> Type of medical emergency</li> <li><input type="checkbox"/> Name and location of the injured</li> <li><input type="checkbox"/> Condition of injured</li> <li><input type="checkbox"/> Contact phone number</li> </ul> </li> <li><input type="checkbox"/> Transport injured to a local hospital or physician.</li> </ul>
<p>Caller's Name:</p>	
<p><b>Note:</b> Evacuation of seriously ill or injured persons should be conducted by ground or air ambulance only. <b>Transportation by Facility or private vehicle should be discouraged, unless advised to do so by medical authorities.</b> All medical emergencies should be documented and applicable emergency notifications completed.</p>	

**II-6.2 Fire / Explosion**

It is the Facility's intention to comply with all applicable fire regulations. The objective of the emergency planning and response program is to produce a favorable outcome at the incident with minimal risk to the public, employees and contractors, and emergency responders.

1. 1st responder to notify Field Controller.
2. The Field Controller will call IC.
3. The Field Controller or designee to secure area.
4. Operators will close all tank valves & pipeline valves if possible.
5. IC, Safety Officer (SO), the Field Controller or designee gets ERT members on
6. duty to secure all roads and determine if an ERT all-call is necessary.
7. IC or SO assess situation, and contacts back up fire fighting agencies, as
8. deemed necessary which include CIMA and/or local fire departments, to provide
9. emergency response.
10. LO notifies government agencies of incident, as required.

### Fire / Explosion / Blowout Checklist

#### Procedures

- |   |   |
|---|---|
| • | Person in Charge – Call 911 and activate fire alarm.  |
| • | Eliminate all ignition sources.   |
| • | Begin Emergency Shut Down if necessary.   |
| • | If person(s) down, refer to Medical Emergency Checklist   |
| • | When fire is noticed at any facility, secure the source if safe to do so.   |
| • | Account for all personnel in the unit or area where the fire occurred.  |
| • | Evacuate all non-essential personnel, if necessary.   |
| • | Establish communications. Contact PIC.  |
| • | Search for and rescue missing or injured personnel as required.   |
| • | Use the buddy system.   |
| • | Ensure the Facility Operators control the process.  |
| • | Conduct air monitoring to ensure safety of personnel and appropriate PPE is required to respond. (For additional information, see the Site Safety and Health Plan and/or the Safety Coordinator.) |
| • | Conduct initial fire fighting by IC/UC personnel (trained in the use of firefighting equipment and PPE), which may include use of monitors, deluge systems, and portable fire extinguishers.      |
| • | Evacuate nearby residents if required.  |

The procedures needed to respond to a fire or explosion are the same and are described below.

1. In the event that anyone discovers a fire or witnesses an explosion, or detects the threat of a fire or explosion they should immediately contact their immediate supervisor who will contact the Field Controller.

The caller shall identify the following to the Field Controller:

- His or her name;
- The nature of the discovery;
- The exact location of the incident;
- If known, the location of employees, contractors or visitors who might be threatened by the incident.

A Field Controller is on duty 24 hours per day 7 days per week, and is trained to take all necessary emergency information. The Field Controller will then contact the IC or alternate. Every effort should be made to establish verbal contact with the IC via telephone or hand-held radio, pager or telephone.

2. If step one is accomplished and the person is able to communicate the incident verbally to the IC, the IC shall then determine if human health is in jeopardy. If so, IC or designee shall sound the nearest alarm.
3. Once the alarm is sounded, all regular operations at the facility shall cease, and the following procedures shall be implemented:
  - All persons (e.g. employees, outside contractors, and visitors) shall proceed to one of the five designated muster areas.
  - Employees who are hosting visitors or supervising outside contractors are responsible for directing and assisting these people to the appropriate muster area(s).
  - Transportation to the muster area shall be upwind of the fire or explosion. Persons shall note the wind direction by using the windsocks and alter their movements accordingly.
  - If movement to the muster area is not possible without going downwind of the fire or explosion, personnel shall establish a position at a safe distance upwind of the affected area and shall wait until they can be safely retrieved. They shall then notify the IC by radio of their location. Simultaneous to sounding the alarm, all incoming traffic to the facility shall be halted. No traffic shall be admitted except emergency response vehicles.
4. The IC or appointed designee shall establish verbal contact with CIMA and the Local Emergency Planning Commission (LEPC) or their alternates as appropriate.

5. If there are injuries, the IC, Safety Officer, or designee shall contact the Ambulance Service and East Houston Medical Center or its alternate.
6. The IC or designate shall then account for all personnel, outside contractors, and visitors.
7. The IC or designee will then begin a detailed assessment of the situation. He shall identify the character of the fire or explosion, the exact source of the fire or explosion, and the amount and area extent of materials released or being released. He shall do this by observation or review of facility records, chemical analyses, etc.
8. Concurrently, the IC or designee shall assess the possible hazards to human health or the environment that could result from the fire or explosion. This assessment shall include both direct and indirect effects of the fire or explosion.

Such effects include:

- the location of the fire or explosion;
  - irritating, toxic or asphyxiation gases generated;
  - hazardous surface water runoff from water or chemical agents used to control fire and heat induced explosions;
  - the potential for additional explosions due to ignitable materials near the incident;
  - the potential for the fire to spread or escalate in intensity due to ignitable materials near the incident; and
  - wind direction.
9. During an emergency, the IC or designee shall take all reasonable measures necessary to ensure that fires or explosions do not recur or spread to other hazardous materials at the facility. These measures will include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
  10. If the IC or designee determines that the fire or explosion could threaten human health or the environment outside the facility, and determines that evacuation of local areas may be advisable, the LO will:

Notify the LEPC and CIMA as appropriate, the report to the National Response Center shall include:

- Name and telephone number of the reporter;
- Name and address of the Kinder Morgan facility;
- Description of the time and type of incident;
- Name and quantity of material(s) involved, to the extent known;
- Extent of injuries, if any; and
- Possible hazard to human health or the environment outside the facility.

The LO or designee shall then assist officials in determining whether local areas should be evacuated.

11. The IC or the designee will ensure all on-site response efforts include:

- Ensuring that all non-emergency response personnel are in a secure location upwind of the affected area or, if necessary, are evacuated completely offsite;
- Keeping lines of communication open including telephones and hand-held radios;
- Limiting the use of vehicles in or near the affected area to prevent ignition of vapors or gases; and
- Containing any released material or surface water runoff contaminated by fire fighting chemicals by using absorbent materials or constructing berms.

12. The IC, Safety Officer or designee will ensure all necessary PPE to emergency response workers.

13. Upon elimination of the emergency, the IC or designee shall direct the collection of all contaminated equipment for decontamination.

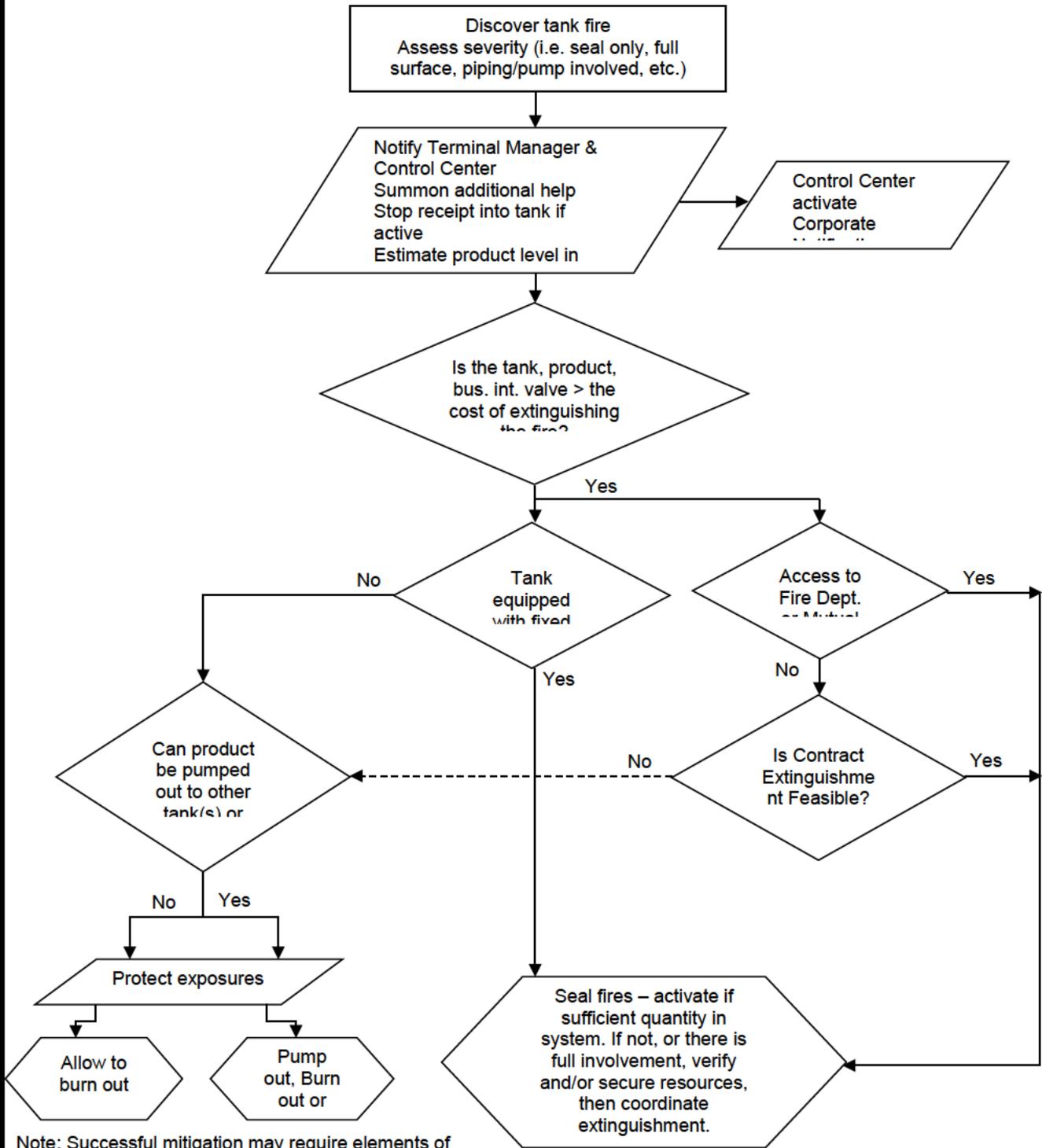
## II-6.3 Pipeline Station or Manifold Fire

Pipeline Station or Manifold Fire	
Procedures	
•	Personnel should immediately evacuate hazardous area.
•	Extinguish fire at once, if possible, with the equipment at hand. <ol style="list-style-type: none"> <li>a) If product cannot be shut off, it is better to let a controlled fire burn than to extinguish it as the fuel may spread and flashback occur.</li> </ol>
•	<b>If telephone is not in hazardous area</b> , notify Supervisor and Control Center and proceed to shut down as outlined in Section II.
•	<b>IF TELEPHONE IS IN HAZARDOUS AREA</b> , do not attempt to use it. <ol style="list-style-type: none"> <li>a) Trip emergency shutdown control.</li> <li>b) Close fuel supply valve if the emergency shutdown control fails.</li> <li>c) Get information to Supervisor and fire department as quickly as possible by any available means.</li> </ol>
•	Reduce fuel supply by: <ol style="list-style-type: none"> <li>a) Closing valves where possible.</li> <li>b) Close tank valves immediately.</li> <li>c) Close mainline fire gates valves on Supervisor's orders if not in the fire area. If in the fire area, the nearest upstream and downstream valves are to be closed.</li> </ol>
•	Notify Terminal Supervisor, Operations Supervisor, and Duty Officer (if applicable). Notify all off-site personnel of Facility Emergency Incident.
•	If foam is needed, contact necessary resources for assistance.
•	Post guards at gates or roadways. Call for any help deemed necessary: ambulance, sheriff (to barricade roads, etc.).
•	Isolate the fire as much as possible and control spreading to other properties by wetting with water.
•	After the fire has been extinguished or controlled, permit only authorized personnel to go near the location.
•	Public Relations: Contact PIO Group to request media support as needed.

## II-6.4 Truck Loading Rack Fire

Truck Loading Rack Fire	
Procedures	
•	<b>Be calm – Think first and act with care. Equipment can be replaced – lives cannot.</b>
•	<b>Stop all loading on rack. Trip emergency shutdown switch – close valves on loading riser.</b>
•	Attempt to put out or control fire with dry chemical extinguisher. Prompt action can extinguish a small fire.
•	Notify Fire Department
•	<b>If immediate action does not extinguish the fire, then:</b>
•	Clear rack of all trucks not on fire and shut off fuel supply by closing all valves on loading lines.
•	Advise Supervisor and/or other employees on duty of the fire.
•	If safe to do so, remove anyone that is injured or burned from immediate danger zone.
•	Summon help as needed: ambulance, sheriff, etc.
•	In some cases it may be better to isolate the fire and permit it to exhaust the fuel, rather than to extinguish and risk an explosion.
•	Water should be applied to lines, equipment and tanks in the fire and surrounding area.
•	Turn off switches on electrical service in fire area.
•	Close gates, post guards to keep spectators away, use sheriff or police to assist.
•	Public Relations: Contact PIO Group to request media support as needed.

II-6.5 Tank Fire Pre-Plan / Flowchart



Note: Successful mitigation may require elements of all 3 options.

## II-6.6 Unconfirmed Report of a Leak

Following an unconfirmed report of a leak, or the substantial threat of a leak, the sequential response actions that should be implemented immediately are:

Unconfirmed Report of a Leak	
Procedures	
•	Contact the Control Center and request a line balance check and shut down line if a leak is suspected or pipeline integrity is compromised.
•	Conduct aerial or ground reconnaissance of the area at the first possible opportunity (incident may occur at night or in inclement weather) and contact the Control Center to shut down line if reconnaissance detects a potential leak.
•	Isolate line segment
•	Start internal and external notification procedures.
•	Mobilize response and repair personnel.

## II-6.7 Spill Material Identification

In defining an acceptable response to a spill incident, it is necessary to know certain physical and chemical characteristics of the spill material. If positive identification of the spilled material can be made without testing, product data may be obtained from a material safety data sheet (MSDS), product specification information, and/or records of product properties.

Occasionally a spill may occur in which the spilled material is not readily identifiable. Typically, laboratory analytical data for spill event samples will not be instantaneously available during an emergency. Therefore, it is necessary and desirable to field-categorize oils as the product reacts and changes in the environment. Although varying widely in physical and chemical properties, oil products have common basic features that permit their grouping for predictive evaluation of environmental effects and determination of control actions. In addition, as petroleum products react and change (e.g., weather) when exposed in the environment, the laboratory data may not be representative of "real-time" conditions; rather the data may instead reflect the chemical characteristics of the spilled material(s) at the time of sample collection.

**The following action items should be conducted during a spill response:**

- |   |   |
|---|---|
| • | Development of a site-specific Safety and Health Plan addressing the proper PPE and waste handling procedures                           |
| • | Development of a Disposal Plan  |
| • | Continuous tracking of oil disposition in order to better estimate amount of waste that could be generated over the short and long-term |
| • | Organization of waste collection, segregation, storage, transportation and proper disposal  |
| • | Minimization of risk of any additional pollution  |
| • | Regulatory review of applicable laws to ensure compliance   |
| • | Documentation of all waste handling and disposal activities   |
| • | Disposal of all waste in a safe and approved manner   |

**General Pipeline Leak Response Actions**
**Travel to Suspected Site of Leak**

- |   |  |
|---|--|
| • | A means of locating the leak site is necessary for minimum travel time. The general location of the leak may be known from reports.  |
| • | If precise directions are not available for finding the site, air surveillance and assistance from a helicopter or other aircraft may be necessary. Areas should maintain a list of companies with aircraft for charter. |

**Find Leak**

- |   |   |
|---|---|
| • | If oil continues to escape from the line, the leak may be detected visually.  |
| • | If underwater, the leak can be found by having a diver survey the line. The line may have to be pressured up to force gas or oil out of the leak to aid in locating the leak. |

**Determine Extent of Damage**

- |   |  |
|---|--|
| • | In determining the extent of damage, three basic conditions of the line must be determined: <ul style="list-style-type: none"> <li>• Degree of damage to the line</li> <li>• Length of damaged line</li> <li>• Misalignment angle if an underwater pipeline</li> </ul> |
|---|--|

**Report to Area Supervisor**

- |   |   |
|---|---|
| • | Once the extent of damage has been determined, the following information should be reported: <ul style="list-style-type: none"> <li>• Location of leak</li> <li>• Size of the Line</li> <li>• Type of coating</li> <li>• Length of damaged section</li> <li>• Misalignment angle</li> <li>• Water depth (if appropriate)</li> <li>• Local terrain conditions</li> </ul> |
|---|---|

**Begin Repair Preliminaries**

- |   |   |
|---|---|
| • | Perform whatever repair preliminaries are possible if it safe to do so. |
|---|---|

**II-6.8 Pipeline Leak or Rupture**

1. Operator to notify Field Controller of situation.
2. Operation shut down (if under pressure) and area secured by operator.
3. Field Controller notifies all Operators and the LO of the situation and to secure the roads near the spill.
4. Everyone in spill area is required to wear respirators, if necessary.
5. Field Controller directs containment of the spill if possible until LO arrives. If spill threatens waterway, then earthen dikes, vacuum truck, and spill containment booms will be used to contain and/or direct flow away from waterway, as practical.
6. LO assess cleanup requirements and contacts clean-up contractor if necessary.
7. LO notifies government agencies of release.

Pipeline Leak or Rupture Checklist	
Procedures	
•	Assess situation and exercise caution.
•	Eliminate all ignition sources onsite.
•	Shut down pumps, close block valves, and shut down affected line.
•	If person(s) down, refer to Medical Emergency Checklist.
•	Contain spill (if safe to do so).
•	Assign person to direct emergency response vehicles.
•	Conduct air monitoring, per the Safety Officer's instruction.
•	Make necessary notifications
•	Ensure safety of personnel involved in spill response activities
•	Coordinate deployment of containment and recovery equipment
•	Designate staging areas for personnel and equipment
•	Coordinate activities of clean-up contractors
•	Set up Command Post, if warranted

- |   |   |
|---|---|
| • | Assess situation and exercise caution.                            |
| • | Eliminate all ignition sources onsite.                            |
| • | Shut down pumps, close block valves, and shut down affected line. |
| • | If person(s) down, refer to Medical Emergency Checklist.          |
| • | Contain spill (if safe to do so).                                 |
| • | Assign person to direct emergency response vehicles.              |
| • | Conduct air monitoring, per the Safety Officer's instruction.     |
| • | Make necessary notifications                                      |
| • | Ensure safety of personnel involved in spill response activities  |
| • | Coordinate deployment of containment and recovery equipment       |
| • | Designate staging areas for personnel and equipment               |
| • | Coordinate activities of clean-up contractors                     |
| • | Set up Command Post, if warranted                                 |

**II-6.9 Natural and Other Gas Leak In or Near a Building**

<b>Natural and Other Gas Leaks In or Near a Building</b>	
Procedures	
•	Immediately stop work activities.
•	Protect public first, then facilities.
•	Safely evacuate building if gas is detected inside building.
•	Always look and listen for any signs of escaped gas.
•	All open flames are to be extinguished.
•	Determine leak severity.
•	Do not enter building with audible leaking gas.
•	Test the environment to determine safe entry.
•	Evacuate people from adjacent buildings.
•	Shut off electrical power to building.
•	Eliminate all other potential sources of ignition.
•	Isolate the building from gas sources of ignition.
•	Close necessary inlet and outlet block valves and open blowdown valves.
•	After gas sources are shut off, utilize portable combustible gas indicator/detector to determine safe environment.

**II-6.10 Natural and Other Gas Leaks**

1. Operator or contractor to notify Field Controller of leak.
2. Area secured by Field Controller or designee.
3. Operator ensure all dike wall valves closed.
4. Field Controller will notify LO; ERT members contacted if release is large
5. enough to require response.
6. LO will notify government agencies.
7. The LO or designee will assess spill site and determine if clean-up is required.

<b>Natural and Other Gas Leaks</b>	
Procedures	
•	Immediately stop work activities.
•	Shut down and isolate flow.
•	Evacuate the area.
•	Eliminate sources of ignition.
•	All equipment used when handling product must be grounded.
•	Water spray may reduce vapors or divert vapor cloud.
•	If exposed, make sure exposed clothing is removed and decon occurs.

**II-6.11 Failure of Manifold, Mechanical Loading Arm, Other Transfer Equipment or Hoses**

1. Operator will shut down transfer.
2. Operator to close off the Dock Valve and the Barge Valve.
3. Operator to notify the Field Controller of the situation.
4. The Field Controller will notify the Liaison Office (LO); assess situation and
5. Initiate deployment of spill response boat and boom if necessary.
6. Operator to evacuate and change the hose as appropriate.
7. LO will call government agencies.

<b>Equipment Failure Checklist</b>	
Procedures	
•	Immediately stop work activities.
•	Shut off transfer pumps. Close header and tank valves.
•	Notify Terminal Manager and the Vessel PIC. (Marine Terminal)
•	Drain spilled material on vessel deck to appropriate vessel tank (s).
•	Secure the area.
•	Initiate oil spill cleanup response actions.

**II-6.12 Tank Overfill**

1. Shut down product move.
2. Notify the Field Controller of the situation.
3. Field Controller designee is responsible for securing the area.
4. Close off valves to tank.
5. Operator to make sure all dike wall valves are closed.
6. Field Controller or Control Center Foreman will contact the LO.
7. LO will call government agencies and spill response contractors. If practical,
8. Facility vacuum truck will be used to collect free product.

### Tank Overfill Response Checklist

#### Procedures

- |   |  |
|---|--|
| • | Immediately stop work activities.  |
| • | Shut off flow to tank.   |
| • | If safe, ensure secondary containment drains are closed (if applicable). |
| • | Initiate oil spill response actions.                                     |
| • | Secure the area.   |
| • | Notify terminal manager.   |
| • | Begin transfer of contents to other tankage.                             |

#### II-6.13 Tank Failure

### Tank Failure Response Checklist

#### Procedures

- |   |  |
|---|--|
| • | Immediately stop work activities.  |
| • | Shut off flow to tank.   |
| • | If safe, ensure secondary containment drains are closed (if applicable). |
| • | Initiate oil spill response actions.                                     |
| • | Secure the area.   |
| • | Notify terminal manager.   |
| • | Begin transfer of contents to other tankage.                             |

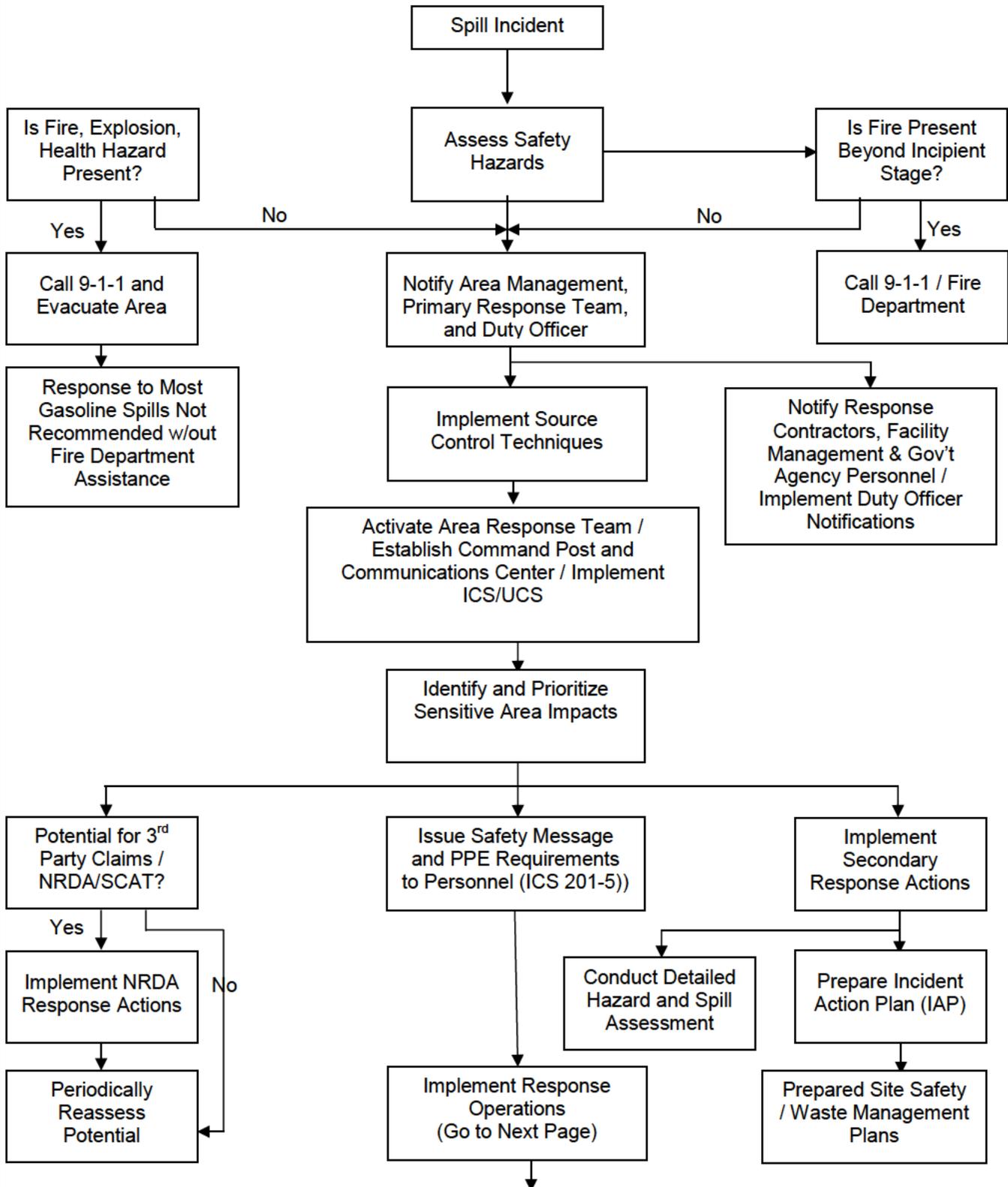
**II-6.14 Tank Release**

If the spill or release is from a tank, the tank will be removed from service and will be scheduled for repair.

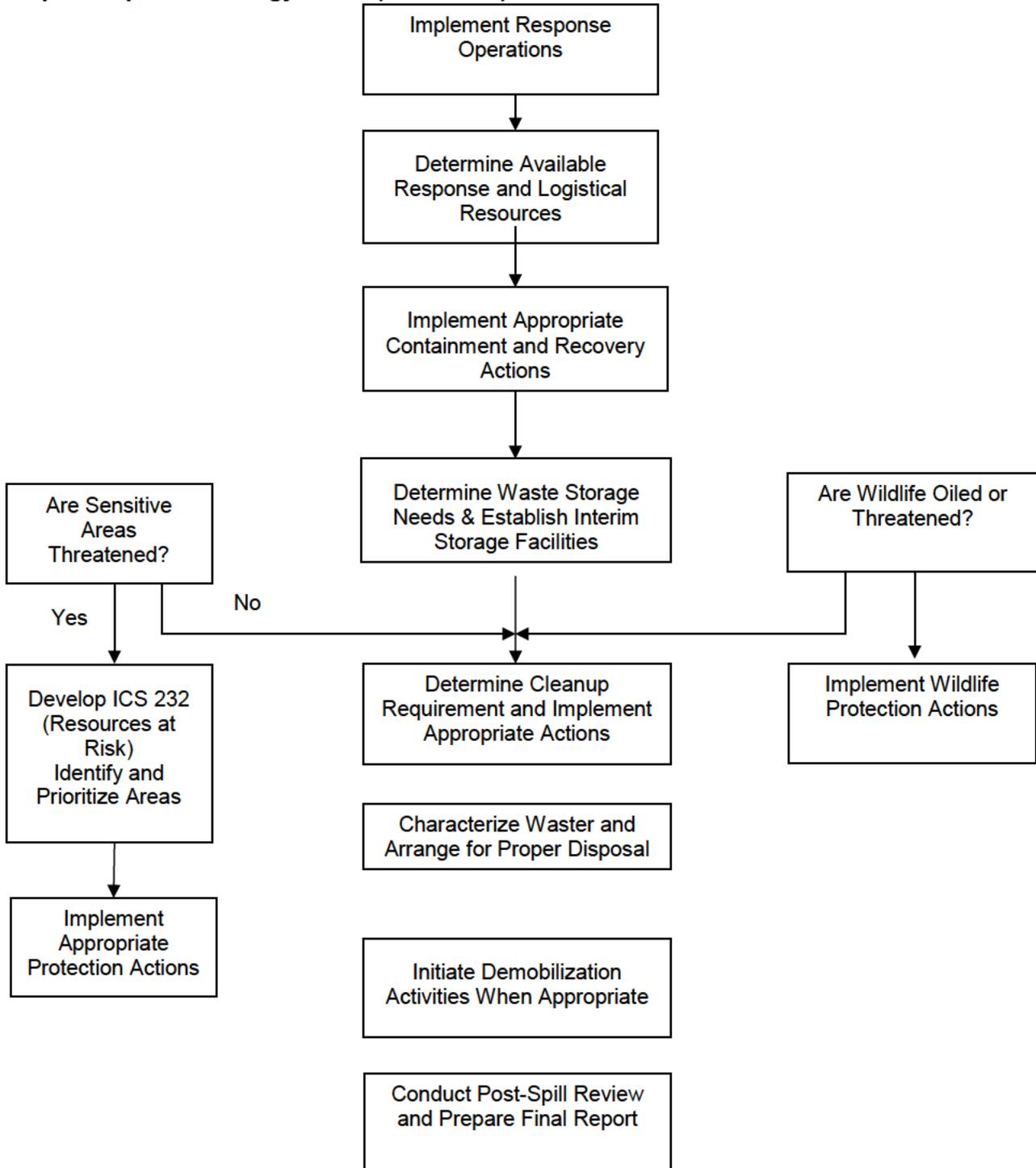
**II-6.15 Oil Spill / Hazardous Material Release**

<b>Oil Release Checklist</b>	
Procedures	
•	Consider safety of personnel.
•	Shut off ignition sources.
•	Stop the flow of spilled product.
•	Coordinate rescue and medical response actions.
•	Identify release and assess possible hazards to human health and the environment.
•	Report all spills to Supervisor and Management.

## Spill Response Strategy Guide



### Spill Response Strategy Guide (Continued)



**Note:** Pipeline Emergency Response operations dictate that the Facility and Agency Incident Commanders will establish the location of the Incident Command Post and Communication Center. Factors that will be taken into account when deciding on the Incident Command Post will include but not be limited to: location of the pipeline release, personal and public safety, geography, preference of local, state and federal response personnel, weather, size of ICP needed and workability.

In the event that an unplanned release or spill of a hazardous substance occurs at the facility, the following steps shall be taken:

1. The person discovering the release or spill shall immediately contact the Field Controller. Either the Field Controller or the Control Center Foremen will then contact the Liaison Officer (LO) or alternate. Every effort shall be made to establish verbal contact with the LO via telephone or hand held radio.

The caller shall identify the following to the LO:

- His or her name.
- The nature of the discovery.
- Amount of material.
- The exact location of the incident.
- If known, the location of employees, contractors or visitors who might be threatened by the release or spill.

A Field Controller is on duty 24 hours per day 7 days per week at the Control Center and is trained to take all necessary emergency information. The LO shall then relay this information to the IC.

2. The IC or alternate will determine if the alarm should be sounded. If/when the alarm is sounded all regular operations at the facility will cease and the following procedures shall be implemented:

All persons (including employees, outside contractors, and visitors) shall proceed to an appropriate muster area depending on wind direction.

Employees who are hosting visitors or supervising outside contractors are responsible for directing and assisting their people to the appropriate muster area.

All transportation to the muster area shall be upwind of the release or spill. All persons shall note the wind direction by using one of four windsocks (see map for location of windsocks) and shall alter their movements accordingly.

3. If movement to one of the muster areas is not possible without going downwind of the spill or release, personnel shall establish a position at a safe distance upwind of the affected area and shall wait until they can be safely retrieved.

Simultaneous to sounding the alarm, all incoming traffic to the Facility shall be halted. No traffic shall be admitted except emergency response vehicles.

4. The IC or designate shall establish verbal contact with CIMA, the Local Emergency Planning Commission (LEPC) or their alternates, as appropriate. The LO or designate shall contact Garner Environment or alternate, if necessary.

5. If there are injuries, the Safety Officer will contact the Ambulance Service and/or the hospital as necessary.
6. The IC or designate shall then account for all personnel, outside contractors, and visitors.
7. The IC or the designate shall then begin a detailed assessment of the situation. The IC shall identify the character of the release or spill, the exact source of the release or spill, and the amount and aerial extent of materials released or being released. This will be accomplished by observation or review of facility records or manifest, and if necessary, by chemical analyses.
8. Concurrently, the IC shall assess the possible hazards to human health or the environment that could result from the release or spill. This assessment shall include both direct and in-direct efforts of the incident. The IC will determine the following:
  - The location of the release or spill,
  - Irritating, toxic or asphyxiating gases generated,
  - Quantity of material being released,
  - The potential for the release to spread or escalate in intensity due to a
  - Ruptured pipe or tank,
  - Type of material (chemical make-up) being released,
  - Possibility for a fire or explosion due to gases being released, and
  - Wind direction and velocity.
9. During an emergency, the IC shall take all reasonable measures necessary to ensure that releases or spills do not occur, recur or spread to other hazardous materials at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
10. If the IC determines that the release or spill could threaten human health or the environment outside the facility or that a Reportable Quantity (RQ) has been released, and the IC determines that evacuation of local areas may be advisable, the LO or the designee shall:
  - a. Notify the LEPC and appropriate agencies. The report to the National Response Center shall include:
    - Name and telephone number of reporter,
    - Name and address of the Facility,
    - Description of the time and type of incident,
    - Name and quantity of material(s) involved, to the extent known,
  - b. Assist officials in determining whether local areas should be evacuated.

11. If the IC determines that the release or spill can be contained and cleaned up by facility personnel, then these employees will be directed to begin immediate response action

The IC shall supervise all on-site response efforts to include:

- Ensuring that all non-emergency response personnel are in a secure location
- Upwind of the affected area or, if necessary, are evacuated completely offsite.
- Keeping lines of communication open including telephones and hand-held radios;
- Limiting the use of vehicles in or near the affected area to prevent ignition of vapors or gases; and
- Containing any released material or surface water runoff contaminated by fire fighting chemicals by using absorbent materials or constructing berms.

12. The IC or SO will provide all necessary personal protective equipment (PPE) and respiratory protection to emergency response workers.

### **Ignitable or Reactive Substances**

If the spill involves ignitable or reactive substances at a minimum but not limited to the following procedures will be employed:

1. Remove possible sources of ignition.
2. Remove reactive materials to a safe location.
3. Shut off feed lines to and from storage tank(s).

### **Leaking Containers**

If the spill is due to a leaking container, the container will be placed in an 85-gallon DOT approved over pack drum. The drum(s) will be stored and/or disposed of offsite at an authorized disposal facility.

### **Overturned Drums**

If the spill involves an overturned drum, the drum shall be up righted immediately and the spill material contained until it can be removed.

### **Liquid Material Spills**

If the spill involves a liquid material, workers will control the affected area by:

- a. stabilizing the liquid material and collecting it in appropriate containers (i.e. drums or roll-off containers); or
- b. collecting the liquid using a vacuum truck; or
- c. disposing the liquid at an authorized disposal facility.

If the release produces more standing liquid than can be stabilized, Kinder Morgan shall either call in an outside contractor to remove the waste off-site for proper treatment and disposal, or will pump the material to the on-site product recovery tanks and disposal at GCWDA.

## II-7 SPILL ASSESSMENT

Upon receiving indication of an off-site oil spill, or other chemical release that may threaten the waters of the United States, the following actions are critical to initiating and sustaining an effective response:

•	Locate the spill
•	Determine size and volume of the spill
•	Predict spill movement
•	Monitor and track spill movement

### II-7.1 Locating a Spill

In the event of a significant release of oil, spill location, trajectory and estimated volume provide preliminary data to plan and initiate cleanup operations. Generating the estimate as soon as possible will aid in determining:

•	Equipment and personnel required;
•	Potential threat to shorelines and/or sensitive areas as well as ecological impact; and
•	Requirements for storage and disposal of recovered materials.

## II-7.2 Determining the Size and Volume of a Spill

When a spill has been verified and located, the priority issue will be to estimate and report the volume and measurements of the spill as soon as possible. Spill measurements will primarily be estimated by using coordinates, pictures, drawings, and other information received from helicopter or fixed wing overflights.

Oil spill volume estimations may be determined by direct measurements or by calculations based upon visual assessment of the color of the slick and information related to length and width that can be calculated on existing charts. The appearance of oil on water varies with the oil's type and thickness as well as ambient light conditions. Oil slick thicknesses greater than approximately 0.25 mm cannot be determined by appearance alone.

Direct measurements are the preferred method for determining the volume of a spill. Measurements can be obtained by:

•	Gauging the tank or container to determine volume lost
•	Measuring pressure lost over time
•	Determining the pump or spill rate (GPM) and elapsed time

### Spill Volume Estimating

Early in a spill response, estimation of spill volume is required in order to:

•	Report to agencies
•	Determine liquid recovery requirements
•	Assess manpower and equipment requirements
•	Determine disposal and interim storage requirements

Several natural weathering processes occur which may diminish the severity of the spill depending upon the composition of the oil. Natural weathering processes include the following:

•	Dispersion
•	Dissolution
•	Emulsification
•	Evaporation

### II-7.3 Tracking the Spill Movement

Oil spill trajectories may initially be estimated in order to predict direction and speed of the slick movement. Trajectory calculations provide an estimate of where oil slicks may impact shorelines and other sensitive areas and provide an estimate of the most likely locations for protection, containment and recovery.

#### The following methods may be used to predict spill movement:

- |   |                              |
|---|------------------------------|
| • | Vector analysis              |
| • | Computer trajectory modeling |

NOAA's GNOME (General NOAA Operational Modeling Environment) is a modeling tool from the Office of Response and Restoration's (OR&R) Emergency Response Division that can be used to predict the possible route, or trajectory, a pollutant might follow in or on a body of water, such as in an oil spill. GNOME can be found by using the following link:

<http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/response-tools/gnome.html>.

The Facility will utilize internal subject matter experts with consultants as necessary to perform trajectory analysis and fate & effect modeling.

#### Input variables for proper modeling include, but are not limited to:

- |   |   |
|---|---|
| • | Spill location, volume, and time of spill           |
| • | Nature of the spill - continuous or single incident |
| • | Wind speed & direction                              |
| • | Water movement (current) speed & direction          |
| • | Water temperature                                   |
| • | Sea state   |
| • | Atmospheric temperature                             |
| • | Characteristics of spilled material                 |

#### This information can be obtained from many sources, including but not limited to:

- |   |  |
|---|--|
| • | Reports from personnel at the spill site               |
| • | Commercial weather services                            |
| • | National Oceanic and Atmospheric Administration (NOAA) |
| • | Internal Facility databases                            |

Surveillance of the spill movement throughout the incident is essential to bringing response operations to a successful conclusion. Surveillance operations can be continued both day and night, and in inclement weather, through the use of infrared sensing cameras capable of detecting oil on water. Information from the infrared cameras can be downloaded to a computer and printed out on a chart and/or recorded on videotape.

### Spill Surveillance Guidelines

•	Spill surveillance should begin as soon as possible to aid response personnel with assessing spill size, movement and potential impact locations.
•	Cloud shadows, sediment, floating organic matter, submerged sand banks or wind-induced patterns on the water may resemble an oil slick if viewed from a distance.
•	Use surface vessels to confirm the presence of any suspected oil slicks, if safe to do so. If possible, direct the vessels from the aircraft and photograph the vessels from the air to show their position and size relative to the slick.
•	It is difficult to adequately observe oil on the water from a boat, dock or shoreline.
•	Spill surveillance is best accomplished using helicopters or small planes. Helicopters are preferred due to their superior visibility and maneuverability characteristics.
•	If fixed-wing planes are used, high wing types provide better visibility than low-wing types.
•	Document all observations in writing and with photographs and/or videotapes.
•	Describe the approximate oil slick dimensions based on available reference points (i.e. vessel, shoreline features, facilities). Use aircraft or vessel (if safe to do so) to traverse the length and width of the slick while timing each pass. Calculate the approximate size and area of the slick by multiplying speed and time.
•	Record aerial observations on detailed maps.
•	In the event of reduced visibility, such as dense fog or cloud cover, boats may be used for patrols and documenting the location and movements of the spill. Boats will only be used if safe conditions are present, including on-scene weather and product characteristics.
•	Surveillance is also required during spill response operations in order to gauge effectiveness of response operations, to assist in locating skimmers and to continually assess size, movement and impact of spill.

## II-7.4 Aerial Spill Surveillance Data Sheet

<b>Incident Name:</b>		<b>Date / Time:</b>				
<b>Environmental Conditions</b>						
Wind Speed (kts):			Wind Direction:			
Current Speed (kts):			Current Direction:			
Air Temperature (°F)			Water Temperature (°F)			
Comments						
Clear <input type="checkbox"/>		Partly Cloudy <input type="checkbox"/>			Cloudy <input type="checkbox"/>	
<b>Spill Location</b>						
Leading Edge	Latitude		Deg		Min	Sec
	Longitude		Deg		Min	Sec
Trailing Edge	Latitude		Deg		Min	Sec
	Longitude		Deg		Min	Sec
<b>Spill Description</b>						
	Barely Discernable	Silvery Sheen	Faint Colors	Bright Bands of Color	Dull Brown	Dark Brown
Length						
Width						
<b>General Description</b>						

## II-8 RESPONSE MANAGEMENT SYSTEM

This Section describes specific duties and responsibilities of Kinder Morgan personnel in the event of an emergency incident. This section should be used as a guide; specific circumstances during an incident response may require different actions. Certain duties, responsibilities and position titles listed here may not be needed in all circumstances and may change with time as the response evolves.

All Kinder Morgan facilities have response teams that consist of trained personnel that will respond to all facility emergency incidents. Trained and qualified OSRO personnel will be called on to fill positions within the incident command as needed/required, including but not limited to positions in the Operations, Planning and Logistics sections.

### II-8.1 Incident Command Posts

First responders to the scene should establish a command post local at a safe distance from the release point to the incident for events considered to be Level 0 or 1. The command post acts as the central clearinghouse for emergency information. To reduce confusion at the emergency scene, all responders will report to the Command Post and On-Scene Coordinator upon arriving at or departing from the scene. All incoming and outgoing communications will pass through the Command Post.

For incidents, Level 2 or 3, Kinder Morgan has a predetermined Emergency Operations Center (EOC) for each facility to command a response to an incident. The term Incident Command Post and Emergency Operations Center are used interchangeably. The following locations have been pre-designated as potential Incident Command Post, if there was an incident at the Kinder Morgan facilities:

#### **Galena Park Terminal**

Firehouse

#### **Pasadena Terminal**

Firehouse

## II-8.2 Incident Command System (ICS) Structure

The Facility is in the process of adopting the National Incident Management System (NIMS) ICS/UCS organization as outlined in:

Homeland Security Presidential Directive Five (HSPD-5)  
National Response Plan (NRP), December 2005

All Federal, State, tribal, and local levels of government, as well as many private sector and non-governmental organizations use ICS/UCS for a broad spectrum of emergencies. These range from small to complex incidents, both natural and manmade, and include acts of catastrophic terrorism. Kinder Morgan is in the process of adopting the NIMS ICS/UCS to allow the partnership of Unified Command to be developed when required in training, exercises or responses. Kinder Morgan's current incident command structure is similar to the one outlined in NIMS/ICS and allows for a flexible response structure depending on incident severity.

<b>ICS/UCS Organization</b>	
The ICS/UCS is applicable across a spectrum of incidents that may differ in terms of size, scope, and complexity because of its:	
•	Functional unit management structure.
•	Modular organizational structure that is extendable to incorporate all necessary elements. Responsibility and performance begin with the incident command element, the IC/UC, and build from the top down.

ICS is driven by several regulations. Specifically, 29 CFR 1910.156 (fire brigade), 1910.120 (emergency response), 40 CFR Part 265 (hazardous waste contingency plan), 40 CFR Part 112 (SPCC plan), the Oil Pollution Act, 40 CFR Part 194, and the Texas Oil Spill Prevention and Response Act require that a facility specific Incident Command System be established to optimize response activities.

The ICS assigns a chain of command and functional responsibilities for each significant categorical position that may be applicable in incident. In the event of significant incident there might become a need for coordination with Federal, State and Local authorities. In this type of an instance there is a good possibility that these governmental personnel may be integrated into the command structure. Government personnel including the Federal On-Scene Coordinator will establish themselves within the Incident Command.

<b>Functional Areas</b>	
ICS/UCS is usually organized around five major functional areas:	
•	Command
•	Operations
•	Planning
•	Logistics
•	Finance/administration.



The ICS places the Incident Commander in charge of managing the incident with other key response personnel assisting the Incident Commander.

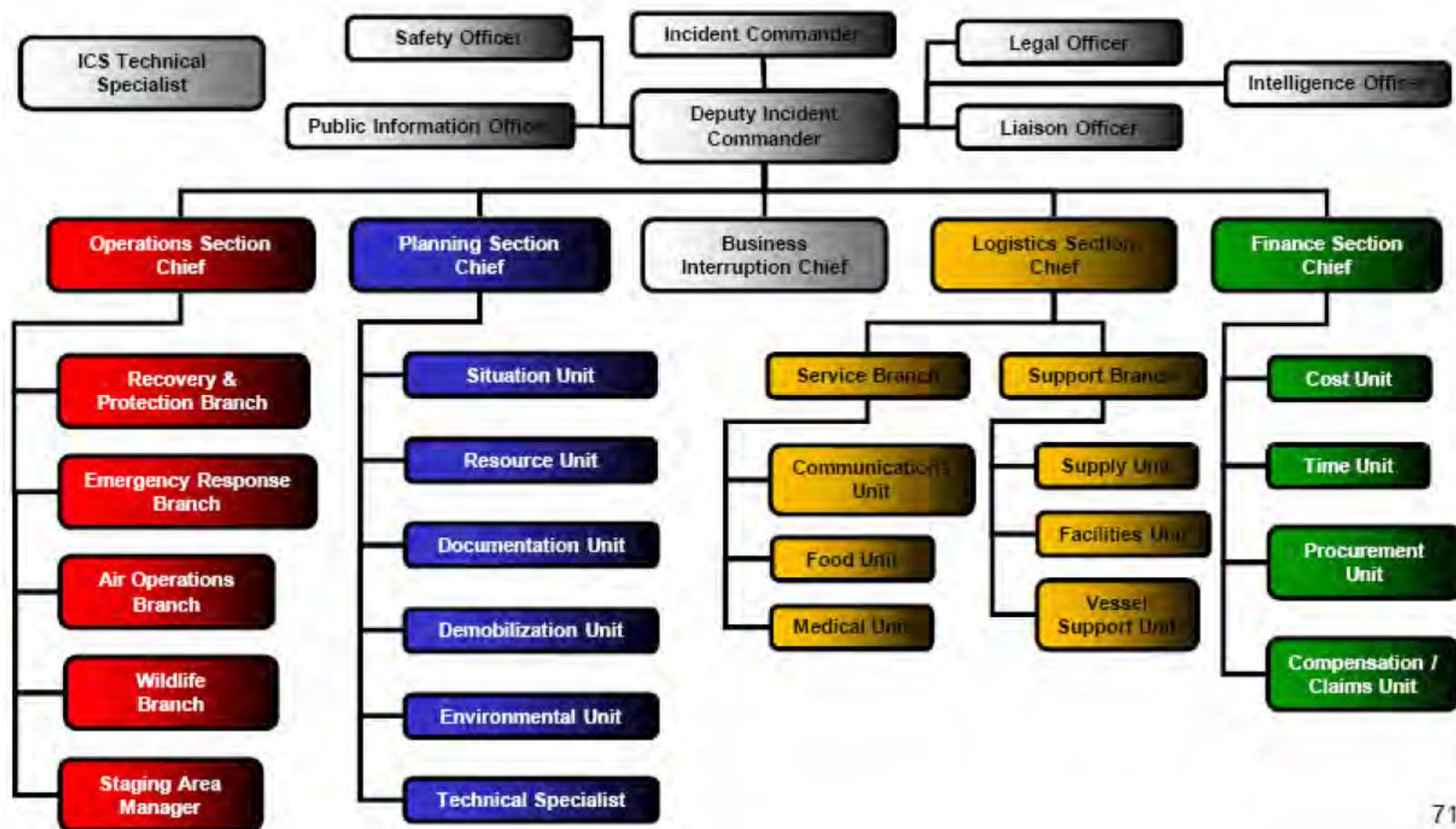
The ICS Organization and its structure along with the various positions and the associated responsibilities with that position are defined below. These definition and duty checklists are to serve as a guide to those individuals that might be assigned to a certain position in the event of an emergency.

### Organization

The organizational structure for incident tactical operations can vary and may be based on:

- A method to accommodate jurisdictional boundaries.
- An approach that is strictly functional in nature.
- A mix of functional and geographical approaches.

## II-8.3 Sample Incident Management Team Organization Chart



## II-8.4 Common Responsibilities

Common Responsibilities Checklist	
Receive assignment from your agency, including:	
<input type="checkbox"/>	Job assignment (e.g., Strike Team designation, position, etc.).
<input type="checkbox"/>	Brief overview of type and magnitude of incident.
<input type="checkbox"/>	Resource order number and request number.
<input type="checkbox"/>	Reporting location & time.
<input type="checkbox"/>	Travel instructions.
<input type="checkbox"/>	Any special communications instructions (e.g., travel, radio frequency).
<input type="checkbox"/>	Monitor incident related information from media, internet, etc., if available.
<input type="checkbox"/>	Assess personal equipment readiness for specific incident and climate (e.g.) medications, money, computer, medical record, etc.). Maintain a checklist of items and possible a personal Go-Kit.
<input type="checkbox"/>	Inform others as to where you are going and how to contact you.
<input type="checkbox"/>	Review Incident Management Handbook.
<input type="checkbox"/>	Take advantage of available travel to rest prior to arrival.
Upon arrival at the incident, check-in at the designated check-in location. Check-in may be found at any of the following locations:	
<input type="checkbox"/>	Incident Command Post (CP), Base/Camps, Staging Areas, and Helibases.
<input type="checkbox"/>	If you are instructed to report directly to a line assignment, check-in with the Division/Group Supervisor.
<input type="checkbox"/>	Receive briefing from immediate supervisor.
<input type="checkbox"/>	Agency Representatives from assisting or cooperating agencies report to the Liaison Officer (LNO) at the CP after check-in.
<input type="checkbox"/>	Acquire work materials.
<input type="checkbox"/>	Abide by organizational code of ethics.
<input type="checkbox"/>	Participate in IMT meetings and briefings as appropriate.
<input type="checkbox"/>	Ensure compliance with all safety practices and procedures. Report unsafe conditions to the Safety Officer.
<input type="checkbox"/>	Supervisors shall maintain accountability for their assigned personnel with regard as to exact location(s) and personal safety and welfare at all times, especially when working in or around incident operations.
<input type="checkbox"/>	Organize and brief subordinates.
<input type="checkbox"/>	The Command and General staff shall ensure branches are identified, set up and allocate divisions and groups within them to stay within the recommended span of control. (1 Supervisor per 7 people) Put in Common Responsibilities
<input type="checkbox"/>	Know your assigned communication methods and procedures for your area of responsibility and ensure that communication equipment is operating properly.
<input type="checkbox"/>	Use clear text and ICS/UCS terminology (no codes) in all radio communications.
<input type="checkbox"/>	Complete forms and reports required of the assigned position and ensure proper disposition of incident documentation as directed by the Documentation Unit.
<input type="checkbox"/>	Ensure all equipment is operational prior to each work period.
<input type="checkbox"/>	Report any signs/symptoms of extended incident stress, injury, fatigue or illness for yourself or coworkers to your supervisor.

### Common Responsibilities Checklist (Continued)

<input type="checkbox"/>	Respond to demobilization orders and brief subordinates regarding Demobilization.
<input type="checkbox"/>	Prepare personal belongings for demobilization.
<input type="checkbox"/>	Return all assigned equipment to appropriate location.
<input type="checkbox"/>	Complete Demobilization Check-out process before returning to home base.
<input type="checkbox"/>	Participate in After-Action activities as directed.
<input type="checkbox"/>	Carry out all assignments as directed.

## II-8.5 Position Specific Responsibilities

### Incident Commander and Deputy IC Responsibilities

The Incident Commander's responsibility is the overall management of the incident. On most incidents, the command activity is carried out by a single IC. The IC is selected by qualifications and experience. The IC may have a deputy, who may be from the same agency, or from an assisting agency. Deputies may also be used at the section and branch levels of the ICS/UCS organization. Deputies may have the same qualifications as the person for whom they work, as they must be ready to take over that position at any time. When span of control becomes an issue for the IC, a Deputy IC may be assigned to manage the Command Staff.

### Incident Commander and Deputy IC Checklist

<input type="checkbox"/>	Review common responsibilities.
<input type="checkbox"/>	Obtain a briefing from the prior IC (201 Briefing).
<input type="checkbox"/>	Determine incident objectives & general direction for managing the incident.
<input type="checkbox"/>	Establish the immediate priorities.
<input type="checkbox"/>	Establish a CP.
<input type="checkbox"/>	Brief Command Staff and General Staff.
<input type="checkbox"/>	Establish an appropriate organization.
<input type="checkbox"/>	Ensure planning meetings are scheduled as required.
<input type="checkbox"/>	Approve and authorize the implementation of an Incident Action Plan.
<input type="checkbox"/>	Ensure that adequate safety measures are in place.
<input type="checkbox"/>	Coordinate activity for all Command and General Staff.
<input type="checkbox"/>	Coordinate with key people and officials.
<input type="checkbox"/>	Approve requests for additional resources or for the release of resources.
<input type="checkbox"/>	Keep internal and external stakeholders informed.
<input type="checkbox"/>	Evaluate/Approve the use of trainees, volunteers, and auxiliary personnel.
<input type="checkbox"/>	Authorize release of information to the news media.
<input type="checkbox"/>	Ensure ICS 209 is completed and forwarded to appropriate higher authority.
<input type="checkbox"/>	Order the demobilization of the incident when appropriate.

### Safety Officer

The Safety Officer (SOFR) function is to develop and recommend measures for assuring personnel safety and to assess and/or anticipate hazardous and unsafe situations. Only one primary SOFR will be assigned for each incident. The SOFR may have specialists, as necessary, and the assistants may also represent assisting agencies or jurisdictions. Safety assistants may have specific responsibilities, such as air operations, hazardous materials, etc.

Safety Officer Checklist	
<input type="checkbox"/>	Review Common Responsibilities.
<input type="checkbox"/>	Identify hazardous situations associated with the incident.
<input type="checkbox"/>	Complete the initial incident action plan site safety and control analysis (ICS Form 201-5)
<input type="checkbox"/>	Participate in tactics and planning meetings, and other meetings and briefings as required.
<input type="checkbox"/>	Review the IAP for safety implications.
<input type="checkbox"/>	Provide safety advice in the IAP for assigned responders.
<input type="checkbox"/>	Exercise emergency authority to stop and prevent unsafe acts.
<input type="checkbox"/>	Investigate accidents that have occurred within the incident area.
<input type="checkbox"/>	Assign assistants, as needed.
<input type="checkbox"/>	Review and approve the medical plan (ICS Form 206).
<input type="checkbox"/>	Develop the site safety plan and publish site safety plan summary (ICS Form 208) as required.

### Public Information Officer

The Public Information Officer (PIO) is responsible for developing and releasing information about the incident to the news media. Only one primary PIO will be assigned for each incident, including incidents operating under a Unified Command (UC) and multiple jurisdiction incidents. The PIO may also have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions. Agencies have different policies and procedures relative to the handling of public information.

Public Information Officer Checklist	
<input type="checkbox"/>	Review Common Responsibilities.
<input type="checkbox"/>	Determine from the IC/UC if there are any limits on information release.
<input type="checkbox"/>	Develop material for use in media briefings.
<input type="checkbox"/>	Obtain IC/UC approval of media releases.
<input type="checkbox"/>	Inform media and conduct media briefings.
<input type="checkbox"/>	Arrange for tours and other interviews or briefings that may be required.
<input type="checkbox"/>	Manage a Joint Information Center (JIC) if established.
<input type="checkbox"/>	Obtain media information that may be useful to incident planning.
<input type="checkbox"/>	Maintain current information summaries and/or displays on the incident and provide information on the status of the incident to assigned personnel.

**Legal Officer**

<b>Legal Officer Checklist</b>	
<input type="checkbox"/>	Review common responsibilities.
<input type="checkbox"/>	Obtain briefing from the Incident Commander.
<input type="checkbox"/>	Advise the Incident Commander (IC) and the Unified Command (UC), as appropriate, on all legal issues associated with response operations.
<input type="checkbox"/>	Establish documentation guidelines for and provide advice regarding response activity documentation to the response team.
<input type="checkbox"/>	Provide legal input to the Documentation Unit, the Compensation/Claims Unit, and other appropriate Units as requested.
<input type="checkbox"/>	Review press releases, documentation, contracts and other matters that may have legal implications for the Company.
<input type="checkbox"/>	Participate in Incident Command System (ICS) meetings and other meetings, as requested.
<input type="checkbox"/>	Participate in incident investigations and the assessment of damages (including natural resource damage assessments).
<input type="checkbox"/>	Maintain Individual/Activity Log (ICS Form 214a).

### **Operations Section Chief**

The Operations Section Chief (OSC), a member of the General Staff, is responsible for the management of all operations directly applicable to the primary mission. The OSC will normally be selected from the organization/agency with the most jurisdictional responsibility for the incident and will work in the ICP.

The OSC activates and supervises organization elements in accordance with the IAP and directs its execution. The OSC also directs the preparation of Unit operational plans, requests or releases resources, makes expedient changes to the IAP, as necessary, and reports such to the IC. The OSC may have deputy OSC's who may be from the same organization or from an assisting agency. In complex incidents, the OSC may assign a Deputy OSC to supervise on-scene operations.

### Operations Section Chief Checklist

<input type="checkbox"/>	Review common responsibilities.
<input type="checkbox"/>	Obtain briefing from IC/UC.
<input type="checkbox"/>	Request sufficient section supervisory staffing for both ops & planning activities.
<input type="checkbox"/>	Convert operational incident objectives into strategic and tactical options through a work analysis matrix.
<input type="checkbox"/>	Coordinate and consult with the PSC, SOFR, technical specialists, modeling scenarios, trajectories on selection of appropriate strategies and tactics to accomplish objectives.
<input type="checkbox"/>	Identify kind and number of resources required to support selected strategies.
<input type="checkbox"/>	Subdivide work areas into manageable units.
<input type="checkbox"/>	Develop work assignments and allocate tactical resources based on strategy requirements.
<input type="checkbox"/>	Coordinate planned activities with the SOFR to ensure compliance with safety practices.
<input type="checkbox"/>	Prepare ICS 234 Work Analysis Matrix with PSC to ensure Strategies, Tactics and tasks are in line with ICS 202 Response Objectives to develop ICS 215.
<input type="checkbox"/>	Participate in the planning process and the development of the tactical portions (ICS 204 and ICS 220) of the IAP.
<input type="checkbox"/>	Assist with development of long-range strategic, contingency, and demobilization plans.
<input type="checkbox"/>	Supervise Operations Section personnel.
<input type="checkbox"/>	Monitor need for and request additional resources to support operations as necessary.
<input type="checkbox"/>	Coordinate with the LOFR and AREP's to ensure compliance with approved safety practices.
<input type="checkbox"/>	Evaluate and monitor current situation for use in next operational period planning.
<input type="checkbox"/>	Interact and coordinate with Command on achievements, issues, problems, significant changes special activities, events, and occurrences.
<input type="checkbox"/>	Troubleshoot operational problems with other IMT members.
<input type="checkbox"/>	Supervise and adjust operations organization and tactics as necessary.
<input type="checkbox"/>	Participate in operational briefings to IMT members as well as briefings to media, and visiting dignitaries.
<input type="checkbox"/>	Develop recommended list of Section resources to be demobilized and initiate recommendation for release when appropriate.
<input type="checkbox"/>	Receive and implement applicable portions of the Incident Demobilization Plan.

### Planning Section Chief

The Planning Section Chief (PSC), a member of the General Staff, is responsible for the collection, evaluation, dissemination and use of incident information and maintaining status of assigned resources. Information is needed to 1) understand the current situation; 2) predict the probable course of incident events; 3) prepare alternative strategies for the incident; and 4) submit required incident status reports. The PSC may have a deputy PSC, who may be from the same organization or from an assisting agency. The Deputy PSC should have the same qualifications as the individual for whom they work and must be ready to take over position at any time.

Planning Section Chief Checklist	
<input type="checkbox"/>	Review Common Responsibilities.
<input type="checkbox"/>	Collect, process, and display incident information.
<input type="checkbox"/>	Assist OSC in the development of response strategies.
<input type="checkbox"/>	Supervise preparation of the IAP.
<input type="checkbox"/>	Facilitate planning meetings and briefings.
<input type="checkbox"/>	Assign personnel already on-site to ICS/UCS organizational positions as appropriate.
<input type="checkbox"/>	Establish information requirements and reporting schedules for Planning Section Units (e.g., Resources, Situation).
<input type="checkbox"/>	Determine the need for any specialized resources in support of the incident.
<input type="checkbox"/>	Establish special information collection activities as necessary (e.g., weather, environmental, toxics, etc.).
<input type="checkbox"/>	Assemble information on alternative strategies.
<input type="checkbox"/>	Provide periodic predictions on incident potential.
<input type="checkbox"/>	Keep IMT apprised of any significant changes in incident status.
<input type="checkbox"/>	Compile and display incident status information.
<input type="checkbox"/>	Oversee preparation and implementation of the Incident Demobilization Plan.
<input type="checkbox"/>	Incorporate plans (e.g., Traffic, Medical, Communications, and Site Safety) into the IAP.
<input type="checkbox"/>	Develop other incident supporting plans (e.g., salvage, transition, security).
<input type="checkbox"/>	Assist Operations with development of the ICS 234 Work Analysis Matrix.
<input type="checkbox"/>	Maintain Unit Log (ICS 214).

### Logistics Section Chief

The Logistics Section Chief (LSC), a member of the General Staff, is responsible for providing facilities, services, and material in support of the incident. The LSC participates in the development and implementation of the IAP and activates and supervises the Branches and Units within the Logistics Section.

The LSC may have Deputy LSCs, who may be from the same organization or from an existing agency. The Deputy LSC must have the same qualifications as the person for whom they work, as they must be ready to take over that position at any time.

Logistics Section Chief Checklist	
<input type="checkbox"/>	Review Common Responsibilities.
<input type="checkbox"/>	Plan the organization of the Logistics Section.
<input type="checkbox"/>	Assign work locations and preliminary work tasks to Section personnel.
<input type="checkbox"/>	Notify the Resources Unit of the Logistics Section Units activated, including names and locations of assigned personnel.
<input type="checkbox"/>	Assemble and brief Logistics Branch Directors and Unit Leaders.
<input type="checkbox"/>	Determine and supply immediate incident resource and facility needs.
<input type="checkbox"/>	In conjunction with Command, develop and advise all Sections of the IMT resource approval and requesting process.
<input type="checkbox"/>	Review proposed tactics for upcoming operational period for ability to provide resources and logistical support.
<input type="checkbox"/>	Identify long-term service and support requirements for planned and expected operations.
<input type="checkbox"/>	Advise Command and other Section Chiefs on resource availability to support incident needs.
<input type="checkbox"/>	Provide input to and review the Communications Plan, Medical Plan and Traffic Plan.
<input type="checkbox"/>	Identify resource needs for incident contingencies.
<input type="checkbox"/>	Coordinate and process requests for additional resources.
<input type="checkbox"/>	Track resource effectiveness and make necessary adjustments.
<input type="checkbox"/>	Advise on current service and support capabilities.
<input type="checkbox"/>	Develop recommended list of Section resources to be demobilized and initiate recommendation for release when appropriate.
<input type="checkbox"/>	Receive and implement applicable portions of the Incident Demobilization Plan.
<input type="checkbox"/>	Ensure the general welfare and safety of Logistics Section personnel.
<input type="checkbox"/>	Maintain Unit Log (ICS 214).

### Finance Section Chief

The Finance Section Chief (FSC), a member of the General Staff, is responsible for all financial, administrative and cost analysis aspects of the incident and for supervising members of the Finance/Admin Section. The FSC may have Deputy FSCs who may be from the same organization or from an assisting agency. The Deputy FSC must have the same qualifications as the person for whom they work, as they must be ready to take over that position at any time.

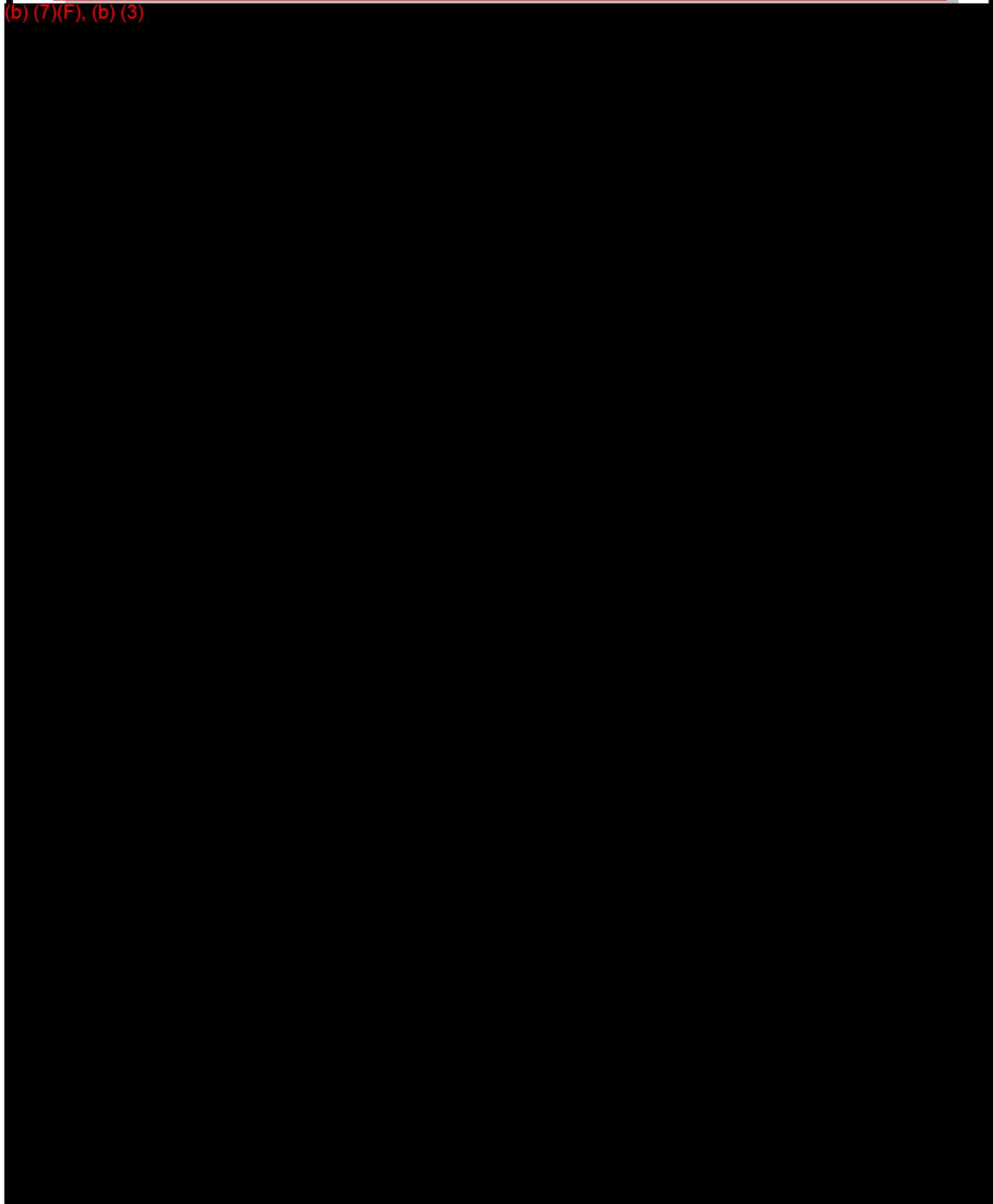
#### Finance Section Chief Checklist

<input type="checkbox"/>	Review Common Responsibilities.
<input type="checkbox"/>	Participate in incident planning meetings and briefings as required.
<input type="checkbox"/>	Review operational plans and provide alternatives where financially appropriate.
<input type="checkbox"/>	Manage all financial aspects of an incident.
<input type="checkbox"/>	Provide financial and cost analysis information as requested.
<input type="checkbox"/>	Gather pertinent information from briefings with responsible agencies.
<input type="checkbox"/>	Develop an operating plan for the Finance/Admin Section; fill supply and support needs.
<input type="checkbox"/>	Determine the need to set up and operate an incident commissary.
<input type="checkbox"/>	Meet with Assisting and Cooperating Agency Representatives, as needed.
<input type="checkbox"/>	Maintain daily contact with agency(s) administrative headquarters on Finance/Admin matters.
<input type="checkbox"/>	Ensure that all personnel time records are accurately completed and transmitted to home agencies, according to policy.
<input type="checkbox"/>	Provide financial input to demobilization planning.
<input type="checkbox"/>	Ensure that all obligation documents initiated at the incident are properly prepared and completed.
<input type="checkbox"/>	Brief agency administrative personnel on all incident-related financial issues needing attention or follow-up prior to leaving incident.
<input type="checkbox"/>	Develop recommended list of Section resources to be demobilized and initial recommendation for release when appropriate.
<input type="checkbox"/>	Receive and implement applicable portions of the Incident Demobilization Plan.
<input type="checkbox"/>	Maintain Unit Log (ICS 214)



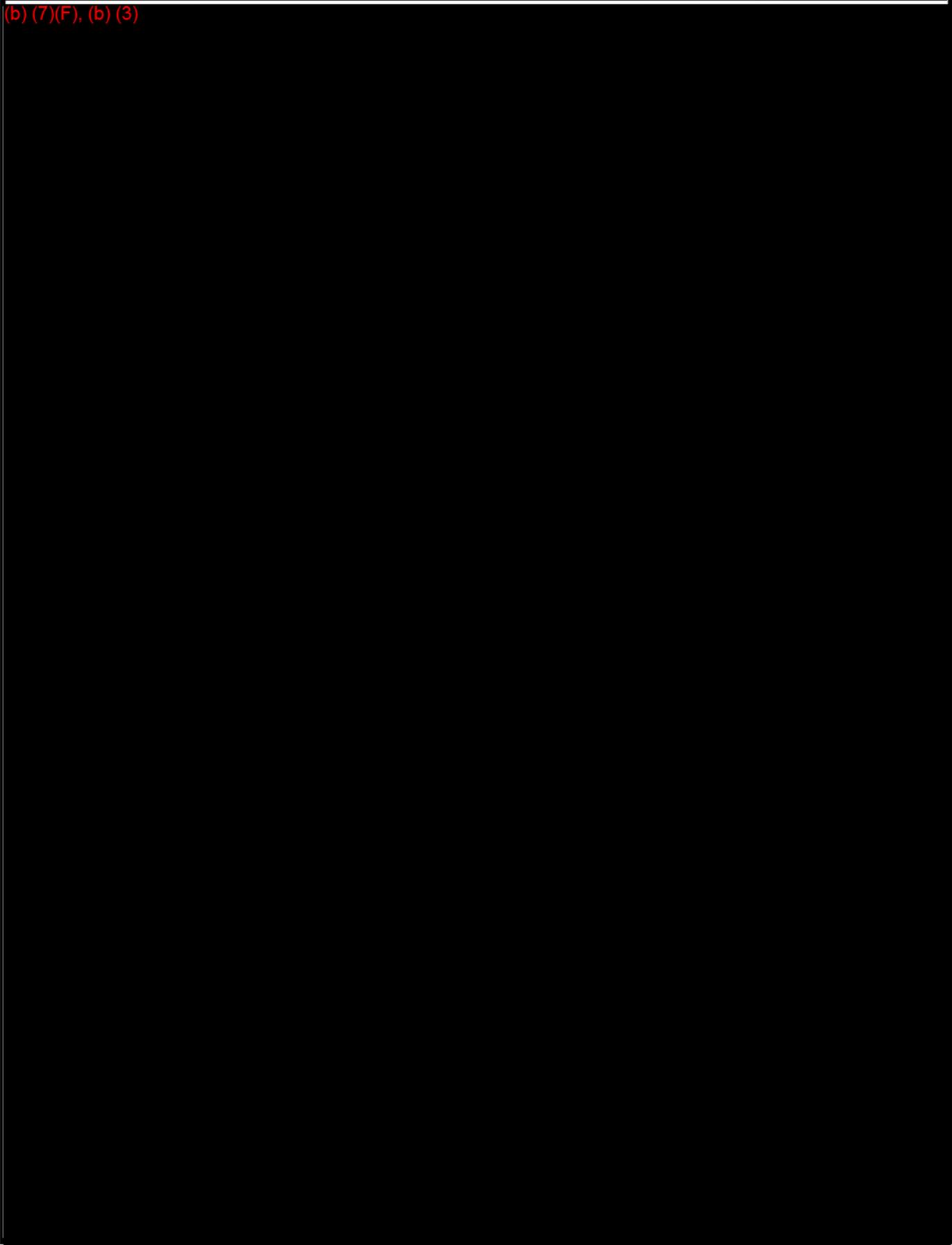
## II-9 SITE SECURITY AND CONTROL

(b) (7)(F), (b) (3)



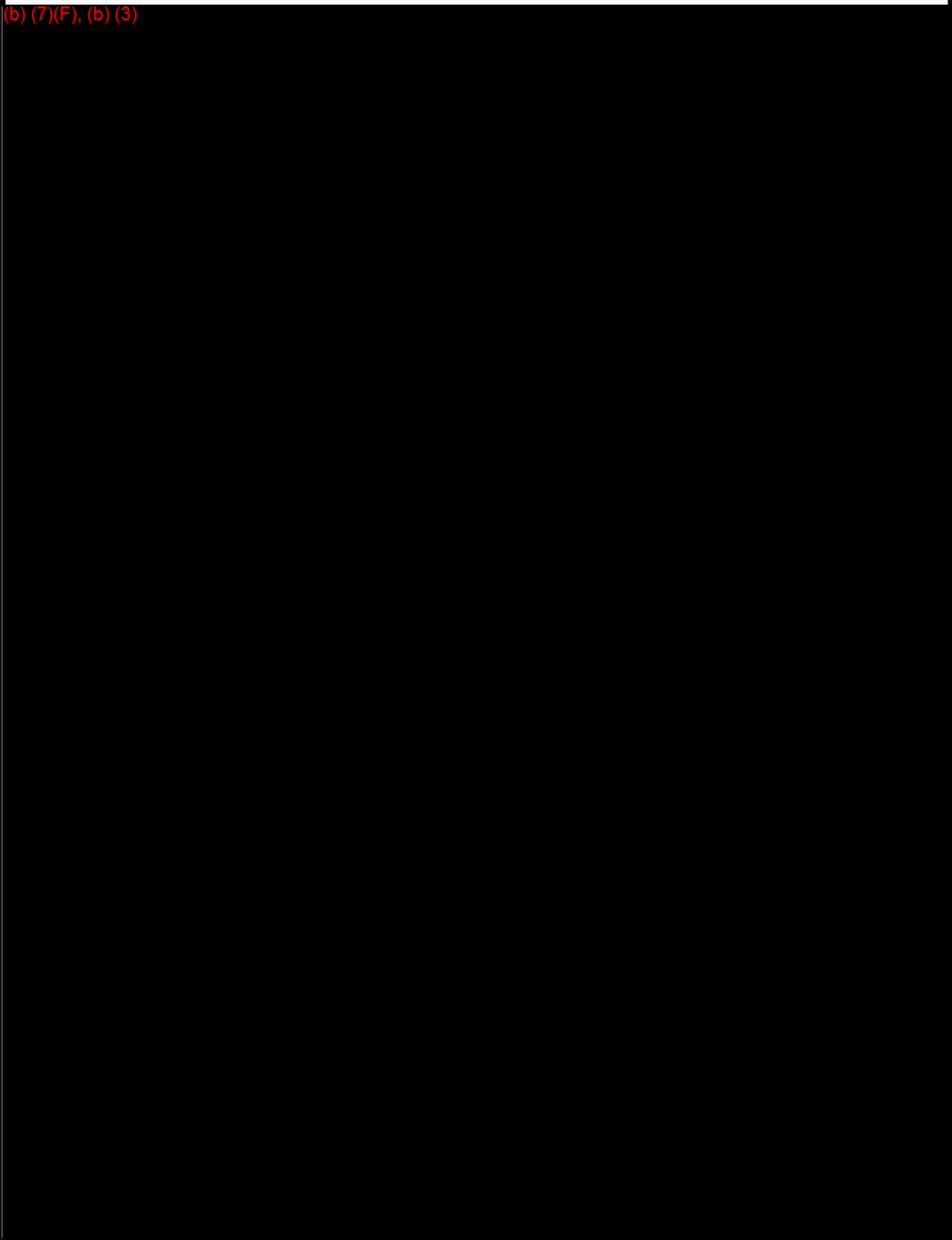


(b) (7)(F), (b) (3)





(b) (7)(F), (b) (3)



## II-10 SITE SAFETY AND HEALTH PLAN

### II-10.1 Introduction

This document describes the health and safety guidelines developed for the Response Operations to protect personnel, visitors, and the public from physical harm and exposure to hazardous materials or wastes. The procedures and guidelines contained herein are based upon the best available information at the time of the plan's preparation. Specific requirements will be reviewed and revised when new information is received and/or conditions change.

The Site Safety & Health (SS&H) Plan is designed to comply with applicable Federal, State OSHA regulations for Response Operations covered in 29 CFR 1910.120 and Facility H&S Policies. Specifically, this program provides procedures and information for program administration, safety and health considerations, personal protective equipment, medical surveillance, training, site control, industrial hygiene monitoring programs, personal hygiene, sanitation, housekeeping, and the decontamination of both personal protective equipment and equipment utilized during the response.

The Incident Action Plan which includes a Site Safety and Health Plan are located in the Forms Section of this plan.

### II-10.2 Scope

All spill response and remedial activities will be conducted in accordance with this SS&H Plan. This plan will cover all personnel, including Facility employees, contractors, subcontractors, government employees, and visitors. The SS&H Plan will be modified as necessary and where applicable will address multiple work environments. A copy of this program will be posted at all command, operations, and field centers for the duration of the clean-up activity. It is the responsibility of each manager, supervisor, and crew foremen to be familiar with this plan and to assist in its implementation.

### II-10.3 Program Administration

The Safety and Health Officer will administer the SS&H Plan. The Safety and Health Officer will be available to answer questions regarding effective implementation of the Program Plan. The Safety and Health Officer is supported by other staff personnel advisors in Safety, Industrial Hygiene, Occupational Medicine, Environmental, Operations and Legal.

It is the responsibility of the Safety and Health Officer to monitor the effectiveness of the SS&H Plan and to contact the appropriate support staff for guidance if changes to the plan are necessary.

All employees who may be directly involved in any clean-up activities are required to have completed HAZWOPER Training and to have been briefed on the contents of this SS&H Plan. All employers and employees will be responsible for adhering to all Federal, State and Local regulations that may not be specifically outlined in this program.

The Safety and Health Officer will enforce compliance with the SS&H Plan and all other requirements. Any deviations from the stipulated requirements, which are noted by the Safety and Health Officer or any other Facility personnel, will be communicated to the responsible contractor. The contractor will take immediate actions to correct the deviations and prepare a written corrective action report to be submitted to the Safety and Health Officer.

#### **II-10.4 Daily Safety Briefings**

Site safety meetings/briefings are the first step in maintaining site safety. Daily meetings will be held at the start of each shift to ensure that all personnel understand site conditions and operating procedures, to ensure that personal protective equipment is being used correctly, to address worker health and safety concerns and to communicate any changes or revisions to the Site Safety and Health Plan.

#### **II-10.5 Visitor Policy**

The Liaison Officer and/or their designee, must approve the site visit and shall coordinate visitor tours with the Spill Containment/Clean-up Organization. The SS&H shall designate a safe route through the site and away from the on-going operations, and provide for visitor escorts. The Team Leader at the task site must be notified when the visitor approaches. The Team Leader shall acknowledge visitor arrival on site and communicate approval of the visit and acceptable duration for the visitor on-site.

**Visitors are expected to dress appropriately for a field visit and when required, shall wear personal protective equipment (PPE) consistent with that used by workers at the Response Site.**

- All visitors shall be approved prior to arrival at the incident site
- All visitors must adhere to the facility's visitor program and may require and escort.

All field workers working as part of the response organization must provide all required training documentation prior to arrival on-site, if possible.

#### **II-10.6 Response**

During the initial response phase the Kinder Morgan Incident Action Plan form is used to ensure hazards are identified, evaluated and managed; and would typically be used for a Level 2 or 3 response. The Kinder Morgan Incident Action Plan form can be supported by attachments such as the released product MSDS and other topics at the Safety Officers discretion. In a Level 2 or 3 response, the Safety Officer can transition to the Site Safety Plan at their discretion

The Level 2 response would typically use the MSDS, Site Safety Plan and Medical Plan form. The Kinder Morgan Incident Action Plan form would be completed and expand as additional response personnel arrived on-site. The Site Safety form can also be supported with attachments of MSDS and Medical Plan, at the Safety Officers discretion. MSDS's are available at the Facility. When a response has transitioned to the "project phase" the project is usually turned over to a remediation project group. At that time a SSHP will be developed based on Facility safety and health procedures.

## II-10.7 Site Safety and Health Plan Evaluation Checklist

<b>Site Safety &amp; Health Plan Evaluation Checklist</b>
---

Name of Program Reviewed:
---------------------------

Program Drafted By (Name/Organization):
---

Program Reviewed By:	Date of Review:
----------------------	-----------------

Review Includes (check those appropriate):
--

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Comprehensive Work Plan (post-emergency)                   |
| <input type="checkbox"/> | Safety & Health Program (for planning not site-specific)   |
| <input type="checkbox"/> | Site-Specific Site Safety & Health Plan (post-emergency)   |
| <input type="checkbox"/> | Emergency Response Plans (emergency phase & routine sites) |

Comprehensive Work plan [1910.120(b)(3)]
--

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Work tasks, and objectives defined                   |
| <input type="checkbox"/> | Methods of accomplishing tasks & objectives defined  |
| <input type="checkbox"/> | Personnel requirements for work plan accomplishments |
| <input type="checkbox"/> | Training requirements identified (see 1910.120(e))   |
| <input type="checkbox"/> | Informational programs implemented (see 1910.120(i)) |
| <input type="checkbox"/> | Medical surveillance programs (see 1910.120(f))      |

Safety and Health Program [1910.120(b)]
---

<u>General:</u>
-----------------

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | A written safety and health program [1910.120(b)(1)] |
| <input type="checkbox"/> | Organizational structure [1910.120(b)(1)(ii)(A)]     |
| <input type="checkbox"/> | Safety and health training program                   |
| <input type="checkbox"/> | Medical surveillance program                         |
| <input type="checkbox"/> | Employer SOP on safety and health                    |

Organization Structure [1910.120(b)(2)]:
--

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Chain of command identified                          |
| <input type="checkbox"/> | Responsibilities of supervisors and employees        |
| <input type="checkbox"/> | Identifies supervisor                                |
| <input type="checkbox"/> | Identifies site safety and health officer(s)         |
| <input type="checkbox"/> | Other personnel functions and responsibilities       |
| <input type="checkbox"/> | Lines of authority / responsibility / communications |

Site-Specific Safety & Health Plan [1910.120(b)(4)]
---

For spill response operations (as opposed to those that start from a remedial action) these plans will vary in detail as the response progresses. During the initial emergency phase, responders rely on generic emergency response plans - contingency plans - while a site-specific plan is being developed. As the response progresses into post-emergency phase recovery operations, a basic site-specific plan is used and may become quite detailed for prolonged or large cleanups. Finally, a spill response may become a fully controlled site cleanup (e.g., remedial cleanups) where a fully developed site-specific plan is developed, including detailed emergency response plans for on-site emergencies.

### Site Safety & Health Plan Evaluation Checklist (Continued)

#### Site-Specific Safety & Health Plan [1910.120(b)(4)] (Cont'd)

##### General – Identify and/or specify:

<input type="checkbox"/> Risks for each task in work plan	<input type="checkbox"/> Employee training assignments
<input type="checkbox"/> Protective equipment for each task/objective	<input type="checkbox"/> Medical surveillance requirements
<input type="checkbox"/> Frequency and types of air monitoring	<input type="checkbox"/> Frequency and types of personnel monitoring
<input type="checkbox"/> Sampling techniques	<input type="checkbox"/> Air monitoring instruments to be used
<input type="checkbox"/> Maintenance and calibration for instrumentation	<input type="checkbox"/> Site control measures
<input type="checkbox"/> Site map	<input type="checkbox"/> Work zones
<input type="checkbox"/> Use of “buddy system”	<input type="checkbox"/> Alerting means for emergencies
<input type="checkbox"/> Safe working practices	<input type="checkbox"/> Nearest medical assistance
<input type="checkbox"/> Decontamination procedures	<input type="checkbox"/> Emergency response plan
<input type="checkbox"/> Confined space entry procedures	<input type="checkbox"/> Spill containment program
<input type="checkbox"/> Pre-entry briefings [1910.120(b)(4)(iii)]	<input type="checkbox"/> Provisions for continual evaluation of plan

##### Site Characterization and Analysis:

- Spill sites shall be evaluated to identify specific site hazards and determine appropriate safety and health controls.

##### Preliminary Evaluation – Performed by a qualified person, prior to site entry, to identify and/or specify:

<input type="checkbox"/> Protection methods and site controls	<input type="checkbox"/> All inhalation/skin hazards
<input type="checkbox"/> Location and approximate size of site	<input type="checkbox"/> Description of response activity
<input type="checkbox"/> Duration of response activity	<input type="checkbox"/> Site topography and accessibility (include air and ground accessibility)
<input type="checkbox"/> Safety and health hazards anticipated	<input type="checkbox"/> Pathways for hazardous substance dispersion
<input type="checkbox"/> Status of emergency response units (rescue, fire, hazmat)	

##### Risk Identification [1910.120(c)(7):

<input type="checkbox"/> Employees on site are informed of identified risks	<input type="checkbox"/> All information concerning chemical, physical and toxicological properties of each substance available to the employer are made available to the responders
---	--

##### Detailed Evaluation [1910.120(c)(2):

- Immediately after preliminary evaluation, a detailed evaluation is conducted to determine safety controls and protection needed.

##### Monitoring [1910.120(h):

<input type="checkbox"/> Monitoring performed during initial entry	<input type="checkbox"/> Monitoring performed periodically
<input type="checkbox"/> Personnel monitoring performed	

##### Illumination Requirements [1910.120(m)]

<input type="checkbox"/> Areas accessible to employees are lighted to levels not less than the intensities outlined in Table H-120.1	
--	--

##### Sanitation Requirements [1910.120(n):

<input type="checkbox"/> Potable(n)(1) / Non-potable water(n)(2)	<input type="checkbox"/> Toilet facilities (n)(3)
<input type="checkbox"/> Washing facilities (n)(6)	<input type="checkbox"/> Shower and change rooms (n)(7)

<b>Site Safety &amp; Health Plan Evaluation Checklist (Continued)</b>
---

Emergency Response Plans [1910.120(l) and (q)] for emergency response operations (e.g., contingency plans used prior to site safety plan development), routine sites (e.g., emergency plans for remedial sites)
---

<b><u>Purpose is to prepare for anticipated emergencies:</u></b>
--

<input type="checkbox"/> Plan is written and available for inspection
---

<b>Elements [1910.120(l)(2)(i-ix) to be specified</b>
---

<input type="checkbox"/> Pre-emergency planning
---

<input type="checkbox"/> Personnel roles, lines of communication
--

<input type="checkbox"/> PPE and emergency equipment
--

<input type="checkbox"/> Emergency recognition and prevention
---

<input type="checkbox"/> Safe distances and places of refuge
--

<input type="checkbox"/> Site security and control
--

<input type="checkbox"/> Evacuation routes and procedures
---

<input type="checkbox"/> Emergency medical treatment and first aid
--

<input type="checkbox"/> Emergency decon procedures
---

<input type="checkbox"/> Emergency alerting and response procedures
---

<input type="checkbox"/> Critique of response and follow-up
---

<b>Additional Elements [1910.120(l)(3)(i)(A-B)]:</b>
--

<input type="checkbox"/> Site topography, layout and prevailing weather conditions
--

<input type="checkbox"/> Procedures for reporting incidents to: local, state, and federal government agencies
---

<input type="checkbox"/> Employee alarm system is installed to notify persons of an emergency situation
---

<b>Additional Requirements [1910.120(l)(3)(ii-viii)] Emergency Response Plan shall be:</b>
--

<input type="checkbox"/> A separate section of Site Safety and Health Plan
--

<input type="checkbox"/> Compatible with federal, state and local plans
---

<input type="checkbox"/> Rehearsed as part of on-site training
--

<input type="checkbox"/> Current
----------------------------------

## II-10.8 Site Exposure Monitoring Plan

<b>Site Name:</b>	<b>Date / Time:</b>
<b>A. Monitoring Plan</b>	
➤	Air monitoring at the spill site and surrounding areas will be done to ensure site worker and community safety.
➤	Air monitoring will be done during work shift site characterization and on each work shift during cleanup activities until results indicate no further monitoring is required.
➤	All monitoring done at the cleanup site will be documented and the data maintained by qualified personnel on site.
➤	Monitoring will be done in accordance with OSHA 29 CFR 1920.120. Monitoring will be done: <ul style="list-style-type: none"> <li><input type="checkbox"/> During initial site entry and characterization;</li> <li><input type="checkbox"/> If a new potential inhalation hazard is introduced into the work area;</li> <li><input type="checkbox"/> During cleanup activities, on each work shift;</li> <li><input type="checkbox"/> If a new task is begun that may involve potential inhalation exposure.</li> </ul>
➤	Noise monitoring, radiation monitoring, etc. will be conducted as needed.
<b>B. Initial Site Monitoring</b>	
➤	Monitoring will be done during initial site entry. The monitoring will include checking for: <ul style="list-style-type: none"> <li><input type="checkbox"/> Oxygen (O<sub>2</sub>) deficiency using a direct reading oxygen meter;</li> <li><input type="checkbox"/> Flammable atmospheres (%LEL) using a combustible gas indicator;</li> <li><input type="checkbox"/> Benzene, hydrogen sulfide, hydrocarbons, and combustion by-products (SO<sub>2</sub>, CO), as needed, using direct-reading instruments, colorimetric indicator tubes, and/or other valid methods.</li> </ul>
➤	Instruments will be calibrated prior to and following use.
➤	All monitoring will be documented. (See attached form for example)
<b>C. Post-Emergency Monitoring (On-Going)</b>	
➤	Monitoring for benzene, hydrogen sulfide, hydrocarbons and combustion by-products will be done during each work shift on an on-going basis, as needed. Repeat initial site monitoring if any significant changes occur (i.e., temperature increases, more material released, wind direction changes, etc.)
➤	Checks for oxygen deficiency and flammable atmospheres will be made if confined spaces are encountered, or as required.
➤	Exposure monitoring shall be done as necessary. Personnel samples will be collected under the direction of the industrial hygiene personnel. Samples will be analyzed by a laboratory accredited by the American Industrial Hygiene Association.
➤	Results of site monitoring will be made available to site workers' supervision for informing all affected employees. Results will be available to the Command Center for review by regulatory agencies.



## II-11 PERSONAL PROTECTIVE EQUIPMENT

All work shall be conducted in accordance with procedures established during pre-entry briefings and the attached Work Plan. Personal Protective Equipment shall be selected and used to protect personnel from hazards that are likely to be encountered as identified during the initial site characterization and subsequent monitoring.

In addition to the oil spill response equipment, the following stock of personal protective equipment (PPE) will be made available as needed:

- Chemical resistant boots issued to each employee and located on-site in employee lockers
- Flame Resistant Clothing
- Gloves
- Chemical resistant nitrile gloves located in the warehouse and PPE shed.
- Hard hats issued to each employee and worn while working on-site.
- Chemical splash goggles issued to individual employees and worn on their hard hats
- Face shields located in the warehouse and operations PPE shed.
- Hearing protection issued to individual employees and worn while working in areas where hearing could be damaged by prolonged exposure.
- Each employee while on-site wears safety shoes.
- Air purifying respirators issued to each employee
- Cartridges for air purifying respirators are located in the warehouse and firehouse.

### Personal Protective Equipment (PPE)

<b>Respiratory:</b>	Wear a positive pressure air supplied respirator in situations where there may be potential for airborne exposure above exposure limits. If exposure concentration is unknown or if conditions immediately dangerous to life or health (IDLH) exist, use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
<b>Skin:</b>	The use of thermally resistant gloves is recommended.
<b>Eye/Face:</b>	Approved eye protection to safeguard against potential eye contact, irritation or injury is recommended. Depending on conditions of use, a face shield may be necessary.
<b>Other Protective Equipment:</b>	A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed. Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

### **II-11.1 Guidelines for Selecting PPE**

The following guidelines will be used when selecting PPE and respiratory protection:

Level A - Will be worn when the highest level of respiratory, skin and eye protection is needed.

Level B - Will be selected when the highest level of respiratory protection is needed, but a less level of skin protection is required. Level B protection is the minimum level recommended on initial site entries or cleanup until the hazards have been further defined.

Level C - Will be selected when the type(s) of airborne substance(s) is known, the concentration(s) is measured, and the criteria for using air-purifying respirators are met; and

Level D - Will not be worn on any site with respiratory or skin hazards. This is primarily a work uniform providing minimal protection.

The selected level of protection will be based primarily on:

- Type(s) and measured concentration(s) of the chemical substance(s) in the ambient atmosphere and its toxicity;
- Potential or measured exposure to substances in air, splashes of liquids or other direct contact with material due to work being performed.

### 1. PPE Use and Limitations

Several factors must be considered when selecting and using PPE:

- The protective clothing, gloves and boots must be resistant to permeation or penetration by oil and other chemicals that may be encountered on the site.
- Protective clothing and gloves should be durable for heavy work.
- Protective clothing and glove materials must maintain protection and flexibility in hot or cold weather conditions.
- Protective clothing must be large enough to fit over other clothing without ripping and tearing.
- For respirator use, procedures must be in place for the proper selection, use, care, and fit testing of the respirators. Additionally, wearer must be advised as to respirator cartridge expected life and of monitoring for contaminant breakthrough, etc.
- Protective footwear must have non-slip soles. Additionally, conditions may require the use of steel toe and/or steel shank footwear.

### 2. Work Duration

The work duration is expected to last for the full shift and will involve moderate to heavy physical exertion during cleanup activities.

### 3. PPE Maintenance and Storage

PPE will be maintained and stored by an assigned work crew. Protective clothing and gloves will be evaluated during and at the end of each shift and will be replaced as necessary. Boots and other PPE may be decontaminated for re-use.

### 4. PPE Decontamination and Disposal

PPE may be decontaminated in designated areas by assigned crews using soap or other suitable cleanser and rinse water. The cleaning solution used will be disposed of in properly labeled containers according to applicable regulations. Contaminated protective gloves and any other PPE to be disposed of will be placed in properly labeled bags and disposed of according to applicable regulations.

### 5. PPE Training and Proper Fitting

All site cleanup workers, supervisors and others entering the contaminated zone will be given training in proper use of PPE. The training will include:

- How to use PPE
- When and where to use the PPE
- How to inspect PPE to determine if it is working properly

Care will be taken to ensure employees are provided properly fitted PPE.

### 6. PPE Donning and Doffing Procedures

Prior to starting work, all site cleanup workers and others required to wear PPE will be instructed on proper procedures for donning and doffing PPE. Doffing of contaminated clothing, gloves and boots must be done in a manner to prevent skin exposure to the oil or chemicals.

**II-11.2 Emergency Equipment****Emergency Equipment**

- |   |   |
|---|---|
| • | A list of all spill response equipment available in the event of a release is listed in the appropriate ICP Geographical Annex of this Core Plan. A list of spill response contractors to be used by the Facility in the event of a release that could surpass the response capabilities of the facility is also located in appropriate ICP Geographical Annex of this Core Plan. |
| • | A list of emergency fire equipment at the Facility is located in Annex A of this Plan.  |
| • | A description of the Facility's communication equipment and plan is provided in this Core Plan.   |
| • | A description of the Facility's alarm systems is provided in this Section of this Plan.   |

## II-12 CONTAINMENT AND RECOVERY

After initial response actions have been taken to stop further spillage and the required agencies have been notified, commence spill containment, recovery, and disposal operations.

First make an assessment of the size and hazards of the spill. The type of oil plus its location and predicted movement will be considered. Based on this assessment, additional cleanup personnel and equipment may be dispatched to the site and deployed so as to control and contain the spill. Containment boom may be used to surround the spill and contain it. They may also be deployed between the spill and environmentally sensitive areas. Booms may also be used in areas of strong currents to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent materials. Cleanup equipment and material will be used in the manner most effective for rapid and complete cleanup of the spill.

Containment and recovery refers to the techniques or methods that can be employed to contain and recover petroleum spills on water or the containment of petroleum spills flowing overland. Recovery of terrestrial spills is often very similar, or uses the same techniques as shoreline cleanup.

### The following considerations should be taken into account when planning or implementing containment and recovery operations:

•	Containment is most effective when conducted near the source of the spill where the oil has not spread over a large area and the contained oil is of sufficient thickness to allow effective recovery and/or cleanup.
•	Feasibility is generally dependent on the size of the spill, available logistical resources, implementation time, and environmental conditions or the nature of the terrain in the spill area.
•	Aquatic (water) containment is primarily conducted through the use of oil spill containment booms.
•	Skimmers are usually the most efficient means of recovery of aquatic spills, although pumps, vacuum systems, and sorbents can also be effective, particularly in smaller waterways.
•	Terrestrial (land) containment typically involves berms or other physical barriers.
•	Recovery of free petroleum from the ground surface is best achieved by using pumps, vacuum sources, and/or sorbents.

### II-12.1 Technique Selection - Terrestrial Containment and Recovery

#### The primary factors influencing terrestrial containment and recovery are:

•	<b>Size</b> - Most containment techniques provide limited storage capacity.
•	<b>Slope</b> - Berms and barriers are generally less effective on steeper slopes and accessibility may be limited.
•	<b>Surface texture</b> - Rough surfaces with natural ridges and depressions enhance containment and should be taken advantage of whenever possible.
•	<b>Substrate permeability</b> - Highly permeable sediments will allow rapid penetration of oil into the substrate, thus complicating containment and recovery.
•	<b>Existing drainage courses</b> - Oil is more easily contained and recovered if it is flowing within, or can be diverted to, existing natural or manmade drainage structures.
•	<b>Stormwater runoff</b> - Runoff generally requires the containment of larger quantities of liquids and complicates oil recovery.

### II-12.2 Technique Selection - Aquatic Containment and Recovery

#### Selection of an appropriate aquatic containment, protection and recovery technique depends on a number of factors including:

•	<b>Current speed</b> - Surface currents greater than 1 knot can cause boom failure or entrainment of oil beneath the boom when the boom is deployed perpendicular to the current. If deployed at an angle, boom can generally be effective up to 2-3 knots.
•	<b>Water depth</b> - Depths greater than 50 feet can complicate boom anchor placement, whereas depths less than 2 feet can preclude effective boom use.
•	<b>Channel width</b> - Widths of more than 200 to 300 feet will generally preclude using booms to completely contain oil floating in the waterway, particularly if strong currents are present.
•	<b>Slick thickness</b> - Recovery effectiveness with pumps/vacuum systems and skimmers decreases as slick thicknesses decline, becoming relatively ineffective for very thin slicks or sheens.
•	<b>Shoreline access</b> - Obstacles (rocks, debris, man-made structures, etc.) in the water or steep or densely vegetated shorelines could restrict access and present safety and operational problems.
•	<b>Anchor points</b> - Soft bottom substrates can complicate boom anchor placement.
•	<b>Safety</b> - High currents and winds, large obstacles, and other dangerous conditions could present safety hazards and preclude certain techniques.

The OSRO(s) contracted to respond in located in Annex B is capable of being on site and ensuring spill containment activities are accomplished within the appropriate tier times. They will provide sufficient containment equipment to ensure enough capacity is available to respond to a worst-case discharge.

## II-12.3 Protection Technique Selection

Technique	Description	Primary Logistical Requirements	Use Limitations <sup>1</sup>	Potential Environmental Effects
<b>Spills on Land</b>				
A. Containment / Diversion Berms	Construct earthen berms ahead of advancing surface spill to contain spill or divert it to a containment area.	<u>Equipment*</u> 1 backhoe, bulldozer, front-end loader, or set of hand tools  <u>Personnel</u> 4-8 Workers	<ul style="list-style-type: none"> <li>Steep Slopes</li> <li>Porous substrate</li> </ul>	<ul style="list-style-type: none"> <li>Disturbance to surface soils and vegetation</li> <li>Increased oil penetration</li> </ul>
B. Storm Drain Blocking	Block drain opening with sediments, plastic sheet, boards, etc. and secure prevent oil from entering drain.	<u>Equipment*</u> Misc. hand tools, 1 board, plastic sheet, mat, etc.  <u>Personnel</u> 1-2 Workers	<ul style="list-style-type: none"> <li>May be advantageous for oil to enter drain</li> <li>Heavy precipitation</li> </ul>	<ul style="list-style-type: none"> <li>Increased oil penetration</li> <li>Oil can spread to other areas</li> </ul>
C. Blocking Dams	Construct dam in drainage course/stream bed to block and contain flowing oil. Cover with plastic sheeting. If water is flowing, install inclined pipes during dam construction to pass water underneath.	<u>Equipment*</u> 1 backhoe, bulldozer, front-end loader, or set of hand tools, 1 plastic sheeting roll  <u>Personnel</u> 4-6 Workers	<ul style="list-style-type: none"> <li>Upstream storage capacity</li> <li>Flowing water</li> </ul>	<ul style="list-style-type: none"> <li>Increased oil penetration</li> </ul>
D. Culvert Blocking	Block culvert opening with plywood, sediments, sandbags, etc. to prevent oil from entering culvert	<u>Equipment*</u> Misc. hand tools, misc. plywood, sandbags, etc  <u>Personnel</u> 3-4 Workers	<ul style="list-style-type: none"> <li>Upstream storage capacity</li> <li>Flowing water</li> </ul>	<ul style="list-style-type: none"> <li>Increased oil penetration</li> </ul>
E. Interception Trench	Excavate ahead of advancing surface/ near-surface spill to contain oil. Cover bottom and downgradient side with plastic.	<u>Equipment*</u> 1 backhoe or set of hand, tools, misc. plastic sheeting  <u>Personnel</u> 3-6 Workers	<ul style="list-style-type: none"> <li>Slope</li> <li>Depth to near-surface flow</li> </ul>	<ul style="list-style-type: none"> <li>Increased oil penetration</li> <li>Disturbance to surface soils and vegetation</li> </ul>

## II-12.3 Protection Technique Selection (Continued)

Technique	Description	Primary Logistical Requirements	Use Limitations <sup>1</sup>	Potential Environmental Effects
<b>Spills on Water</b>				
F. Diversion Booming	Boom is deployed from the shoreline at an angle towards the approaching slick and anchored or held in place with a work boat. Oil is diverted towards the shoreline for recovery.	<u>Equipment*</u> 1 boat, 3 anchor systems (min), 100 feet boom (min)  <u>Personnel</u> 3 workers plus boat crew	<ul style="list-style-type: none"> <li>• Currents &gt;2-3 kts</li> <li>• Waves &gt; 1-2 ft</li> <li>• Water depth &gt;50 feet (anchoring)</li> <li>• Sensitive shorelines</li> </ul>	<ul style="list-style-type: none"> <li>• Minor substrate disturbance at anchor points</li> <li>• Heavy oiling at shoreline anchor point</li> </ul>
G. Narrow Channel Containment Booming	Boom is deployed across entire river channel at an angle to contain floating oil passing through channel.	<u>Equipment*</u> 1 boat, vehicle, or winch; 1-2 booms (1.2 x channel width each); 2-10 anchor systems  <u>Personnel</u> 2-3 Workers	<ul style="list-style-type: none"> <li>• Currents &gt;2-3 kts</li> <li>• Water depth &gt;50 feet (anchoring)</li> <li>• Sensitive shorelines</li> </ul>	<ul style="list-style-type: none"> <li>• Minor substrate disturbance at anchor points</li> <li>• Heavy shoreline oiling at downstream anchor point</li> </ul>
H. Sorbent Barriers	A barrier is constructed by installing two parallel lines of stakes across a channel, fastening wire mesh to the stakes, and filling the space between with sorbents.	<u>Equipment*</u> (per 100 ft of barrier): misc. hand tools, 1 boat, 20 fence posts, 200 ft wire mesh, 200 ft <sup>2</sup> sorbents, misc. fasteners, support lines, additional stakes, etc.  <u>Personnel</u> 2-3 Workers	<ul style="list-style-type: none"> <li>• Water depths &gt;5-10 feet</li> <li>• Currents &gt;0.5 kts</li> <li>• Soft substrate</li> </ul>	<ul style="list-style-type: none"> <li>• Minor substrate disturbance at post and shoreline anchor points</li> <li>• High substrate disturbance if boat is not used</li> </ul>
I. Exclusion Booming	Boom is deployed across or around sensitive areas and anchored in place. Approaching oil is excluded from area.	<u>Equipment*</u> (per 500 ft of boom): 1 boat, 6 anchor systems, 750 ft boom (min)  <u>Personnel</u> 3 workers plus boat crew	<ul style="list-style-type: none"> <li>• Currents &gt;1-2 kts</li> <li>• Waves &gt;1-2 feet</li> <li>• Water depth &gt;50 feet (anchoring)</li> </ul>	<ul style="list-style-type: none"> <li>• Minor substrate disturbance at anchor points</li> </ul>

## II-12.3 Protection Technique Selection (Continued)

Technique	Description	Primary Logistical Requirements	Use Limitations <sup>1</sup>	Potential Environmental Effects
<b>Spills on Water (Cont'd)</b>				
J. Deflection Booming	Boom is deployed from the shoreline away from the approaching slick and anchored or held in place with a work boat. Oil is deflected away from shoreline.	<u>Equipment*</u> 1 boat, 5 anchor systems, boom (200 feet)  <u>Personnel</u> 3 workers plus boat crew	<ul style="list-style-type: none"> <li>• Currents &gt;2-3 kts</li> <li>• Waves &gt;1-2 feet</li> <li>• Water depth &gt;50 feet (anchoring)</li> <li>• Onshore winds</li> </ul>	<ul style="list-style-type: none"> <li>• Minor substrate disturbance at anchor points</li> <li>• Oil is not contained and may contact other shorelines</li> </ul>
K. Inlet Dams	A dam is constructed across the inlet or channel using local shoreline sediments to prevent oil from entering inlet. Dam can be covered with plastic to minimize erosion.	<u>Equipment*</u> 1 backhoe, bulldozer, front-end loader, or set of hand tools, 1 plastic sheeting roll  <u>Personnel</u> 2-6 workers	<ul style="list-style-type: none"> <li>• Water outflow</li> <li>• Inlet depth &gt;5 feet</li> <li>• Excessive inlet width</li> </ul>	<ul style="list-style-type: none"> <li>• Sediment/vegetation disturbance at borrow areas</li> <li>• Inlet substrate disturbance</li> <li>• Increases suspended sediments</li> <li>• Water in inlet can become stagnant</li> </ul>
L. Debris / Ice Exclusion	Install fence barrier upstream of containment site to exclude debris/ice	<u>Equipment*</u> (per 100 ft of barrier): misc. hand tools, 1 boat, 10 fence posts, 100 feet cyclone fence, misc fasteners, support lines, etc.  <u>Personnel</u> 2-3 workers	<ul style="list-style-type: none"> <li>• Water depth &gt;5-10 feet</li> <li>• Currents &gt;3-4 kts</li> <li>• Soft substrate</li> </ul>	<ul style="list-style-type: none"> <li>• Minor substrate disturbance at post anchor points</li> </ul>

<sup>1</sup> In addition to implementation and accessibility.

\* Need to establish a safe perimeter and follow safety precautions as appropriate before work begins.

## II-12.4 Shoreline and Terrestrial Cleanup

In the event that terrestrial sediments do become oiled or that petroleum contacts and becomes stranded on a shoreline, cleanup operations should be undertaken to minimize the environmental effects of the petroleum. In most instances, cleanup efforts are not subject to the same time constraints as containment, recovery, and protection operations. As a result, better planning and greater attention to detail is possible. The exception is where there is a high probability of stranded oil becoming remobilized and migrating to previously unaffected areas. In this case, cleanup operations should be implemented immediately.

### The following items should be considered in detail:

- |   |  |
|---|--|
| • | Documentation of the location, degree, and/or extent of oil conditions                           |
| • | Evaluation of all environmental, cultural, economic, and political factors                       |
| • | Clean-up technique selection   |
| • | Mitigation of physical and environmental damage associated with cleanup technique implementation |
| • | Cost-effectiveness   |

The shoreline or terrestrial oil conditions can range from those which require immediate and thorough cleanup to lightly oiled areas where no action may be the most environmentally sound option. The amount and type of oil, shoreline sensitivity, substrate or shoreline type, intrusive nature of the candidate techniques, and shoreline exposure are all factors that influence technique selection and whether or not cleanup will be required.

## II-12.5 Cleanup Technique Selection - Shoreline

### The selection of an appropriate shoreline cleanup technique is primarily dependent on the following factors:

- |   |   |
|---|---|
| • | <b>Substrate type</b> - Finer-grained sediments typically require different techniques than coarse-grained sediments.   |
| • | <b>Oil conditions</b> - Heavier oil conditions and larger areas may require more intrusive or mechanical methods, whereas lighter conditions may not require any form of cleanup. For example – removing lighter oils in a marsh area or wetland may cause more harm to the environment than allowing for natural attenuation and biodegrading. |
| • | <b>Shoreline slope</b> - Heavy equipment may not be usable on steeper shorelines.   |
| • | <b>Shoreline sensitivity</b> - Intrusive techniques may create a greater impact than the oil itself.  |
| • | <b>Oil penetration depth</b> - Significant penetration can reduce the effectiveness of several techniques.  |

## II-12.6 Cleanup Technique Selection - Terrestrial

**The selection of an appropriate terrestrial cleanup technique is primarily dependent on the following factors:**

•	<b>Size</b> - Larger areas will generally require the use of mechanical methods, whereas manual techniques can be used for smaller areas.
•	<b>Slope</b> - The use of heavy equipment is often restricted to gradually sloped areas, and manual techniques may be considered unsafe if used on steep terrain.
•	<b>Sediment type</b> - Softer sediments may reduce trafficability for heavy equipment and the presence of coarser sediments and bedrock could also restrict the use of certain types of heavy equipment.
•	<b>Oil penetration depth</b> - Significant penetration may require the use of heavy equipment or special subsurface remediation techniques.
•	<b>Impacted groundwater</b> - Special subsurface remediation techniques would likely be required.

## II-12.7 Non-Mechanical Response Options

**Non-mechanical response options that could be used in responding to a spill include:**

•	Chemical treatment / dispersants
•	Bioremediation
•	In-situ Burning

Although the physical control and recovery of spilled oil is advocated and generally preferable, such actions are not always possible or practical because of factors including safety hazards, remote spill sites, or weather. When non-mechanical methods can result in reduced human hazard or environmental damage, consideration of their use is appropriate but will require regulatory approval. If a non-mechanical response method is considered, Company will coordinate through the Unified Command and with the Regional Response Team to ensure appropriate steps are taken and documented to expedite approval.



### **II-12.8 Bioremediation**

Bioremediation is the process of applying nutrients (fertilizer containing nitrogen and phosphorus) or genetically engineered bacteria to oiled terrestrial or shoreline areas to accelerate the natural biodegradation process. During this process, micro-organisms (bacteria) oxidize hydrocarbons, ultimately converting them to carbon dioxide and water. Biodegradation occurs primarily at the oil/water or oil/air interface and is limited by oxygen, moisture, and nutrient availability. It is also sensitive to temperature; the lower the ambient temperature, the lower the rate. If nutrients are used, they must be supplied in such a way that they will not be washed away by tides or any water runoff.

The decision to use bioremediation treatment should be based on the type of spill, the character of the area impacted, and the local political jurisdiction. In some cases, other forms of cleanup may be required in conjunction with nutrient addition to achieve the desired enhancement rate. Extensive efforts to achieve more acceptance of this technology are underway. As in the case of other oil spill response chemicals, approval must be obtained from the FOSC and SOSC before the nutrients are applied and the products must be listed on government product schedules where required. An expert should be consulted.

The use of biological additives is regulated under Subpart J of the NCP (40 CFR 300.900). Under the NCP, options for the authorization of biological agents are outlined, including a provision for conditional preapproval for use under certain conditions and in certain locations. Consult with the FOSC to determine whether an applicable preauthorization has been approved. The current application and approval procedure includes state approval and does not preempt the States from having their own testing criteria.

The Incident Commander will be responsible for providing the FOSC and SOSC with incident specific information needed to approve the conduct of bioremediation operations.

### **II-12.9 In-situ Burning**

In-situ is not permitted unless authorized by the Federal On-scene Coordinator.

### **II-12.10 Spills to Groundwater**

Spills to bare ground will initially spread laterally on the surface and then begin migrating downward through the soil and, depending on a variety of factors and circumstances, could reach groundwater. For spills that could affect ground water, the Kinder Morgan Remediation Group will develop appropriate response strategies.

### **II-12.11 Initial Assessment**

As for any spill, the initial response actions for spills to bare ground should include the assessment of health and safety hazards. See the Site Safety and Health Plan as well as the following parameters.

### Initial Assessment Parameters

•	Spill Size and Product Accumulation (pooled oil) Depth
•	Product Type (viscosity)
•	Soil Type/Permeability/Moisture Content
•	Depth to Groundwater
•	Estimated Response Time to Initiation of Recovery Actions

#### II-12.12 Response Actions

In the event of a spill to bare ground, there are a number of actions that should be taken to assess the spill and, if groundwater is impacted, initiate recovery and limit the extent of impact. A decision guide is provided at the end of this section that outlines the general response actions that should be taken. Additional information on these response actions is also provided below.

#### II-12.13 Ground Impact Potential

Once the assessment is completed, the potential for the spill to impact underlying groundwater should be determined. Generally this requires some knowledge of the local hydrogeology including soil type/permeability and depth to groundwater and groundwater flow direction. For spills that could have a ground impact, the Kinder Morgan Remediation Group will develop appropriate response strategies.

For small spills that do not pool on the ground surface, vertical penetration into the soil is often limited to 4 to 8 inches with the exception of coarse gravels which could allow considerably deeper penetration. Depth of penetration can be estimated if you know the square footage of surface impact, soil type, depth to groundwater and spill volume. Using the above information and the table shown below, a calculation of how much oil can be adsorbed/retained by the soil between the surface and the water table. If the retention capacity is significantly greater than the spill volume, the potential for the spill to reach groundwater would be low and vice versa.

### Retention Capacity

Soil Type	Oil Retention Capacity (gal / yd <sup>3</sup> )
Stones, coarse gravel	1
Gravel, coarse san	1.6
Coarse sand, medium sand	3
Medium sand, fine sand	5
Fine sand, silt	8

#### II-12.14 Supplemental Assessment

If the potential exists for a spill to reach groundwater, additional assessment activities should be conducted to confirm groundwater has been impacted and, if so, assess the extent of impacts. In most cases, experienced remediation contractors already under contract to the Facility will be utilized to conduct subsequent assessment activities.

**These activities commonly include:**

•	<b>Backhoes or Excavators</b> – excavate pits/trenches to determine penetration depth/groundwater impacts (limited to depths of 10–20 ft)
•	<b>Hand or Power Augers</b> – install borings to collect soil/water samples and can be used to install temporary wells (often limited to 15-30 ft)
•	<b>Direct Push Drilling Rigs</b> – install borings to collect soil/water samples and can be used to install temporary wells (often limited to 50-100 ft)
•	<b>Hollow Stem Auger (HAS) or rotary drill rigs</b> - install borings to collect soil samples and wells for groundwater samples (limited to 100-500 ft)

The type of method used often depends on equipment availability, depth to groundwater and access to the spill area. For areas with shallow groundwater and good access, backhoes or excavators are often the most expedient means of determining penetration depth and groundwater impacts. If access is limited, such as in many tank farms, hand or power augers can be used to install borings and collect samples. Direct push (Geoprobe) rigs can get into many areas but are generally truck mounted and will need road access. For areas with good access and where groundwater is deeper, hollow stem augers or rotary drill rigs are often the best equipment for subsequent assessment.

Borings or pits should be installed, if safe to do so, in the main spill area where penetration is typically greatest. If groundwater impacts are confirmed or expected, additional borings or wells should be installed by stepping out laterally from the spill area and primarily in the down gradient direction until the groundwater impact area is delineated.

It is important to note that if intrusive activities (excavation, drilling, hand augers, etc.) are necessary, additional air monitoring of the excavation and breathing zone around the activities should be conducted to ensure additional hazards are not created by the activities. In addition, if excavation activities are conducted and it is necessary for workers to enter the excavation, confined space permitting and/or shoring regulations may apply.

## II-13 COMMUNICATION

### Primary communications for response activities will consist of the following:

•	Emergency Response Team members contact information is located in Annex B of this Plan.
•	The primary means of communication by response personnel will be hand held radios.
•	Secondary means of communication for response activities may be mobile phones, hard line phones, faxes, internet, VHF-FM marine radios, VHF-AM aircraft radios, UHF oil spill radios, HF Single Sideband radios, satellite phones and/or paging systems. Secondary means will most likely be used to support of response operations.
•	If communication equipment necessary to conduct response operations is unavailable, the Company will ensure it is acquired using the incident's resource ordering processes.
•	The Company will also ensure that any required training for the use of communication equipment is also provided.
•	Additional communications devices may be supplied by contracted OSROs.
•	OSRO contact information are located in Annex B of this Plan.

## II-14 DECONTAMINATION

Decontamination is the systematic removal of residual chemicals from personnel and equipment after exposure to toxic, flammable and/or hazardous products. At a minimum, the following equipment will be maintained on-site for decontamination purposes:

- High pressure water
- Water soluble cleaning solution
- Sponges, brushes and mops for decontamination
- Plastic material for ground covering

### The benefits of Decontamination include:

- Enhancing the safety of responders and other personnel.
- Decreasing the hazard of environmental contamination.
- Restricting contamination to the immediate area and minimizes the potential for injury to others.
- Each step in the process reduces the amount of residual product on the clothing until safe and acceptable levels area achieved.

### Non-Emergency / Routine vs. Emergency Decontamination

- **Routine decontamination** is designed to reduce the amount of residual product on the clothing until safe and acceptable levels are achieved.
- **Emergency decontamination** is designed to remove the patient from the hazardous area, remove contaminated clothing and flush the product off the patient. This will be accomplished taking into account any medical considerations. Water should be used to perform the emergency decontamination of the patient. There is less regard for runoff retention, and the emphasis is to expedite emergency medical treatment.

### Factors Influencing Methodology

- Product(s) involved
- Hazards associated with the product(s)
- Degree or extent of contamination
- Physical and chemical properties of the product(s)

### Decontamination Methods

There are many methods for decontamination. The proper method will be determined by the situation and materials involved.

<b>Dilution</b>	The application of water to reduce the concentration of product to a point that it no longer presents a hazard.
<b>Absorption</b>	Mechanically pulled in or soaked up by the sorbent.
<b>Chemical Degradation</b>	Altering the chemical composition of the material to the point that it is less hazardous or easier to remove. For example, emulsifying a gasoline spill.
<b>Disposal</b>	Easiest form of "decontamination".

**Note:** Contaminated products require proper disposal – incineration, burial, etc.

## II-15 WASTE MANAGEMENT AND DISPOSAL PLAN

Federal, state and local rules designed to ensure safe and secure handling of waste materials govern the waste disposal activities of the Facility. To ensure proper disposal of recovered oils plus associated debris, the Facility's Approved Hazardous Waste Plan should be consulted/followed.

The Facility must describe how and where the facility intends to recover, reuse, decontaminate or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State and Federal requirements must be addressed.

### Material that must be accounted for in the disposal plan, as appropriate, include

•	Recovered product
•	Contaminated equipment and materials, including drums, tank parts, valves, shovels
•	Personnel protective equipment
•	Decontamination solutions
•	Adsorbents
•	Spent Chemicals

The management of the wastes generated in clean-up and recovery activities must be conducted with the overall objective of ensuring:

### Overall Objectives

•	Worker Safety
•	Waste Minimization
•	Cost-Effectiveness
•	Minimization of Environmental Impacts
•	Proper Disposal
•	Minimization of present and future environmental liability

All Hazardous Waste Disposal Plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA], State and local regulations, where applicable.

Most of the wastes are "hazardous" due to the benzene concentrations in the wastes (>0.5 mg/l) or ignitability. The avgas filters are frequently determined to be "hazardous" due to the lead concentrations (>5.0 mg/l) in the filters. The paint chips are typically hazardous for lead, chromium or both (>5.0 mg/l).

It is the purpose of the Terminal's hazardous waste contingency plan to minimize hazards to human health and the environment in the event of an emergency. This plan is designed to address emergencies that may occur during operations at this Facility involving hazardous wastes.

The plan must be carried out immediately whenever there is a fire, explosion or release of hazardous waste that could threaten human health or the environment.

### II-15.1 Amendments to Plan

#### The contingency plan must be reviewed and immediately amended whenever:

- |   |  |
|---|--|
| • | Applicable regulations are revised   |
| • | Plan fails in an emergency   |
| • | Facility changes in design, construction, operation, maintenance, or any way increasing the potential for fires, explosions, or releases of hazardous waste, or changes the response necessary in an emergency |
| • | List of waste coordinators or equipment changes  |

#### Good hazardous waste management includes:

- |   |  |
|---|--|
| • | Reusing materials when possible  |
| • | Recycling or reclaiming waste  |
| • | Treating waste to reduce hazards or reducing amount of waste generated |

Solid wastes such as sorbents, PPE, debris and equipment will typically be transported from the collection site to a designated site for:

#### Designated Site Activities

- |   |                    |
|---|--------------------|
| • | Storage            |
| • | Waste segregation  |
| • | Cost-Effectiveness |
| • | Packaging          |
| • | Transportation     |

Once this process is complete, the waste will be shipped off-site to an approved facility for required disposal.

### II-15.2 Storage

During an oil spill the volume of oil that can be recovered depends on the storage capacity available. Typical short-term storage methods are summarized in Figure II-8.3. If storage containers such as bags or drums are used, the container should be clearly marked and/or color-coded to indicate the type of material or waste contained and/or the ultimate disposal option.

### II-15.3 Disposal Plan

Any potentially hazardous waste generated during the cleanup operations after a spill or release will be segregated and each waste stream will be treated separately for waste determination, characterization, and classification. All hazardous wastes generated will be managed as required by the Resource Conservation and Recovery Act (RCRA), and other applicable regulations.

### II-15.4 Identification of Hazardous Materials

**All materials included in the release will be identified, including:**

•	Character
•	Exact source
•	Amount
•	Area extent

### II-15.5 Incompatible Waste

Potentially incompatible hazardous wastes are handled separately at the refinery. Incompatible wastes are treated and/or stored in physically separated areas with separate containment systems, so there is no chance of the wastes contacting each other.

### II-15.6 Transportation

Hazardous substances will be transported by permitted transporters to approved and permitted disposal facilities and must be properly packaged and labeled prior to transport in accordance with 40 CFR 262.30. State licensed hazardous material haulers are required to have a US Environmental Protection Agency ID Number as well as a state transporter ID number. The waste generator must complete and enclose a uniform hazardous waste manifest with each shipment of waste material. The uniform hazardous waste manifest must be signed by responsible Company personnel and include a statement to the effect that Company is disposing of the material within the framework of a spill response operation in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300).

Applicable regulations for wastes shipped offsite include, but are not limited to, the following:

- RCRA regulations listed in 40 CFR 262-263
- PHMSA hazardous materials regulations listed in 40 CFR 171-178
- Applicable state regulations; based on shore base location

### II-15.7 Record Retention

Responsible Company personnel will track and maintain copies of the hazardous waste manifests received from the designated disposal facilities for a minimum of three (3) years.

When developing any Hazardous Waste Contingency Plan refer to the specific Facility RCRA Hazardous Waste Contingency Plan.

## II-16 WATER QUALITY AND SEDIMENT QUALITY ANALYSIS

If the situations requires, following a release of oil to a waterway, the Facility will attempt to gather background data to determine the current conditions of the impacted waterway and sediments. An attempt will be made to collect samples ahead of the plume to determine current background conditions. Water quality data and sediment quality data will also be collected from within the impacted area to determine the changes in conditions. Following cleanup efforts, additional sampling will be conducted to demonstrate the effectiveness of the cleanup operations.

The sampling protocol will be determined by the volume and type of material spilled. In general, near surface water samples will be obtained along with sediment samples. In some cases, depending on spill-specific conditions, stratified sampling may be required. The following EPA analytical methods may be utilized to determine if oil from the Facility release exists on the bottom sediments or within the water column. This is not intended to be an exhaustive list, but may be used as a guideline when deciding which methods to use.

EPA Analytical Methods\*\*

Product	Constituent	Possible EPA Methods
<b>GASOLINE</b>	Benzene	8020, 8240
	Toluene	8020, 8240
	Ethylbenzene	8020,8240
	Xylenes	8020, 8240
<b>DIESEL</b>	Polynuclear Aromatic Hydrocarbons	8100, 8270, 8310
	BTEX	8020, 8240
<b>OILS</b>	Total Petroleum Hydrocarbons	418.1, Modified 8015

\*\* Contact your Environmental Representative for assistance in selecting the proper analytical methods.

## II-17 DRAINAGE PLAN

In addition to automated alarms and routine inspections to tanks and dikes, procedures are in place to further ensure the safety of personnel, equipment and protection of the environment. These procedures are intended to be followed at all times to maintain the safety of the Facility and to mitigate or prevent the damage potential of a large-scale discharge.

**The following elements will be addressed storage tanks, the truck rack area, tank water draining, or facility piping and valves as appropriate:**

•	Available containment volume
•	Route of drainage
•	Drainage through construction materials
•	Type/quantity of valves and separators
•	Sump pump capacities
•	Weir/boom containment capacity and location
•	Other cleanup material
•	General Facility: The available containment volume of this Facility is in Annex 1.

### II-17.1 Storage Tanks

Each storage tank has a diked area. However, adjacent tanks share common dike walls and accumulated liquids can be drained from one diked area to another through valve regulated drain lines. Accumulated water is removed from diked areas through locked drain valves as necessary. Water accumulation within diked areas is visually inspected for petroleum products and any accumulation of oil is removed with sorbent materials before the water is removed. Drain valves are locked closed when not in use.

Drainage from undiked areas is controlled through dock loading/unloading areas, which are equipped with spill pans for catching spilled oil. The pans are piped into a quick drain system, which has large containment tanks that would channel any spilled product into a storage tank.

Inspections and drainage events are recorded in the terminal SPCC logbook that is retained for a period of three years.

### II-17.2 Truck Rack Area

There is a sump for the truck loading rack area. The sump will handle a small amount of storm run-off and has the petroleum containment capacity of a tank truck compartment. The loading rack is covered in order to reduce the amount of rainfall entering the system. Accumulated oil and water is hauled to an approved treatment facility. All other non-contact storm water leaves the Facility via sheet flow.

### II-17.3 Tank Water Drains

**Discharge from tank water drains are prevented by:**

•	Procedures require terminal personnel to be present at all times during the water draining operation.
•	All water from the tank is drained into a water collection tank for disposal under guidelines established by applicable pollution control laws, rules and regulations.

## II-18 INCIDENT DOCUMENTATION

Documentation of a spill provides not only a historical account covering the entire period from pre-spill through cleanup actions to final post-spill assessment, but also serves as a legal instrument and a means to account for all cleanup costs. To ensure that pertinent data and information are available for the incident report, documentation should commence immediately upon notification of a spill and should continue until termination of all operations. For responses requiring EOC activation, the task of coordinating all documentation is the Documentation Unit Leader's. For all responses that do not require an EOC activation, the incident documentation will be documented in STARS.

Documentation relies heavily upon detection and assessment functions, and together these functions provide the necessary data on the extent of the spill and the necessity for control measures. An important aspect to bear in mind when entering data in a form is to use a quantitative system. Avoiding relative or arbitrary terms such as large, small, thick, thin, a lot, not much, etc. These cause confusion and are not comparable between locations and individuals.

## II-19 RESPONSE TERMINATION AND FOLLOW-UP PROCEDURES

Termination activities are divided into three phases: debriefing the incident, post-incident analysis, and critiquing the incident. The extent to which these phases are undertaken depends on the nature and magnitude of the spill or release. Even a small product release could elicit very detailed termination activities. For example, a release of H<sub>2</sub>S resulting with subsequent employee, or public, negative impact. Additionally, some spills or releases trigger outside agency reporting. These events would trigger the formal termination procedures outlined in this section.

### II-19.1 Debriefing the Incident

Debriefings should begin as soon as the “emergency” phase of the operation is completed. Ideally, this should be before first responders leave the scene, and it should include the hazmat response team, sector officers, and other key players such as public information officers and agency representatives who the Incident Commander determines would benefit from being involved.

Debrief
Principles
Use safety meeting attendance forms and or memoranda to document the debriefing.
Inform responders exactly what hazardous materials they were (possibly) exposed to and the signs and symptoms.
Identify equipment damage and unsafe conditions requiring immediate attention or isolation for further evaluation
Assign information-gathering responsibilities for a Post-Incident Analysis and critique.
Summarize the activities performed by each sector, including topics for follow-up.
Reinforce the positive aspects of the response.

## II-19.2 Post-Incident Analysis: (PIA)

### General Information

#### Debriefing the Incident

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Debriefings should begin as soon as the “emergency” phase of the operation is completed. Ideally, this should be before first responders leave the scene, and it should include the hazmat response team, sector officers, and other key players such as public information officers and agency representatives who the IC determines would benefit from being involved. |
| <input type="checkbox"/> | Inform responders exactly what hazardous materials they were (possibly) exposed to and the signs and symptoms.   |
| <input type="checkbox"/> | Identify equipment damage and unsafe conditions requiring immediate attention or isolation for further evaluation.   |
| <input type="checkbox"/> | Assign information-gathering responsibilities for a Post-Incident Analysis (PIA) and critique.   |
| <input type="checkbox"/> | Summarize the activities performed by each sector, including topics for follow-up.   |

*Safety meeting attendance forms and or memoranda may be utilized to document the debriefing.*

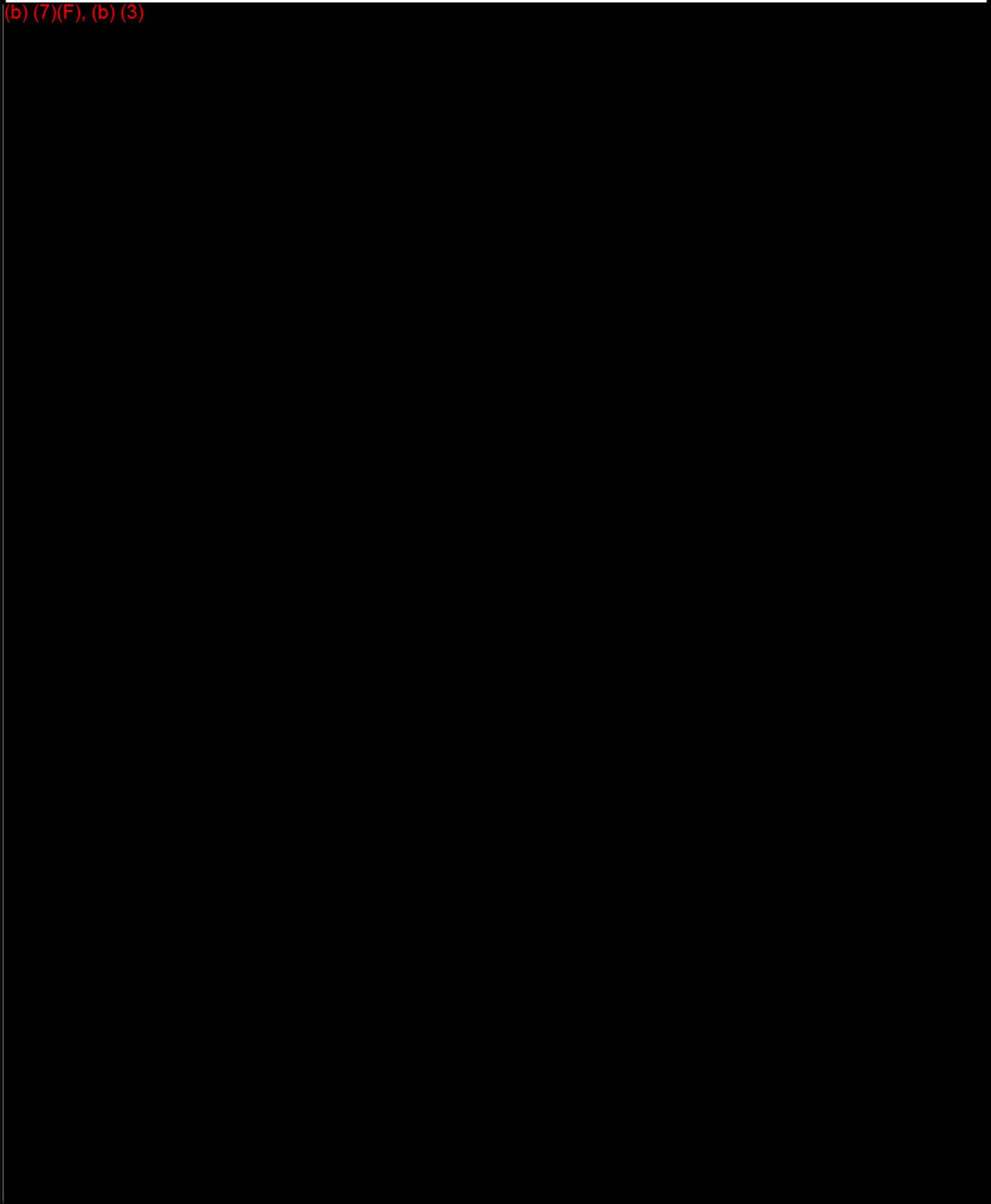
### Post-Incident Analysis:

	PIA is the detailed, step-by-step review of the incident to establish a clear picture of the events that took place during the incident. It is conducted to establish a clear picture of the emergency response for further study.
	The PIA is not the same as investigations conducted to establish the probable cause of the accident for administrative, civil, or criminal proceedings. Those are usually conducted utilizing root cause or hazard and operability methodologies. One person or (or office) should be designated to collect information about the response during the debriefing. Additional data may be obtained from Command post logs, incident reports and eyewitness interpretations.
	Once all available data has been assembled and a rough draft report developed, the entire package should be reviewed by key responders to verify the available facts are arranged properly and actually occurred. The PIA should focus on four key topics: <i>Command and Control, Tactical Operations, Resources and Support Services.</i>
	<i>Command and Control</i> – Was command established and sectors organized? Did information flow from operations personnel through Sector Officers to the Incident Commander? Were response objectives communicated to the personnel expected to carry them out?
	<i>Tactical Operations</i> – Were the tactical options ordered by the IC and implemented by emergency response personnel effective? What worked? What did not?
	<i>Resources</i> – Were the resources adequate for the job? Are improvements needed to apparatus and/or equipment? Were personnel trained to do the job effectively?
	<i>Support Services</i> – Were the support services received from other organizations adequate? What is required to bring support to the desired level?



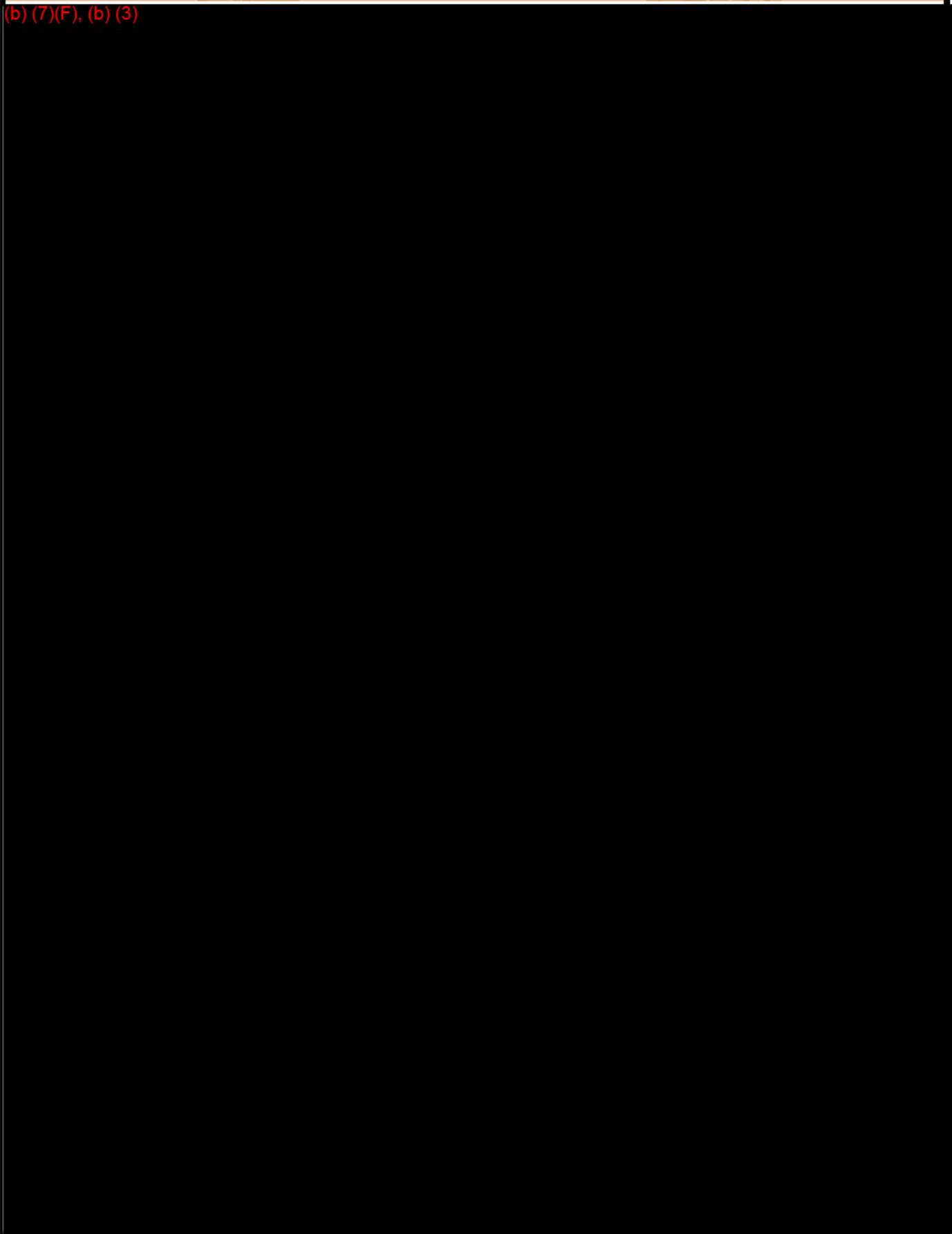
## II-20 EVACUATION

(b) (7)(F), (b) (3)





(b) (7)(F), (b) (3)

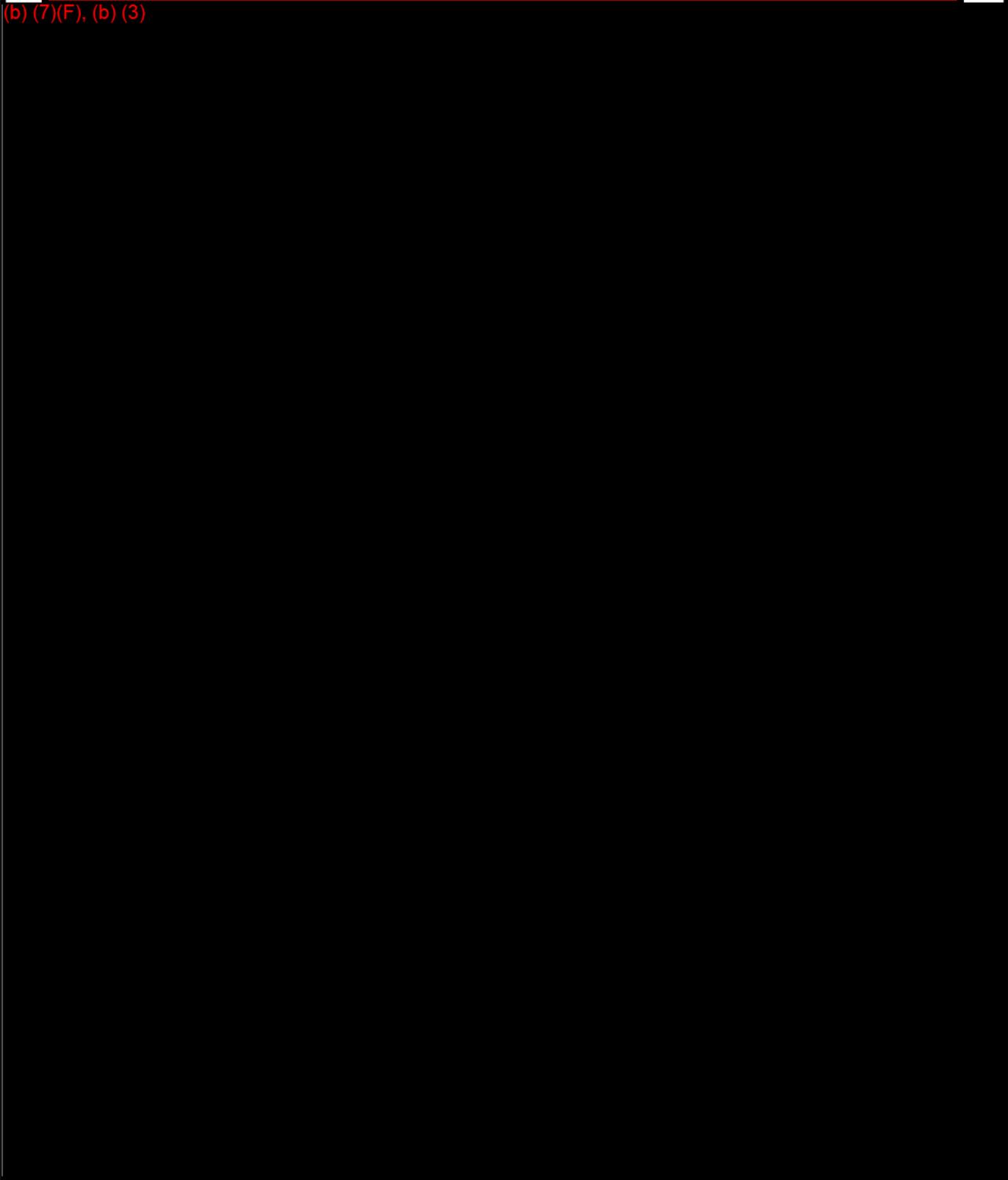




When the alarm is sounded or a signal to evacuate is given all personnel should:

**Evacuation Checklist**

(b) (7)(F), (b) (3)



**Section III – Table of Contents****III-1 General****III-2 Response Training****III-3 Incident Command System (ICS)/HAZWOPER  
Training****III-4 Response Exercise Program****III-5 Incident Critique****III-6 Example PREP Documentation**

### III-1 GENERAL

Primary training records for members are maintained at Pasadena Terminal Environmental Health and Safety Office. The Environmental Health and Safety Department will locate any training records not physically maintained by the location office listed below.

**Records will be retained for a period not less than period of five (5) years or for the duration of the individual is assigned duties under this facility response plan, whichever is greater.**

#### Pasadena Terminal Environmental Health and Safety Office

Location of Required Training Records	
Street Address	530 North Witter
City, Street, Zip	Pasadena, TX 77506

## III-2 RESPONSE TRAINING

Kinder Morgan has developed a program for facility response training. Please refer to the appropriate training documentation, which is maintained and available in this section of the Core Plan.

### III-2.1 Description of Response Training

**The following summarizes the response training elements for all Facilities:**

- |   |  |
|---|--|
| • | Incident Command System (ICS) Training Program |
| • | Classroom Training                             |
| • | HAZWOPER Response Qualifications               |

A response-training program has been developed in accordance with the PREP Guidelines and 29 CFR 1910.120. All Kinder Morgan response personnel have received training as required by 29 CFR 1910.120(q) and the PREP Guidelines, which includes either 40 hour, 24 hour, or 8 hour training as appropriate for their position and responsibility. Annual eight-hour refresher training is given as required by OSHA.

It is the responsibility of the Regional Environmental Health and Safety Manager to plan, carry out and monitor the drills conducted in accordance with the PREP guidelines.

Before entering the Kinder Morgan Terminal facility, all response and clean-up contractor personnel working in the field must have received all required training under 29 CFR 1910.120(q).

The Safety Officer will make verification of contractor personnel training.

Training records are maintained for a minimum of three (3) years and will be available for inspection. Requests for inspection of training records should be made through the Kinder Morgan Terminal Manager.

OSROs identified in this response plan have been classified by the US Coast Guard and therefore comply with all training requirements. Through consistent coordination and routine communication, the Company ensure that each OSRO maintains records sufficient to document training for the organization's personnel and that these records are available for inspection upon request.

In accordance with TAC Title 31 Part 1 Chapter 19, Subchapter B 19.13 – Requirements for Discharge Prevention and Response Plans, the Kinder Morgan Terminal facility includes the following elements within the annual oil spill drill:

- Submitting notification to the GLO and National Response Center;
- Submitting notification to all third parties that have established an agreement to respond to an oil spill and confirm their eligible to respond on the scheduled day of the annual drill exercise;
- Deployment of a representative portion of the on-site spill equipment which would be used to respond to a spill event most likely to occur at the facility;
- Documentation of drill event and facility personnel in attendance.

OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER) rule (29 CFR 1910.120) became law on March 6, 1990. It sets minimum training and/or competency requirements for people associated with an oil spill emergency. HAZWOPER requirements are described in the following section. Additional training and exercise requirements are discussed in the balance of this section.

The Regional Environmental Health and Safety Manager will devise a training plan and schedule in response to governmental regulations and the specific requirements of the Company, and implement the training plan in cooperation with local oil spill response co-ops and selected contractors. Representatives of governmental agencies and other interested parties may be invited to observe or participate in these activities as determined appropriate.

### III-3 INCIDENT COMMAND SYSTEM (ICS)/HAZWOPER TRAINING

Experienced, well-trained people are essential for successful implementation of this Emergency Response Plan. Exercises are performed to check the effectiveness of the training and to test the Plan. An ongoing training and exercise program will be carried out at the facility. In addition to maintaining maximum familiarity with all aspects of the Plan, the training and exercise program is intended to provide members of the spill response team with the basic knowledge, skills and practical experience necessary to perform safe and effective spill response operations in accordance with the plan.

#### III-3.1 Training Requirements

It is important to have well trained Spill Management Team. New Employees involved in response management will complete an incident command training equivalent to ICS 100 and ICS 200. Persons filling key roles in the ICS/UCS Organization (i.e. Command Staff Officers and General Staff Section Chiefs) will also complete training for integrating into the Emergency Management Team to manage a response.

ICS 100, ICS 200, and ICS 300 Level Training can be achieved through various mediums including:

1. For ICS 100 and ICS 200 Level Training courses are available on-line through the FEMA Independent Study Courses through the Emergency Management Institute. A certificate will be provided upon completing each course. <http://www.training.fema.gov/IS/crslist.asp>:
  - a. IS-100 Introduction to Incident Command System, I-100
  - b. IS-200.a ICS for Single Resources and Initial Action Incidents
2. Instructor Lead Courses- Courses are also available though a class room setting. Contact the Company's Regional Environmental Health and Safety Manager to scheduling the course internally.

#### III-3.2 Emergency Response Plan Training

The Company will conduct Emergency Response Plan training annually for their personnel involved in response management to meet the requirement for "personnel response training logs". Please consult the Regional Environmental Health and Safety Manager for further information on these records.

### III-3.3 Classroom Training

**The Company conducts training at this facility. The topics applicable to response training may consist of, but are not limited to, the following:**

- |   |   |
|---|---|
| • | Facility Response Plan/OPA (annual)                                     |
| • | SPCC/HWCP Training (annual)   |
| • | PPE Use, Care and Maintenance   |
| • | Biannual Equipment Deployment (If owned and maintained at the facility) |
| • | Tabletop Drills   |
| • | Fire Extinguishing School   |
| • | First Aid/CPR   |

**The training program has been designed to ensure that:**

All personnel know --

Their responsibilities under the response plan.

The name and address of, and the procedure for contacting, the operator on a 24-hour basis.

The name of, and procedures for contacting, the qualified individual on a 24-hour basis.

Reporting personnel know --

The content of the information summary of the response plan.

The toll-free telephone number of the National Response Center.

The notification process.

Personnel engaged in response activities know --

The characteristics and hazards of the oil discharged.

The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.

The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage.

### III-3.4 HAZWOPER Response Qualifications

**Certain designated Company employees are required to obtain qualifications to meet different levels of initial training (each require 8 hours of annual refresher training) in accordance with OSHA 1910.120 or HAZWOPER.**

- |   |  |
|---|--|
| • | First Responder - Awareness (Sufficient hours of training to demonstrate competencies) |
| • | First Responder - Operations (8 hours initial)   |
| • | Hazardous Material Technician (24 hours initial)                                       |
| • | Hazardous Material Specialist (24 hours initial)                                       |
| • | "On-Scene" Commander or Incident Commander (24 hours initial)                          |

## HAZWOPER Levels

### First Responder Awareness Level

First responders at the Awareness Level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. First responders at the Awareness Level shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- An understanding of what hazardous substances are, and the risks associated with them in an incident.
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present.
- The ability to recognize the presence of hazardous substances in an emergency.
- The ability to identify the hazardous substances, if possible.
- An understanding of the role of the first responder awareness individual in the employer's emergency response plan including site security and control and the U.S. Department of Transportation's Emergency Response Guidebook.
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center.

### First Responder Operations Level

First responders at the Operations Level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release.

Their function is to contain the release from a safe distance, keep it from spreading and prevent exposures. First responders at the Operational Level shall have received at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas in addition to those listed for the awareness level and the employer shall so certify:

- Knowledge of the basic hazard and risk assessment techniques.
- Know how to select and use proper personal protective equipment provided to the first responder operational level.
- An understanding of basic hazardous materials terms.
- Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and PPE available with their unit.
- Know how to implement basic decontamination procedures.
- An understanding of the relevant standard operating procedures and termination procedures.

### Hazardous Materials Technician

Hazardous Materials Technicians are individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. Hazardous Materials Technicians shall have received at least 24 hours of training equal to the first responder operations level and in addition have competency in the following areas and the employer shall so certify:

- Know how to implement the employer's emergency response plan.
- Know the classification, identification and verification of known and unknown materials by using field survey instruments and equipment.
- Be able to function within an assigned role in the Incident Command System.
- Know how to select and use proper specialized chemical personal protective equipment provided to the hazardous materials technician.
- Understand hazard and risk assessment techniques.
- Be able to perform advance control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit.
- Understand and implement decontamination procedures.
- Understand termination procedures.
- Understand basic chemical and toxicological terminology and behavior.

### Hazardous Materials Specialist

Hazardous Materials Specialists are individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician, however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The Hazardous Materials Specialist would also act as the site liaison with Federal, state, local and other government authorities in regards to site activities. Hazardous Materials Specialists shall have received at least 24 hours of training equal to the technician level and in addition have competency in the following areas and the employer shall so certify:

- Know how to implement the local emergency response plan.
- Understand classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment.
- Know of the state emergency response plan.
- Be able to select and use proper specialized chemical personal protective equipment provided to the hazardous materials specialist.
- Understand in-depth hazard and risk techniques.
- Be able to perform specialized control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available.
- Be able to determine and implement decontamination procedures.
- Have the ability to develop a site safety and control plan.
- Understand chemical, radiological and toxicological terminology and behavior.

### On Scene Incident Commander

Incident Commanders, who will assume control of the incident scene beyond the First Responder Awareness Level, shall receive at least 24 hours of training equal to the First Responder Operations Level and in addition have competency in the following areas and the employer shall so certify:

- |   |  |
|---|--|
| • | Know and be able to implement the employer's Incident Command System.  |
| • | Know how to implement the employer's emergency response plan.  |
| • | Know and understand the hazards and risks associated with employees working in chemical protective clothing. |
| • | Know how to implement the local emergency response plan.   |
| • | Know of the state emergency response plan and of the Federal Regional Response Team.                         |
| • | Know and understand the importance of decontamination procedures.  |

### HAZWOPER Refresher Training

Those employees who are trained in accordance with the above descriptions shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

### HAZWOPER Training Certification and Documentation

The Company will certify that its spill management response team members assigned to all HAZWOPER levels have received the required training or equivalent based on responsibilities. The Company will train and maintain its spill management team members to HAZWOPER per 29 CFR 1910.120(q) as a minimum. The designated Facility Supervisor will determine the specific refresher training provided for each employee.

Upon receiving the initial HAZWOPER training, response team members will be issued a certificate indicating that they have completed the required amount of HAZWOPER training and can function as a response team member. Documentation of specific training received by each employee is maintained by the Environmental Health and Safety Department.

### III-3.5 Response Contractors

All contractors responding to a spill/release that involves the Company will be required by their contracts to satisfy the HAZWOPER training requirements of 29 CFR 1910.120 for their position.

### **III-3.6 Skilled Temporary Support Personnel**

Facility and other response support personnel whose skills are needed temporarily to perform immediate emergency support work (such as truck drivers and crane operators) are not required to meet the training requirements discussed above. However, these personnel must be briefed on the potential hazards and the duties to be performed at the site before participating in response operations. They must also receive instruction in the use of any safety and personal protective equipment as needed and be provided with all other appropriate safety and health precautions.

### **III-3.7 Specialist Employees**

Specialist employees are experts who would provide technical advice or guidance during response to a spill incident. Examples of such specialists might include chemists, biologists, industrial hygienists, physicians, or others with skills useful during a spill response operation. There are no specific requirements on training content or hours of training for these persons except that it entails whatever is necessary to maintain competency in their specific area of expertise. Training and demonstration of competency for skilled support personnel and specialists should be documented.

### **III-3.8 Casual Laborers**

Casual laborers will generally not be hired, but may be employed by the Facility's response contractors or other response organizations. Contractors will be responsible for providing the appropriate HAZWOPER training to these laborers prior to their involvement in response operations.

### **III-3.9 Volunteers**

Normally, the Facility will not hire and/or train volunteers for work on an oil spill response incident. Consequently, the Facility will refer volunteers to appropriate state and/or local agencies or organizations that are set up to handle volunteers. In addition, the Facility will refer volunteers to appropriate wildlife rescue agencies or contractors, such as the Wildlife Branch.

### **III-3.10 Waste Handling Training**

Field operations personnel receive extensive regulatory-required training in HAZWOPER, HAZCOM, emergency response, fire fighting, and other areas as described in this section. Employees at sites which generate hazardous waste receive additional orientation and training specific to hazardous waste regulatory requirements, and hazardous waste emergency response. Waste Specialists receive additional training on waste handling.

### III-3.11 Fire Response and Fire Equipment Training

Proper knowledge and training on fire response and fire equipment can mean the difference between a small incident and a major catastrophe. Knowing and understanding the information contained in this manual is critical to fire prevention and protection. The Gulf Region will apprise employees of the fire hazards of the materials and processes to which they are exposed and emergency action plan at the following times:

Initially when the plan is developed  
Whenever the employee's responsibilities or designated actions under the plan change  
Whenever the plan is changed.

The Gulf Region will review with each employee upon initial assignment those parts of the plan, which the employee must know to protect the employee in the event of an emergency. This written plan will be incorporated into the Gulf Region Safety Manual, and made available for employee review.

In addition to the training listed above, the following training also will be presented:

First Aid	Annually
Fire Extinguisher	Annually
Blood borne Pathogen Exposure Control	Annually
CPR	Annually

### III-3.12 Discharge Prevention Meeting Log

Discharge Prevention Training is covered in annual Environmental Awareness Training.

## III-4 RESPONSE EXERCISE PROGRAM

The Facility exercise program is designed to be consistent with the exercise requirements as outlined in the National Preparedness for Response Exercise Program (PREP) Guidelines developed by the U.S. Coast Guard in conjunction with the Pipeline Hazardous Materials Safety Administration (PHMSA) and the U.S. Environmental Protection Agency (EPA). Participation in this program ensures that the Facility meets all federal exercise requirements mandated by OPA '90.

The primary elements of the Facility exercise program are notification exercises, tabletop exercises, facility-owned equipment deployment exercises, contractor exercises, unannounced exercises by government agencies and area-wide exercises conducted by industry and government agencies. The exercise year for all facilities will be from January 1 to December 31. The Facility Manager is responsible for implementing the exercise program.

All exercises and actual release event responses will be critiqued. If appropriate, the information derived from the post-exercise or post-event evaluation will be incorporated into the Emergency Response Plan. The IC will cause the facility plan to be updated as necessary and updates will be forwarded to the Environmental Health and Safety Department.

### III-4.1 Exercise Format and Procedures

Exercises serve to evaluate the thoroughness and effectiveness of the emergency response component of the Emergency Response Plan by testing under simulated conditions. Exercises will be conducted in consistence with the PREP Guideline to maintain maximum effectiveness of the plan.

**The following is a list of suggested organizations that should be invited to table top and equipment deployment exercises:**

•	Federal Agencies having jurisdictional responsibility during a spill or emergency (i.e. USCG, EPA, DOT).
•	State agencies having jurisdictional responsibility during a spill or emergency.
•	Local agencies having jurisdictional reasonability during a spill or emergency (i.e. Local Fire Department, LEPC, Law Enforcement, Health Department).
•	Other interested entities that may play a critical role during a spill or fire (i.e. Local Utilities).

### III-4.2 Coordination with Local Emergency Services

During an event meetings should be conducted with all local emergency services departments. If possible, a single source of contacts with these departments should be appointed. Lines of communication to this source must be determined to allow quick contact. If the situation is expected to be of longer duration, off-duty police or security personnel may be required to assist. These people will be very useful in traffic control including ingress and egress from the site, and preventing unauthorized personnel from entering the area.

It is the responsibility of the Liaison Officer for establishing interaction with public officials and ensuring coordination between fire, police, and other appropriate public officials is possible during an emergency. It is encouraged to involve local officials in drills/training programs, where appropriate.

#### Facility personnel will coordinate with local emergency service officials as necessary to:

•	Provide the officials with current information on all Company facilities within their jurisdiction
•	Exchange information about responsibilities and resources (both for the Facility and the officials) available for responding to hazardous liquid pipeline emergencies, and to discuss (preplan) possible responses to be made during potential emergency situations
•	Ensure that the names, addresses, and telephone numbers for the officials are current

### III-4.3 Qualified Individual (QI) Notification Exercise

The QI Notification Drill is an exercise to ensure the QI can be reached in a spill response emergency in order to carry out his or her required duties. This type of drill is required to exercise communications between facility personnel and qualified individuals. Contact by telephone, radio, message-pager, or facsimile must be made with the qualified individual, and confirmation must be received from him or her to satisfy the requirements of this exercise. The drill consists of simulating a spill and using the following notification sequence to inform the proper individual.

The person discovering the release of the spill (First Responder) shall immediately notify the Field Coordinator.

The First Responder will report the following information:

- Name and title of the person reporting the spill.
  - Substance spilled and quantity released.
  - Time, location, source and apparent cause of the spill.
  - Possible source of ignition.
  - Size of area impacted or potentially impacted.
  - Location of any employees, contractors, or visitors that may be threatened by the release.
1. The Incident Commander shall notify all ERT members on duty and direct them where to respond and what type of equipment will be necessary.

**NOTE: It is important to note that the QI drill is a communication drill only. Therefore, no actual employee or equipment deployment is necessary.**

2. The Field Controller (FC) must notify the EHS person on call, or alternate of any spill. They should be able to provide the information indicated in #1, above.
3. The EHS person on call will initiate the Emergency Response Line (ERL).
4. If significant quantities of customer product are affected, the Control Room will notify the customer that incident that has taken place with their product.
5. The IC and/or EHS person on call must supervise all response activities, and file claim incident forms with the Regional Office.
6. The EHS person on call shall assess the incident with the IC, notify appropriate governmental agencies, file internal incident reports, and arrange for containment and/or disposal.
7. Maintenance and/or Operations personnel will be notified to make any repairs at the location of the spill.

At the end of each year, if there have been no spill responses or QI notifications, an employee unassociated with the ICS will be given a spill scenario and the requirements outlined above. This employee will be instructed to initiate the drill, acting as first responder to test the notification procedure.

Results of the exercise must be logged (use: Notification Exercise Form) and maintained for 3 years for USCG records and 5 years for EPA records. At least once a year the exercise should be conducted outside of regular business hours.

**NOTE: Use Documentation forms for all Internal Exercises provided for in PREP Guidelines (August 2002)**

### III-4.4 Equipment Deployment Exercises

All of the facility's equipment must be included in a maintenance program. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices. The owner must document all inspection and maintenance.

The Equipment Deployment Exercise demonstrates the ability of the facility personnel to deploy and operate equipment necessary in the event of a spill. In addition, it assures that equipment is in its proper working condition. The EDE requires that response equipment be deployed and operated into its intended operating environment.

The Equipment Deployment Exercise includes deployment and operation of the following:

- 1000 feet of Weir Boom to completely contain and secure projected spill area.
- Response powerboat with boom for deployment around location of spill
- Absorbent Boom and Pads
- Communication devices

EDE will be conducted semiannually during normally scheduled ERT Drills or HAZWOPER. Six (6) exercises must be performed in a triennial cycle.

The OSROs identified in the plan will conduct three (3) equipment deployment exercises during the triennial.

### III-4.5 Spill Management Team Tabletop Exercises

The Spill Management Team Tabletop Exercise (SMTTX) consists of key members of the staff with emergency management responsibilities gathering informally and discussing what actions need to be taken during an oil or hazardous substance spill. The discussion is based on hypothetical situations that could possibly arise at the facility. The Spill Management Team (SMT) elicits constructive discussion by all participants, as they resolve problems based on the response plan. The SMTTX has participants practicing problem solving and resolving any questions of coordination, and assignment of responsibilities.

The SMTTX is intended to exercise the SMTs organization, communication, and decision-making in managing a spill response. In addition, it allows a review of the SMTs:

- Knowledge of the response plan
- Proper notifications
- Communications system
- Ability to access an OSRO
- Coordination of internal organization personnel with responsibility for spill response

The Spill Management Team tabletop Exercise must be conducted annually, with at least one SMTTX in a triennial cycle involving a worst-case discharge.

### **III-4.6 Internal Unannounced Exercise (UE)**

An internal UE must be conducted annually so that at least three (3) UE's will be completed in a triennial period. Every three years, one of the UE's must be an Equipment Deployment Exercise. This does not have to be a separate exercise. Any of the required exercises, with the exception of the QI Notification Drill, that is conducted unannounced will satisfy this requirement. Any equipment that is deployed during a UE can be credited toward the requirements for the EDE. The UE will be implemented by the LO, IC, or alternate.

### **III-4.7 Triennial Exercise of the Entire Response Plan**

A drill of the entire spill response plan must be exercised once in a triennial (3 year) period. However, exercises involving all parts of the plan do not have to be conducted at one time. The plan may be exercised in segments over a period of 3 years, as long as each component of the plan is exercised at least once within the 3-year period.

### **III-4.8 Documentation and Record Maintenance**

Documentation includes, but is not limited to, listing the type of exercises conducted, the objectives met, and the results of the exercise evaluation. This documentation will be in writing and signed by a responsible individual within the organization. All the record of events that occur within the facility will be filed with the Environmental Health and Safety Department. All documentation will be kept on file **for at least (5) years**.

### **III-4.9 Credit for Conducting an Exercise**

When lesser-included exercises occur as part of larger exercises or a real event, the Company facility will receive credit for that lesser included exercise or real event when properly documented. For example, if a terminal responds to an actual spill, the activities involved in the spill response (i.e., the IC notification, the equipment deployment, etc.) will satisfy the requirements of these two exercises, provided the actual response activities meet the objectives of the exercises and are properly documented.

Credit for an Area Exercise will be given to the Company facility or facilities for an actual response to a spill in the Area if the plan was utilized for response to the spill and the objectives of the Area Exercise were met, properly documented and certified. The caveat to this statement is that if a The Company facility plan was scheduled for an Area Exercise and an actual spill occurred in the Area for which the facility's plan was not used (i.e., another company's plan was used or an agency plan was used), then the Company facility would not receive credit for the spill response.



### III-4.10 Certification Process

The Incident Commander or Exercise Facilitator certifies the response exercise.

Following an exercise or actual event, the responders should complete a critique of their response. The evaluation form located is located in the PREP Guidelines (August 2002) and should include the Company and facility name, exercise date, type of exercise conducted, response plan exercised and participants. This form is to be signed by the Incident Commander or Exercise Facilitator; then filed and retained for a minimum of five years at the facility.

### Coast Guard Marine Transportation-Related (MTR) Facilities

QI Notification Exercises	
Applicability	Facility
Frequency	Quarterly
Initiating Authority	Company policy.
Participating Elements	Facility personnel, qualified individual
Scope	Exercise communication between facility personnel and qualified individual.
Objectives	Contact must be made with a qualified individual or designee, as designated in the response plan.
Certification	Self-certification.
Verification	U.S. Coast Guard
Records	
Retention	3 years
Location	Records to be kept at the facility.
Credit	<p>Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.</p> <p>For plan holders handling both oil and hazardous substances, a single QI notification will satisfy exercise requirements for both plans, if both plans rely on the same QI. If the plan holder uses two different QIs, the plan holder is required to exercise both separately.</p>

### Coast Guard Marine Transportation-Related (MTR) Facilities

Emergency Procedures Exercises (Optional)	
Applicability	Facility
Frequency	Quarterly
Initiating Authority	Facility owner or operator.
Participate. Elements	Facility personnel
Scope	Exercise the emergency procedures for the facility to mitigate or prevent any discharge or a substantial threat of such discharge or oil/HAZSUB resulting from facility operational activities associated with oil transfers.
Objectives	<p>Conduct an exercise of the facility's emergency procedures to ensure personnel knowledge of actions to be taken to mitigate a spill. This exercise may be a walk-through of the emergency procedures.</p> <p>Exercise should involve one or more of the sections of the emergency procedures for spill mitigation. For example, the exercise should involved a simulation of a response to an oil spill.</p> <p>The facility should ensure that spill mitigation procedures for all contingencies at the facility are addressed at some time.</p>
Certification	Self-certification.
Verification	U.S. Coast Guard
Records	
Retention	3 years
Location	Records to be kept at the facility.
Evaluation	Self-evaluation
Credit	<p>Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.</p> <p><b>This section describes an option exercise to provide facilities with an exercise that may be conducted <u>unannounced</u> to fulfill the internal unannounced exercise requirement.</b></p> <p>At facilities covered by both oil and hazardous substance plans, separate oil and hazardous substance exercises are not required. However, the shipboard personnel should alternate oil and hazardous substance scenarios each quarter.</p>

### Coast Guard Marine Transportation-Related (MTR) Facilities

Spill Management Team Tabletop Exercise	
Applicability	Facility spill management team
Frequency	Annually
Initiating Authority	Company policy
Participating Elements	Spill management team as established in the response plan.
Scope	Exercise the spill management team's organization, communication, and decision-making in managing a spill response.
Objectives	<p>Exercise the spill management team in a review of:</p> <ul style="list-style-type: none"> <li>• Knowledge of the response plan;</li> <li>• Proper notifications;</li> <li>• Communications system;</li> <li>• Ability to access an OSRO/HSRO;</li> <li>• Coordination of internal organization personnel with responsibility for spill response;</li> <li>• An annual review of the transition from a local team to a regional, national, and international team, as appropriate;</li> <li>• Ability to effectively coordinate spill response activity with the National Response System (NRS) infrastructure. (If personnel from the NRS are not participating in the exercise, the spill management team should demonstrate knowledge of response coordination with the NRS);</li> <li>• Ability to access information in the Area Contingency Plan for location of sensitive areas, resources available within the area, unique conditions of area, etc.</li> <li>• At least one spill management team tabletop exercise in a triennial cycle would involve simulation of a <u>worst-case discharge scenario</u>.</li> </ul>
Certification	Self-certification.
Verification	U.S. Coast Guard
Records	
Retention	3 years
Location	Records to be kept at the facility.
Evaluation	Self-evaluation
Credit	<p>Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.</p> <p>Plan holders are responsible for ensuring that SMTs are familiar with Area Committees/Regional Response Teams (*RRTs) and Area Contingency Plans in every area in which the plan holder operates. While it is not practicable to require an SMT to exercise in every area/region in which they offer cover each year, each SMT is expected to review ACPs annually and the make-up of Area Committees/RRTs in all areas in which they offer coverage. Self-certification for exercise credit should include SMT certification that the SMT has completed annual review and is familiar with the ACPs and Area Committees in all areas in which the plan holder operates.</p>

### Coast Guard Marine Transportation-Related (MTR) Facilities

#### Equipment Deployment Exercises

Applicability	Facilities with facility owned and operated response equipment.
Frequency	Semiannually
Initiating Authority	Company policy
Participate. Elements	Facility personnel
Scope	<p>Deploy and operate facility owned and operated response equipment identified in the response plan. The equipment to be deployed would be either (1) the minimum amount of equipment for deployment as described in "Guiding Principles", or (2) the equipment necessary to respond to an average most probably discharge at the facility, <u>whichever is less</u>.</p> <p>All of the facility's personnel involved in equipment deployment operations must be included in a comprehensive training program. All of the facility's equipment must be included in a comprehensive maintenance program. Credit should be taken for deployment conducted during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices. All inspection and maintenance must be documented by the owner.</p>
Objectives	<p>Demonstrate ability of facility personnel to deploy and operate equipment.</p> <p>Ensure equipment is in proper working order. Deployment should also include testing ACP containment, protection and diversion strategies.</p>
Certification	Self-certification.
Verification	U.S. Coast Guard
Records	
Retention	3 years
Location	Records to be kept at the facility.
Evaluation	Self-evaluation
Credit	<p>Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.</p> <p><b>Note: If a facility with facility owned and operated equipment also identifies OSRO equipment in its response plan, the OSRO equipment must also be deployed and operated in accordance with the equipment deployment requirements for OSRO owned equipment.</b></p>

### Coast Guard Marine Transportation-Related (MTR) Facilities

Equipment Deployment Exercises	
Applicability	Facilities <u>with OSRO/HSRO response equipment cited in their response plan.</u>
Frequency	Annually
Initiating Authority	Company policy
Participating Elements	Facility owner or operator and OSRO/HSRO.
Scope	<p>Deploy and operate response equipment identified in the response plan. The equipment to be deployed would be the minimum amount of equipment as described in "Guiding Principles."</p> <p>All of the OSRO/HSRO personnel involved in equipment deployment operations must be included in a comprehensive training program. All of the OSRO/HSRO equipment must be included in a comprehensive maintenance program. Credit should be taken for equipment deployment conducted during training. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices. The facility owner or operator must ensure that inspection and maintenance by the OSRO/HSRO is documented. The OSRO/HSRO must provide inspection and maintenance information to the owner or operator.</p> <p>Plan holders must ensure that when a regional OSRO/HSRO is identified in the response plan, the OSRO/HSRO conducts annual equipment deployment exercises in each operating environment for each CG Contingency Planning Area.</p>
Objectives	<p>Demonstrate ability of personnel to deploy and operate equipment.</p> <p>Ensure the response equipment is in proper working order.</p> <p>Whenever feasible, equipment deployment should also include ACP containment, protection and diversion strategies.</p>
Certification	The facility owner or operator should ensure that the OSRO/HSRO identified in the response plan provides adequate documentation that the requirements for this exercise have been met.
Verification	U.S. Coast Guard
Records	
Retention	3 years
Location	Records to be kept at the facility.
Evaluation	Self-evaluation
Credit	Plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.

Coast Guard Marine Transportation-Related (MTR) Facilities	
Government-Initiated Unannounced Exercises	
Applicability	Vessel and MTR facility response plan holders within the area.
Frequency	Triennially, if successfully completed. A facility deemed by the CG/EPA not to have successfully completed the exercise may be required to participate in another government initiated unannounced exercise at the discretion of the exercising agency. (Plan holders who have successfully completed a PREP government-initiated unannounced exercise will not be required to participate in another one for at least 36 months from the date of the exercise.)
Initiating Authority	U.S. Coast Guard
Participating Elements	Vessel and MTR facility response plan holders.
Scope	<p>Unannounced exercises are limited to a maximum of four exercises per area per year.</p> <p>Exercises are limited to approximately 4 hours in duration.</p> <p>Exercises must involved response to an average AMD scenario.</p> <p>PHMSA and MMS would cover unannounced exercises for pipelines and offshore facilities <u>not part of a complex</u> in their exercise program.</p>
Objectives	<p>Conduct proper notifications to response to unannounced scenario of an average most probable discharge.</p> <p>Demonstrate response is:</p> <ul style="list-style-type: none"> <li>• Timely – As a general rule, the regulatory planning standard is containment equipment (e.g., booms) on scene within one hour of notification and recovery equipment (skimmers and temporary storage) on scene within two hours. Therefore in a government-initiated unannounced exercise, plan holder should be able to initiate simulated clean up within approximately two hours of exercise commencement.</li> <li>• Conducted with adequate amount of equipment for scenario;</li> <li>• Properly conducted.</li> </ul> <p>Whenever feasible, equipment deployment should also include testing ACP containment, protection and diversion strategies.</p>
Certification	U.S. Coast Guard
Verification	U.S. Coast Guard
Records	
Retention	3 years
Location	<p>For facilities, at the facility.</p> <p>For vessels, in accordance with 33 CFR 155.1060(e)(2)</p>
Evaluation	Evaluation to be conducted by initiating agency.
Credit	Credit may be granted by the initiating authority for an actual spill response when the PREP objectives are met, the response is evaluated by the initiating authority and a proper record is generated. Plan holders participating in this exercise may take credit for notification & equipment deployment exercises, if criteria for those exercises are met, the response is evaluated by the plan holder and a proper record is generated.

## III-5 INCIDENT CRITIQUE

A commitment to critique an all hazardous material response will improve emergency response performance by improving efficiency and pinpointing weaknesses. This information should be used as a tool which can provide a valuable learning experience (everyone came to the incident with good intentions). A good critique should promote the following:

- Trust in the response system as being self-correcting;
- Willingness to cooperate through teamwork
- Continuing training of skills and techniques
- Pre-planning for significant incidents;
- Sharing information between internal and external response participants.

Command and Control – Was command established and sections organized? Did information flow from operations personnel through Section Chiefs to the Incident Commander? Were response objectives communicated to the personnel expected to carry them out?

Tactical Operations – Were the tactical options ordered by the IC and implemented by emergency response personnel effective? What worked? What did not?

Resources – Were the resources adequate for the job? Are improvements needed to the response apparatus and/or equipment? Were personnel trained to do the job effectively?

Support Services – Were the support services received from other organizations adequate? What is required to bring support to the desired level?

### Critiquing the Incident:

A commitment to critique an all hazardous material response will improve IMT performance by improving efficiency and pinpointing weaknesses. Use the tool as a valuable learning experience (everyone came to the incident with good intentions)

A good critique promotes:

	Trust in the response system as being self-correcting.
	Willingness to cooperate through teamwork.
	Continuing training of skills and techniques.
	Pre-planning for significant incidents.
	Sharing information between response agencies.

### III-5.1 Critique Format

Someone should be assigned as a “critique leader”. This individual would be responsible for the gathering of all pertinent information and its corresponding dissemination for both learning and historical purposes. The following items can be used as guidance for this individual in developing a useful critique of an incident.

Control the critique. Introduce the individuals involved and their responsibilities in the critique procedure. Set a definitive time frame for completion and keep the process moving until completion. Too often after action critiques seemingly give way to post incident chaos and then the return to normal operations which inevitably supersedes the critique.

- Ensure all questions raised receive detailed answers.
- Ensure all operations responders (or their collective groups) present their observations.
- Any items raised that have potential impact on safety, health or operational mistakes made should be given special attention to ensure they are documented properly and in detail.
- Provide for a summation of lessons learned.
- Follow-up

Upon completion of the incident critique process, a written report should be compiled and forwarded on to management. This report should highlight suggestions for improving response capabilities and alternative solutions.

When larger incidents are involved or injuries have occurred, formal reports should be circulated so that everyone that participated in the response efforts can be made aware of and understand the “lessons learned”.

#### Critique Format:

A critique leader is assigned. This can be anyone who is comfortable and effective working in front of a group. The critique leader should:

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Control the critique. Introduce the players and procedures. Keep it moving and end on schedule.  |
| <input type="checkbox"/> | Ensure that specific questions receive detailed answers.   |
| <input type="checkbox"/> | Ensure that all participants follow the critique rules.  |
| <input type="checkbox"/> | Ensure that each operational group presents their observations.  |
| <input type="checkbox"/> | Keep notes of important points.  |
| <input type="checkbox"/> | Sum up the lessons learned.  |
| <input type="checkbox"/> | Follow up.   |
| <input type="checkbox"/> | Following the critique, forward the written comments to management. They should highlight suggestions for improving response capabilities and alternative solutions.           |
| <input type="checkbox"/> | When larger incidents are involved or injuries have occurred, formal reports shall be circulated so that everyone in the response system can understand the “lessons learned.” |



## III-6 EXAMPLE PREP DOCUMENTATION

### III-6.1 Notification Exercise

=	
1.	Date of Exercise: _____
2.	Exercise - <input type="checkbox"/> Actual Response - <input type="checkbox"/>
3.	Facility initiating exercise: _____
4.	Individual notified: _____ QI - <input type="checkbox"/> IC - <input type="checkbox"/> Alternate - <input type="checkbox"/>
5.	Time initiated: _____ AM / PM Time QI/IC or Alternate responded: _____ AM / PM
6.	Contact method: Telephone - <input type="checkbox"/> Pager - <input type="checkbox"/> Radio - <input type="checkbox"/> Fax - <input type="checkbox"/> Other - <input type="checkbox"/> _____
7.	Description of notification procedure: _____ _____
8.	Identify core components from OSRP exercised: _____ _____
9.	Personnel attending exercise (Attach sign-up list) _____ _____ _____ _____ _____
_____	
Certifying Signature	
Note – Retain form for a minimum of three (3) years (for USCG/PHMSA/BSEE) or five (5) years (for EPA).	

**III-6.2 Internal Exercise (IMT Table Top)**

1. Date Performed: _____
2. Exercise or actual response? _____ If an exercise, announced or unannounced? _____
3. Location of Tabletop: _____
4. Time started: _____ Time completed: _____
5. Response plan scenario used (check one): <input type="checkbox"/> Average most probable discharge <input type="checkbox"/> Maximum most probable discharge <input type="checkbox"/> Worst case discharge Size of (simulated) spill _ bbls/gals
6. Describe how the following objectives were exercised: a) Incident management team's knowledge of Oil Spill Response Plan: _____ _____ b) Proper notifications: _____ _____ c) Communications system: _____ _____ d) Incident Management Team's ability to access contracted oil spill removal organizations: _____ _____ e) Incident Management Team's ability to coordinate spill response with On-Scene Coordinator, state and applicable agencies: _____ _____ f) Incident Management Team's ability to access sensitive site and resource information in the Area Contingency Plan: _____ _____



7. Identify which of the 15 core components of your response plan were exercised during this particular exercise:

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Attach description of lesson(s) learned and person(s) responsible for follow-up of corrective measures.

\_\_\_\_\_  
Certifying Signature

Retain form for a minimum of three (3) years (for USCG/PHMSA/BSEE) or five (5) years (for EPA).

### III-6.3 Internal Exercise (Equipment Deployment)

1. Date Performed: _____
2. Exercise or actual response? _____ If an exercise, announced or unannounced? _____
3. Deployment Location(s): _____ _____
4. Time started: _____ Time completed: _____
5. Equipment deployed was (check one): <input type="checkbox"/> Facility-owned <input type="checkbox"/> Both <input type="checkbox"/> Oil Spill Removal Organization owned    If so, which OSRO? _____
6. List type and amount of all equipment (e.g., boom and skimmers) deployed and number of support personnel employed: _____ _____ _____
7. Describe goals of the equipment deployed and list any Area Contingency Plan strategies tested. (Attach a sketch of equipment deployments and booming strategies.) _____ _____ _____
8. For deployment of facility-owned equipment, was the amount of equipment deployed <u>at least</u> the amount necessary to respond to your facility's average most probable spill? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Was the equipment deployed in its intended operating environment? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
9. For deployment of OSRO-owned equipment, was a representative sample (at least 1,000' of each boom type and at least one of each skimmer type) deployed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Was the equipment deployed in its intended operating environment? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
10. Are all facility personnel that are responsible for response operations involved in a comprehensive training program and all pollution response equipment involved in a comprehensive maintenance program? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A If Yes, describe the program: _____ _____  Date of last equipment inspection: _____
11. Was the equipment deployed by personnel responsible for its deployment in the event of an actual spill? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A



12. Was all deployed equipment operational?  Yes  No  N/A

If No, describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Identify which of the 15 core components of your response plan were exercised during this particular exercise:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attach description of lesson(s) learned and person(s) responsible for follow-up of corrective measures.

\_\_\_\_\_

Certifying Signature

Note – Retain form for a minimum of three (3) years (for USCG/PHMSA/BSEE) or five (5) years (for EPA).



**Section IV – Table of Contents**

**IV-1 ICS Forms**

## IV ICS FORMS

Incident Command System (ICS) Forms	
ICS Form	Name
Agency Notification Form	Agency Notification Form
IAP Cover Sheet	IAP Cover Sheet
Annex 1 Tab A	General Incident Report
Notification Status Report	Notification Status Report
Weather	Weather Report
ICS 201 (-1, -2, -3, -4, -5, and -7 )	Incident Briefing Forms
ICS 202	Response Objectives
ICS 203	Organization Assignment List
ICS 204	Assignment List
ICS 205	Communications Plan
ICS 206	Medical Plan
ICS 207	Incident Organization Chart
ICS 208	Site Safety Plan
ICS 209	Incident Status Summary
ICS 210	Change Status
ICS 211P	Check-In List (Personnel)
ICS 211E	Check-In List (Equipment)
ICS 213	Resource Requisition
ICS 214	Unit Log
ICS 214a	Individual Log
ICS 215	Operational Planning Worksheet
ICS 218	Support Vehicle Inventory
ICS 220	Air Operations Plan
ICS 221	Demobilization Check Out
ICS 223	Health and Safety Message
ICS 224	Environmental Unit Summary
ICS 226	Long Term Planning Worksheet
ICS 230	Daily Meeting Schedule
ICS 231	Meeting Description
ICS 232	Resources At Risk Summary
ICS 232a	ACP Site Index
ICS 233	Action Tracker Report
ICS 234	Work Analysis Matrix

## Agency Notification Form

**NOTE: Initial notification must not be delayed pending collection of all information.**

INFORMATION ON DISCHARGE					
<b>INVOLVED PARTIES</b>					
(A) Reporting Party	(B) Suspected Responsible Party				
Name:	Name:				
Phone(s):	Phone(s):				
Facility: KM Liquids Terminals LLC	Facility:				
Address:	Address:				
City:	City:				
State: Texas	State:				
Zip:	Zip:				
Were Materials Released (Y/N)	Calling for Responsible Party				
<b>INCIDENT DESCRIPTION</b>					
<b>Source and/or Cause of Incident</b>					
<b>Incident Discovered</b>	<b>EHS Notified:</b>				
Date: _____ Time: _____	Date: _____ Time: _____				
<b>Incident Address/Location</b>					
Distance from City:	TNRCC Waste # _____; Air # _____; EPA ID # _____				
Storage Tank Container Type Above Ground (Y?N)? Below Ground (Y/N)? Unknown	Tank Capacity: Facility Capacity:				
Latitude Degrees:	Mile Post or River Mile				
Longitude Degrees:					
<b>Materials</b>					
Released Quantity/Unit of Measure: Quantity in Water:	Released Material RQ per _____ : Y/N				
<b>WEATHER CONDITIONS:</b>					
<b>REMEDIAL ACTION:</b>					
Actions Taken to Correct or Mitigate the Incident					
<b>IMPACT</b>					
Number of Injuries	Number of Facilities				
Were there evacuations (Y/N)					
Was there any damage (Y/N)?	Damage in Dollars: _____ NOTE: _____				
<b>CALLER NOTIFICATIONS</b>					
<b>Footnote:</b> 1. Initial Notifications should be made within 15 minutes to NRC, SERC, USCG, & ERL 2. Notification within 24 hours to TCEQ & HCPHES 3. Only if it affects the community 4. Incidents involving DOT Pipelines (Determine reporting requirement using DOT Flow Chart) Notifications within 2 hrs.					
Agency: NRC	SERC	USCG	LEPC	HCPHES	ERL
Phone #: 800-424-8802	800-832-8824	713-671-5100	713-674-5311	713-920-2831	
Case #: _____	_____	_____	_____	_____	_____
Contact: _____	_____	_____	_____	_____	_____
Time: _____	_____	_____	_____	_____	_____
Agency: DOT	TXRCC				
Phone #: 800-424-8802	512-463-6788				
Case #: _____	_____	_____	_____	_____	_____
Contact: _____	_____	_____	_____	_____	_____
Time: _____	_____	_____	_____	_____	_____

## IAP Cover Sheet

**Purpose:** The Incident Action Plan (IAP) Cover Sheet documents the signature approval by Unified Command to implement the Incident Action Plan and may serve as a table of contents for the Incident Action Plan.

**Preparation:** The Planning Section Chief and/or the Situation Unit Leader, while assembling the Incident Action Plan, complete The Incident Action Plan Cover Sheet.

**Distribution:** Sufficient copies of the Incident Action Plan will be reproduced and to all supervisory personnel at the Section, Branch, Division/Group, and Unit leader levels.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Incident Location	Enter the location of the incident
3.	Date/Time Prepared	Enter the date and time prepared. (Military time)
4.	Operational Period	Enter the date and time interval for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
5.	Approved By	Signature line for Unified Command (Federal, State, Local, and Responsible Party).
6.	Incident Notes	Enter a brief summary of the incident.
7.	Operational Period Notes	Enter a brief summary of activities for the operational period

The IAP should include the following forms:

- Incident Action Plan Cover Sheet
- Weather Report
- ICS-201 Incident Briefing (Optional)
- ICS-202 Response Objectives
- ICS-203 Organization Assignment List
- ICS-204 Division Assignment List
- ICS-205 Communications Plan
- ICS-206 Medical Plan
- Incident Map(s) (present situation, future trajectories, and plans)
- ICS-208 Site Safety Plan (As required)
- ICS-209 Incident Status Summary
- ICS-220 Air Operations Plan
- ICS-230 Meeting Schedule
- ICS-232 Resources at Risk Summary
- Other forms/sheets as needed for tactical operations

Integrated  
Contingency  
Plan



Section IV:  
Forms

### IAP Cover Sheet

Incident Name:	Prepared By:	at:	:
Period: / / : to / / :	Version Name:		

Approved  
by:

FOSC

SOSC

RPIC

## Incident Action Plan

IAP Cover Sheet

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### General Incident Information Report (Annex 1 Tab A)

**Purpose:** The General Incident Information report provides the Incident Commander (and the Command and General Staff assuming command of the incident) with basic information regarding the incident situation and conditions.

**Preparation:** The responder receiving the first call reporting the incident prepares the General Incident Information Report. The Situation Unit makes subsequent updates to the form.

**Distribution:** The initial form will be given to the Incident Commander. When updated, the Planning Section Chief will duplicate the General Incident Information Report and post a copy at the Situation Display in the Command Post. Single copies may then be distributed to the Command Staff, Section Chiefs, and Joint Information Center.

Integrated  
Contingency  
PlanSection IV:  
Forms

### General Incident Report

<b>Incident:</b>	<b>Incident Date/Time:</b>
<b>Person Reporting Incident:</b>	<b>Prepared:</b> _____ <b>at:</b> _____ :
<b>Person Contact Number(s):</b>	<b>Version:</b>
<b>Facility Name:</b>	
<b>Type of Facility:</b>	
<b>Number of People at Facility:</b>	
<b>Contact:</b>	<b>Phone:</b>
<b>Owner:</b>	<b>Phone:</b>
<b>Operator:</b>	<b>Phone:</b>

### Facility Specific Information

<b>Type(s) of Product:</b>
<b>Equipment Involved:</b>

### Incident Information

<b>Incident Location:</b>	<b>Latitude:</b>	<b>Longitude:</b>
<b>Type of Casualty:</b>		
<b>Total Capacity of Common Container:</b>	<b>Potential for Additional Spillage:</b>	
<b>Material(s) Spilled:</b>	<b>API Gravity:</b>	
<b>Estimated Quantity Spilled:</b>	<b>Classification:</b>	
<b>Source Secured?: Yes No</b>	<b>If not, Estimated Spill Rate:</b>	

<b>Notes:</b>
---------------

### Incident Status

<b>Injuries/Casualties:</b>		
<b>Fire: Yes No</b>	<b>Fire Status:</b>	<b>Fire Assistance:</b>

<b>Notes:</b>
---------------

General Incident Report (Facility)

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## Notification Report

**Purpose:** The Notification Report is used to document each Government and Non-Government Organizations (NGO) notified and briefed on the incident.

**Preparation:** The company representative or the Liaison Officer in the Command Staff prepares the Notification Report.

**Distribution:** The Notification Report is a critical part of the incident briefing and the Incident Action Plan. When updated, the Situation Unit Leader will post/update the Situation Display in the Command Post.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Version Name	
3.	Period	Enter the Operational Period date and time.
4.	Prepared By	Enter name and title of the person preparing the form and date/time (Military Time).
5.	Organization Notified	Enter the name of the Organization notified.
6.	Phone Number	Enter the phone number of the Organization notified.
7.	Date/Time	Enter the date and time the notification is made.
8.	Person Contacted	Enter the name of the person notified.
9.	Person Contacted Email	Enter the email address of the person notified.
10.	Case Number	Enter the Case Number where applicable (e.g. NRC Case Number).
11.	Follow Up	Circle Yes or No if follow up is required.
12.	ETA On Site	Enter the estimated time of arrival of the organization if applicable.
13.	Notified By	Enter the name of the person making the notification.



**Notification Status Report**

Incident: _____	Prepared By: _____ at: _____
Period: ___/___/___ : ___ to ___/___/___ : ___	Version Name: _____

Organization Notified	Phone	Date /Time Notified	Person Contacted	Person Contacted Email	Case No.	Follow Up	ETA On Site	Notified By
Notes: _____								
Notes: _____								
Notes: _____								
Notes: _____								
Notes: _____								
Notes: _____								
Notes: _____								
Notes: _____								

## Weather Report

**Purpose:** The Weather Report form provides the Incident Commander (the Command and General Staffs assuming command of the incident) with basic information regarding current incident specific weather conditions, forecast for the next twenty-four (24) and forty-eight (48) hour period. Personnel or responders at the incident location should provide real time current weather data. It also serves as a permanent record of the initial response to the incident.

**Preparation:** The Planning Section prepares the briefing from data gathered from NOAA's National Weather Service and other sources. The information will be provided to the Situation Unit Leader so he may maintain the information on his static display.

**Distribution:** After the initial briefing of the Incident Commander and General Staff members, the Incident Briefing is duplicated and distributed to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Planning and Logistics Section Unit Leaders.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Date/Time Prepared	Enter date & time prepared (e.g. 09/17/1996 1500hrs.).
3.	Operational Period	Enter the date and time interval for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Prepared By	Enter the name of the person completing the form.
5.	Wind Speed	Enter wind speed. (Indicate either knots or mph)
6.	Wind Direction	Enter the direction from which the wind is blowing.
7.	Air Temperature	Enter on the air temperature in °F.
8.	Barometric Pressure	Enter current barometric pressure in inches.
9.	Humidity	Enter current humidity in percent.
10.	Visibility	Enter visibility in miles. (Use data from surveillance aircraft)
11.	Ceiling	Enter ceiling in feet. (Use data from surveillance aircraft)
12.	High Tide (time)	Enter time for next high tide for current operational period (24 hr).
13.	High Tide (height)	Enter height of next high tide for current operational period (feet).
14.	Sunrise	Enter time of sunrise for current operational period.
15.	Wave Height (feet)	Enter the wave height in feet (e.g., 1-3 feet).
16.	Wave Direction	Enter the direction, which the waves are moving.
17.	Swell Height	Enter the swell height. (feet)
18.	Swell Interval	Enter the swell interval (seconds)
19.	Current Speed	Enter the speed of water current (Indicate either kts or mph).
20.	Current Direction	Enter the direction which the water current is moving.
21.	Water Temperature	Enter the water temperature in °F.
22.	Low Tide (time)	Enter time for next low tide for current operational period (24 hr).
23.	Low Tide (height)	Enter height of next low tide for current operational period (feet).
24.	Sunset	Enter time of sunset for current operational period.
25.	Notes	Enter notes (e.g. thunderstorm activity, wind shift, front movement) about weather data current operational period.
<b>24 Hour Forecast</b>		
26.	Forecast	Enter forecast (e.g. thunderstorm activity, expected temperature, wind shift, front movement) for forecast period.
<b>48 Hour Forecast</b>		
27.	Forecast	Enter forecast (e.g. thunderstorm activity, expected temperature, wind shift, front movement) for forecast period.

### Weather Report

<b>Incident:</b>	<b>Prepared:</b> _____ <b>at:</b> _____
<b>Period:</b> ___ / ___ / ___ : ___ to ___ / ___ / ___ : ___	<b>Version Name:</b> _____

### Present Conditions

Wind Speed:	Wave Height:
Wind Direction From	Wave Direction:
Air Temperature:	Swell Height:
Barometric Pressure:	Swell Interval:
Humidity:	Current Speed:
Visibility:	Current Direction Toward:
Ceiling:	Water Temperature:
Next High Tide (Time):	Next Low Tide (Time):
Next High Tide (Height):	Next Low Tide (Height):
Sunrise:	Sunset:

Notes:

### 24 Hour Forecast

Sunrise:	Sunset:
High Tide (Time):	High Tide (Time):
High Tide (Height):	High Tide (Height):
Low Tide (Time):	Low Tide (Time):
Low Tide (Height):	Low Tide (Height):

Notes:

### 48 Hour Forecast

Sunrise:	Sunset:
High Tide (Time):	High Tide (Time):
High Tide (Height):	High Tide (Height):
Low Tide (Time):	Low Tide (Time):
Low Tide (Height):	Low Tide (Height):

Notes:

## Incident Briefing (ICS FORM 201)

**Purpose:** The Incident Briefing form provides the Incident Commander, the Command Staff and General Staff assuming command of the incident with basic information regarding the incident situation and the resources allocated to the incident. It also serves as a permanent record of the initial response to the incident.

**Preparation:** The Initial Incident Commander prepares the briefing form for presentation to the relieving Incident Commander along with a more detailed oral briefing.

**Distribution:** After the initial briefing of the Incident Commander and General Staff members, the Incident Briefing is duplicated and distributed to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Planning and Logistics Section Unit Leaders. The sketch map and summary of current action portions of the briefing form are given to the Situation Unit while the Current Organization and Resources Summary portion are given to the Resources Unit.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter name of person completing form and the date & time prepared (e.g. 09/17/1996 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	ICS 201-1 Map Sketch	Show the Areas of Operations, the incident site, overflight results, trajectories, impacted shorelines, or other graphics depicting situation and response status on a sketch or attached map.
6.	ICS 201-2 Summary of Current Actions	Brief paragraph on: <ol style="list-style-type: none"> <li>1. What, when, and how the incident occurred</li> <li>2. Surveillance &amp; weather information</li> <li>3. Overall initial response objectives</li> <li>4. Timeline of major events or actions that have taken place.</li> </ol>
7.	ICS 201-3 Current Organization	Enter on the organization chart the names of the individuals assigned to each position. Modify the chart as necessary.
8.	ICS 201-4 Resources Summary	Track the following information about the resources allocated to the incident. <ol style="list-style-type: none"> <li>1. Name of supplier providing the resource</li> <li>2. Resource Type (e.g. fire truck, boom, skimmer)</li> <li>3. Description (e.g. size, name, capacity)</li> <li>4. Quantity or amount of resource(s)</li> <li>5. Area of Operation – destination of the resource (e.g. staging area, division, group, task force)</li> <li>6. Status of each resource (e.g. Standby, En-route with Estimated time of arrival, At Staging, Assigned, &amp; Out of Service).</li> </ol>

Integrated  
Contingency  
Plan



**KINDER MORGAN**  
INC.



Section IV:  
Forms

### ICS 201-1 - Incident Briefing Map/Sketch

Incident:	Prepared By:	at
Period: __/__/__:__ to __/__/__:__	Version Name:	

Current Situation:

ICS 201-1 Incident Briefing Map/Sketch

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**ICS 201-2 - Summary of Current Actions**

<b>Incident:</b>	<b>Prepared By:</b>	<b>at:</b>
<b>Period:</b> ___ / ___ / ___ : ___ to ___ / ___ / ___ : ___	<b>Version Name:</b>	

**Incident Information**

--

**Initial Incident Objectives**


**Summary of Current Actions**

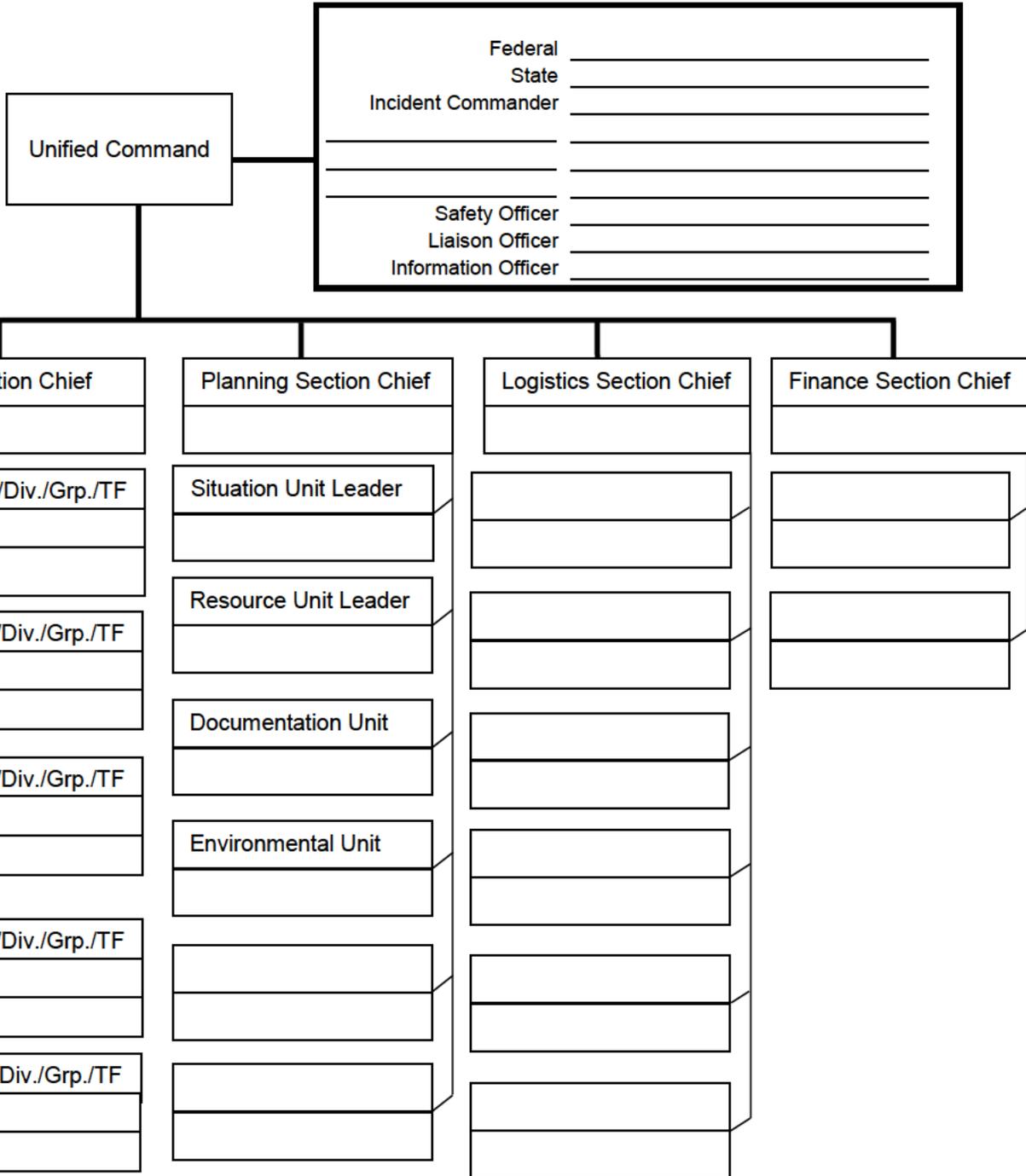
Date/Time	Action/Note

--



**ICS 201-3 - Current Organization**

Incident: _____	Prepared By: _____ at: _____
Period: ___/___/___ : ___ to ___/___/___ :	Version Name: _____





## ICS 201-5 Site Safety and Control Analysis

<b>Incident:</b>	<b>Prepared By:</b>	<b>at:</b>
<b>Period:</b>	<b>Version Name:</b>	
<b>Site Control</b>		
1. Is Site Control set up? <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Is there an on-scene command post? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, where?	
3. Have all personnel been accounted for? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	Injuries: Unaccounted:	Fatalities: Trapped:
4. Are observers involved, or rescue attempts planned? Observers: <input type="checkbox"/> Yes <input type="checkbox"/> No Rescuers: <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Are decon areas setup? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, where?	
<b>Hazard identification, immediate signs of: (if yes, explain in Remarks)</b>		
1. Electrical line(s) down or overhead? <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Unidentified liquid or solid products visible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Wind direction across incident: <input type="checkbox"/> Towards your position Wind Speed: <input type="checkbox"/> Away from your position	4. Is a safe approach possible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Odors or smells? <input type="checkbox"/> Yes <input type="checkbox"/> No	6. Vapors visible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Holes, ditches, fast water, cliffs, etc. nearby? <input type="checkbox"/> Yes <input type="checkbox"/> No	8. Fire, sparks, sources of ignition nearby? <input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Is local traffic a potential problem? <input type="checkbox"/> Yes <input type="checkbox"/> No	10. Product placards, color codes visible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
11. Other Hazards? <input type="checkbox"/> Yes <input type="checkbox"/> No	12. As you approach the scene from the upwind side, do you note a change in the status of any of the above? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Hazard Mitigation: have you determined the necessity for any</b>		
1. Entry Objectives:		
2. Warning sign(s), barriers, color codes in place? <input type="checkbox"/> Yes <input type="checkbox"/> No		
3. Hazardous material being monitored? <input type="checkbox"/> Yes <input type="checkbox"/> No 3a. Sampling Equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Personal exposure monitoring:		
4. Protective gear / level: 4b. Respirators: 4d. Boots:	4a. Gloves: 4c. Clothing: 4e. Chemical cartridge change frequency:	
5. Decon 5a. Instructions: 5b. Decon equipment and materials:		
6. Emergency escape route established? <input type="checkbox"/> Yes <input type="checkbox"/> No Route?		
7. Field responders briefed on hazards? <input type="checkbox"/> Yes <input type="checkbox"/> No		
8. Remarks:		
<b>ICS 201-5 Site Safety and Control Analysis</b>		<b>© 1997-2013 TRG/dbSoft, Inc.</b>

### Response Objectives Form (ICS FORM 202)

**Purpose:** The Response Objectives Form describes the basic incident strategy, control objectives, and safety considerations for use during the next operational period.

**Preparation:** The Response Objectives Form is completed by the Planning Section Chief following each formal Planning Meeting conducted in preparation for the Incident Action Plan.

**Distribution:** The Response Objectives Form will be reproduced with the IAP and given to all supervisory personnel at the Section, Branch, Division/Group and Unit leader levels.

NOTE: ICS 202, Response Objectives, serves as part of the IAP, which is not considered complete until attachments are included.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Version Name	
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Prepared By	Enter the name of the Planning Section Chief or person completing the form and the date & time prepared (e.g. 09/17/1996 1500hrs).
5.	Overall Incident Objective(s)	What you plan to do in priority order. Enter short, clear and concise statements of the objectives for managing the response. The overall incident objectives usually apply for the duration of the incident. (e.g. Contain and Recover Spilled Material)
6.	Tactical Objectives for specific Operational Period	How you plan to accomplish objectives. Enter short, clear and concise statements of the objectives for the incident response for this operational period. Include alternatives. (e.g. Deploy containment boom at appropriate collection areas)
7.	Safety Messages for the specified Operational Period	Enter information such as known safety hazards and specific precautions to be observed during this operational period. If available, a safety message should be referenced and attached.

## ICS 202 - General Response Objectives

<b>Incident:</b>	<b>Prepared By:</b>	<b>at:</b>
<b>Period:</b> ___ / ___ / ___ : ___ to ___ / ___ / ___ : ___	<b>Version Name:</b>	

## Overall and Strategic Objectives

	Assigned to:	Status
<b>1. Ensure the Safety of Citizens and Response Personnel</b>		
<input type="checkbox"/> 1a. Identify hazard(s) of spilled material		
<input type="checkbox"/> 1b. Establish site control (hot zone, warm zone, cold zone, & security)		
<input type="checkbox"/> 1c. Consider evacuations if needed		
<input type="checkbox"/> 1d. Establish vessel and/or aircraft restrictions		
<input type="checkbox"/> 1e. Monitor air in impacted areas		
<input type="checkbox"/> 1f. Develop site safety plan for personnel & ensure safety briefings are conducted		
<b>2. Control the Source of the Spill</b>		
<input type="checkbox"/> 2a. Complete emergency shutdown		
<input type="checkbox"/> 2b. Conduct firefighting		
<input type="checkbox"/> 2c. Initiate temporary repairs		
<input type="checkbox"/> 2d. Transfer and/or lighter product		
<input type="checkbox"/> 2e. Conduct salvage operations, as necessary		
<b>3. Manage a Coordinated Response Effort</b>		
<input type="checkbox"/> 3a. Complete or confirm notifications		
<input type="checkbox"/> 3b. Establish a unified command organization and facilities (command post, etc.)		
<input type="checkbox"/> 3c. Ensure local and tribal officials are included in response organizations		
<input type="checkbox"/> 3d. Initiate spill response Incident Action Plans (IAP)		
<input type="checkbox"/> 3e. Ensure mobilization & tracking of resources & account for personnel & equip		
<input type="checkbox"/> 3f. Complete documentation		
<b>4. Maximize Protection of Environmentally-Sensitive Areas</b>		
<input type="checkbox"/> 4a. Implement pre-designated response strategies		
<input type="checkbox"/> 4b. Identify resources at risk in spill vicinity		
<input type="checkbox"/> 4c. Track oil movement and develop spill trajectories		
<input type="checkbox"/> 4d. Conduct visual assessments (e.g., overflights)		
<input type="checkbox"/> 4e. Development/implement appropriate protection tactics		

ICS 202 General Response Objectives

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## ICS 202 - General Response Objectives

Incident:

Prepared By: \_\_\_\_\_ at: \_\_\_\_\_

Period: \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_ to \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_

Version Name: \_\_\_\_\_

## Overall and Strategic Objectives

	Assigned to:	Status
<b>5. Contain and Recover Spilled Material</b>		
<input type="checkbox"/> 5a. Deploy containment boom at the spill site & conduct open-water skimming		
<input type="checkbox"/> 5b. Deploy containment boom at appropriate collection areas		
<input type="checkbox"/> 5c. Evaluate time-sensitive response technology (e.g., dispersants, in-situ burning)		
<input type="checkbox"/> 5d. Develop disposal plan		
<input type="checkbox"/>		
<b>6. Recover and Rehabilitate Injured Wildlife</b>		
<input type="checkbox"/> 6a. Establish oiled wildlife reporting hotline		
<input type="checkbox"/> 6b. Conduct injured wildlife search and rescue operations		
<input type="checkbox"/> 6c. Setup primary care unit for injured wildlife		
<input type="checkbox"/> 6d. Operate wildlife rehabilitation center		
<input type="checkbox"/> 6e. Initiate citizen volunteer effort for oiled bird rehabilitation		
<b>7. Remove Oil from Impacted Areas</b>		
<input type="checkbox"/> 7a. Conduct appropriate shoreline cleanup efforts		
<input type="checkbox"/> 7b. Clean oiled structures (piers, docks, etc.)		
<input type="checkbox"/> 7c. Clean oiled vessels		
<b>8. Minimize Economic Impacts</b>		
<input type="checkbox"/> 8a. Consider tourism, vessel movements, & local economic impacts		
<input type="checkbox"/> 8b. Protect public and private assets, as resources permit		
<input type="checkbox"/> 8c. Establish damage claims process		
<input type="checkbox"/>		
<b>9. Keep Stakeholders and Public Informed of Response Activities</b>		
<input type="checkbox"/> 9a. Provide forum to obtain stakeholder input and concerns		
<input type="checkbox"/> 9b. Provide stakeholders with details of response actions		
<input type="checkbox"/> 9c. Identify stakeholder concerns and issues, and address as practical		
<input type="checkbox"/> 9d. Provide timely safety announcements		
<input type="checkbox"/> 9e. Establish a Joint Information Center (JIC)		
<input type="checkbox"/> 9f. Conduct regular news briefings		
<input type="checkbox"/> 9g. Manage news media access to spill response activities		
<input type="checkbox"/> 9h. Conduct public meetings, as appropriate		

ICS 202 General Response  
Objectives

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### Organization Assignment List (ICS FORM 203)

**Purpose:** The Organization Assignment List provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit. It is used to complete the Incident Organization Chart (ICS Form 207), which is posted on the Incident Command Post display.

**Preparation:** The list is prepared and maintained by the Resources Unit under the direction of the Planning Section chief.

**Distribution:** The Organization Assignment List is duplicated and included in the Incident Action Plan.

**NOTE:** An Organization Assignment List may be completed any time the number of personnel assigned to the incident increase or decrease or a change in assignments occurs.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Resources Unit member or person preparing the form and the date & time prepared (e.g. 09/17/1996 1500hrs).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
6.	Title	
7.	Name	Name of person staffing the position
	Phone, Fax, Radio, Other	List the numbers where the person staffing can be reached at or information can be sent to.

### ICS 203 - Organization Assignment

<b>Incident:</b>		<b>Prepared By:</b>		<b>at:</b>	
<b>Period:</b> /    /    :    to		<b>Version Name:</b>			
<b>Incident</b>				<b>Operations</b>	
Incident Commander				Operations Section Chief	
				Operations Section Deputy	
Dep. Incident Commander				Staging Area Manager	
Safety Officer					
Public Information Officer					
Liaison Officer					
<b>Agency/Organiza</b>					
<b>Planning Section</b>					
Planning Section Chief					
Planning Section Deputy					
Resource Unit Leader					
Situation Unit Leader					
Documentation Unit Leader					
Environmental Unit Leader					
Documentation Unit Leader					
<b>Logistics Section</b>					
Logistics Section Chief					
Logistics Section Deputy					
Support Branch Director				<b>Finance Section</b>	
Support Unit Leader				Finance Section Chief	
Facilities Unit Leader				Finance Section Deputy	
Ground Support Unit				Time Unit Leader	
Communications Unit				Procurement Unit Leader	
Medical Unit Leader				Comp./Claims Unit Leader	
Food Support Unit Leader				Cost Unit Leader	

**ICS            203**  
**Organization**  
**Assignment**

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### Assignment List (ICS FORM 204)

**Purpose:** The Assignment List(s) is used to inform Operations Section personnel of Incident assignments. Once the Incident Command and General Staff agree to the assignments, the assignment information is given to the appropriate Units/Divisions/Groups.

**Preparation:** The Operations & Planning Staff will prepare the Assignment List(s) using guidance from the Response Objectives (ICS Form 202), the Operational Planning Worksheet (ICS Form 215) and Resource Unit Leader. The Planning Section Chief will approve the Assignments List. When approved, it is included in the Incident Action Plan.

**Distribution:** The Assignment List is duplicated and included in the Incident Action Plan. In some cases, assignments may be communicated via radio.

NOTE: A separate sheet is used for each Division or Group.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Branch	Enter the Branch name.
2.	Division/Group	Enter the Division/Group name.
3.	Incident	Enter the name assigned to the incident.
4.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
5.	Area Map (optional)	
6.	Tactical Objective	Enter a brief statement of the tactical objective to accomplish for the specified area.
7.	Description of Work	Enter a brief description of work to be accomplished to meet the objective specified for the area.
8.	Location of Work	Enter directions how to access the site or work area.
9.	Safety Message	Enter information such as known safety hazards and specific precautions to be observed in the area.
10.	Environmental Considerations	Enter any environmental issues or areas to consider.
11.	Operational Personnel, Phone, Radio, & Pager	Enter the operational personnel in charge of the area along with contact information for each.
12.	Equipment Resources	Enter the resource information for each resource assigned to the area or site such as supplier, resource type, description, quantity, and status.
13.	Manpower Resources	Enter the manpower assigned to the area or site such as supplier, resource type, description, quantity, and status.
14.	Prepared By	Enter the name of the Resources Unit Member or person completing the form.
15.	Approved By	Enter the name of the person approving the form (usually the Planning Section Chief).
16.	Date/Time Approved	Enter the date/time the form was approved.





### ICS 204 - Assignment List

<b>Incident:</b>	<b>Branch:</b>
<b>Period:</b> ___ / ___ / ___ : ___ to ___ / ___ / ___ : ___	<b>Division:</b>
<b>Prepared by Signature:</b>	<b>Task Force:</b>
<b>Approved by Signature:</b>	<b>Group:</b>

#### Tactical Objective

#### Description of Work

#### Location of Work

#### Work Assignment Special Instructions

#### Special Equipment/Supplies Needed for Assignme

#### Special Environmental Considerations

#### Special Site-Specific Safety Considerations

#### Shoreline Cleanup Assessment Team (SCAT) Considerations

<b>Prepared by (Resource Unit Leader):</b>	<b>Approved by (Planning Section Chief):</b>	<b>Date/Time Approved:</b>
--	--	----------------------------

### Communications Plan (ICS form 205)

**Purpose:** The Communications Plan provides, in one location, information on all phone & radio frequency assignments for each operational period. Information from the Communications Plan on phone and frequency assignments is normally placed on the appropriate Assignment List (ICS Form 204).

**Preparation:** The Communications Plan is prepared by the Communications Unit Leader and given to the Planning Section Chief.

**Distribution:** The Communications Plan is duplicated and given to all recipients of the Incident Action Plan including the Incident Communications Center. Information from the plan is normally placed on the appropriate Assignment List(s) (ICS Form 204).

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Communications Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Operational Period	Enter the date and time interval for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Phone Listing	Enter the phone numbers assigned to each person to be used on the incident.
	Name	Enter the name of the person
	Phone, Fax, & Radio	Enter the phone, fax, and radio number assigned to each person
	Radio Utilization	Enter the radio channel/frequency assigned to each person, place, or resource used on the incident.
6.	System	Enter the name of the communication system
	Channel	Enter the radio channel being utilized
	Function	Enter what function the frequency is being used for
	Frequency	Enter the frequency being utilized
	Assignment	Enter the communication system assignment
	Notes	Enter any notes or comments about the system





### Medical Plan (ICS FORM 206)

**Purpose:** The Medical Plan provides information on incident medical aid stations, transportation services, hospitals and medical emergency procedures.

**Preparation:** The Medical Plan is prepared by the Medical Unit Leader and reviewed by the Safety Officer.

**Distribution:** The Medical Plan may be an attachment to the Response Objectives Form (ICS 202), or information from the plan pertaining to incident medical aid stations and medical emergency procedures may be taken from the plan and placed on the Assignment list(s) (ICS Form 204).

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Medical Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Operational Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	First Aid Stations	Enter name, location, and contact information for the incident medical first aid stations (e.g. Staging Area, Camp Ground) and indicate if paramedics are located at the site by entering "Yes" or "No" in the Paramedics (EMT) field.
6.	Transportation	
	Ground Ambulance Services	List name and address of ambulance services (e.g. Shaeffer, 4358 Brown Parkway, Corona). Provide phone numbers and indicate if ambulance company has paramedics by entering "Yes" or "No" in the Paramedics (EMT) field.
7.	Air Ambulance Services	List name and address of ambulance services (e.g. Shaeffer, 4358 Brown Parkway, Corona). Provide phone numbers and indicate if ambulance company has paramedics or doctors by entering "Yes" or "No" in the Doctor and Paramedics (EMT) field.
8.	Hospitals	List hospitals, which will serve this incident. Hospital name, address, phone number, radio and enter "Yes" or "No" to indicate whether the hospital has a burn center and/or helipad.
9.	Medical Emergency Procedures	Note any special emergency instructions for use by incident personnel.



**ICS 206 - Medical Plan**

Incident: _____	Prepared By: _____ at: _____
Period: ___ / ___ / ___ : ___ to ___ / ___ / ___ :	Version Name: _____

**First Aid Stations**

Name	Location	EMT (On-Site)	Phone	Radio

**Transportation (Ground and/or Ambulance Services)**

Name	Location	EMT	Phone	Radio

**Air Ambulances**

Name	Location	Doctor/Nurse	EMT	Phone	Radio

**Hospitals**

Name	Location	EMT	Phone	Radio

**Special Medical Emergency Procedures**



## Incident Organization Chart (ICS FORM 207)

**Purpose:** The Incident Organization Chart is used to indicate what ICS organizational elements are currently activated and the names of personnel staffing each element. The attached chart is an example of the kind of Organizational Chart used in the ICS. Personnel responsible for managing organizational positions would be listed in each box as appropriate.

**Preparation:** The organization chart is prepared by the Resources Unit and posted along with other displays at the Incident Command Post. A chart is completed for each operational period and updated when organizational changes occur.

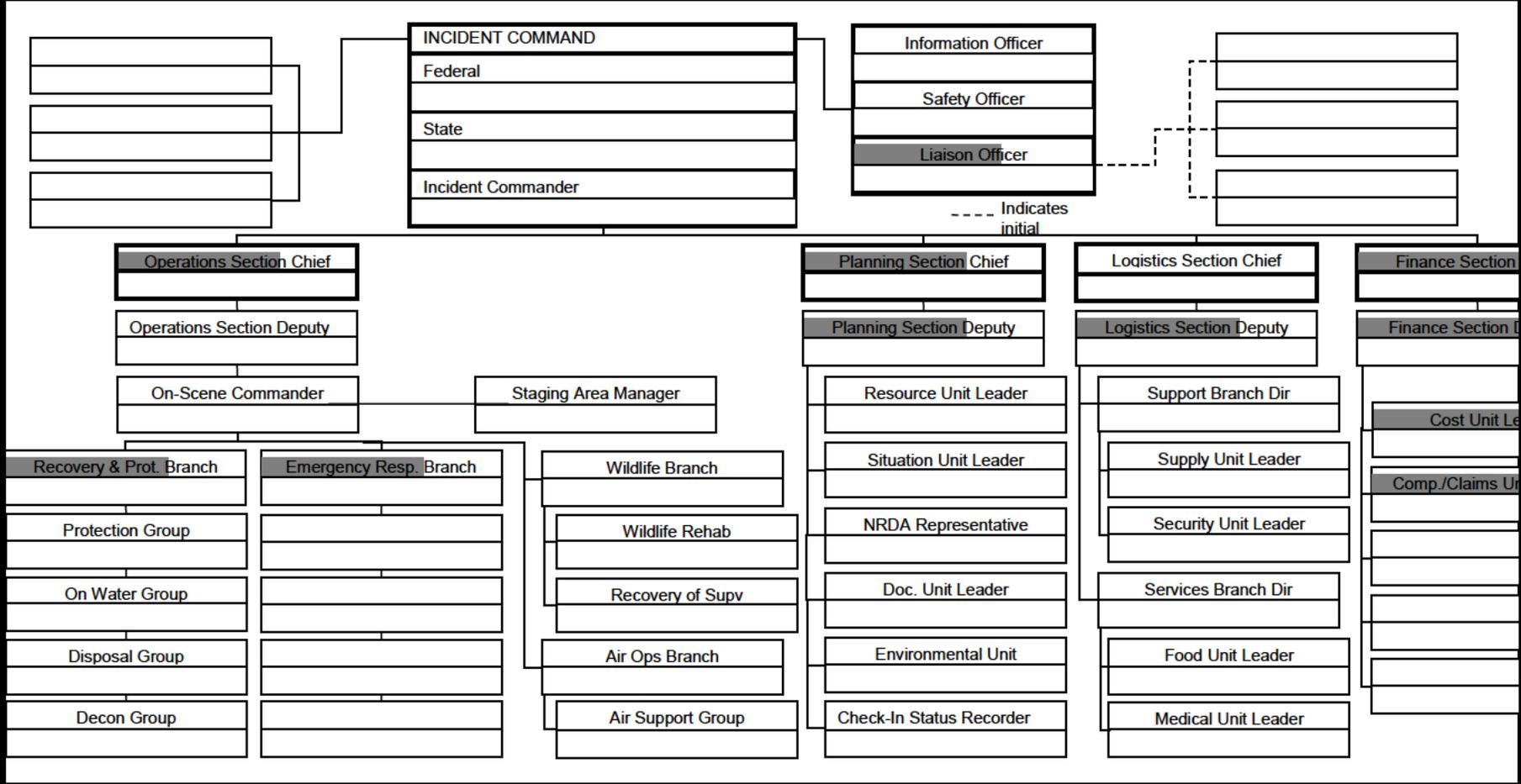
**Distribution:** When completed, the chart is posted on the display board located at the Incident Command Post.

Wall Size Chart. The ICS Form 207 WS is a large chart that is primarily used to post on the command post display board for better visibility.



**ICS 207 Organization Chart**

<b>Incident:</b> _____	<b>Prepared By:</b> _____ <b>at:</b> __: __
<b>Period:</b> __/__/__ __: __ to __/__/__ __: __	<b>Version Name:</b> _____





## Site Safety and Health Plan (ICS FORM 208)

**Purpose:** The Site Safety and Health Plan (SSHP) is a site-specific document required by state and federal OSHA regulations and specified in the Area Contingency Plan. The SSHP, at minimum addresses, includes, or contains the following elements: health and safety hazard analysis for each site task or operation, comprehensive operations work plan, personnel training requirements, PPE selection criteria, site-specific medical monitoring requirements, air monitoring plan, site control measures, confined space entry procedures (if needed), pre-entry briefings (tailgate meetings), pre-operations commencement health and safety briefings for all incident participants, and quality assurance of SSHP effectiveness,

**Preparation:** The Safety Officer prepares the SSHP with input from the Industrial Hygienist and Medical Unit Leader.

**Distribution:** The SSHP is distributed to the Operations Section Chief for implementation and promulgation to all operational groups and responding agencies. A copy is provided to the Incident Commander, the Command Staff, and the General Staff.



**ICS 208 - Site Safety Plan**

Incident: \_\_\_\_\_ Prepared by: \_\_\_\_\_ at: \_\_\_\_\_

Period: \_\_\_\_/\_\_\_\_/\_\_\_\_ : to \_\_\_\_/\_\_\_\_/\_\_\_\_ Version Name: \_\_\_\_\_

Revision: \_\_\_\_\_

Applies To Site: \_\_\_\_\_

Products: (Attach MSDS) \_\_\_\_\_

**SITE CHARACTERIZATION**

Water: \_\_\_\_\_  
 Wave Height: \_\_\_\_\_ Wave Direction: \_\_\_\_\_  
 Current Speed: \_\_\_\_\_ Current Direction: \_\_\_\_\_  
 Land: \_\_\_\_\_ Use: \_\_\_\_\_  
 Weather: \_\_\_\_\_ Temp: \_\_\_\_\_  
 Wind Speed: \_\_\_\_\_ Wind Direction: \_\_\_\_\_

**Pathways for Dispersion:**

**Site Hazards**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Boat Safety           | <input type="checkbox"/> Fire, explosion, in-situ burning | <input type="checkbox"/> Pump hose               |
| <input type="checkbox"/> Chemical hazards      | <input type="checkbox"/> Heat stress                      | <input type="checkbox"/> Slips, trips, and falls |
| <input type="checkbox"/> Cold Stress           | <input type="checkbox"/> Helicopter operations            | <input type="checkbox"/> Steam and hot water     |
| <input type="checkbox"/> Confined Spaces       | <input type="checkbox"/> Lifting                          | <input type="checkbox"/> Trenching/Excavation    |
| <input type="checkbox"/> Drum handling         | <input type="checkbox"/> Motor vehicles                   | <input type="checkbox"/> UV Radiation            |
| <input type="checkbox"/> Equipment operations  | <input type="checkbox"/> Noise                            | <input type="checkbox"/> Visibility              |
| <input type="checkbox"/> Electrical operations | <input type="checkbox"/> Overhead/buried utilities        | <input type="checkbox"/> Weather                 |
| <input type="checkbox"/> Fatigue               | <input type="checkbox"/> Plants/wildlife                  | <input type="checkbox"/> Work near water         |
| <input type="checkbox"/> Other                 | <input type="checkbox"/> Other                            | <input type="checkbox"/> Other                   |

**Air Monitoring**

%O<sub>2</sub>: \_\_\_\_\_ %LEL: \_\_\_\_\_ ppm Benzene: \_\_\_\_\_  
 ppm H<sub>2</sub>S: \_\_\_\_\_  Other (Specify): \_\_\_\_\_

**CONTROL MEASURES**

**Engineering Controls**

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Source of release secured | <input type="checkbox"/> Valve(s) closed    | <input type="checkbox"/> Energy source locked/tagged out |
| <input type="checkbox"/> Site secured              | <input type="checkbox"/> Facility shut down | <input type="checkbox"/> Other _____                     |

**Personal Protective Equipment**

- |  |  |
|--|--|
| <input type="checkbox"/> Impervious suit           | <input type="checkbox"/> Respirators         |
| <input type="checkbox"/> Inner gloves              | <input type="checkbox"/> Eye protection      |
| <input type="checkbox"/> Outer gloves              | <input type="checkbox"/> Personal floatation |
| <input type="checkbox"/> Flame resistance clothing | <input type="checkbox"/> Boots               |
| <input type="checkbox"/> Hard hats                 | <input type="checkbox"/> Other _____         |

**Additional Control Measures**

- |   |   |
|---|---|
| <input type="checkbox"/> Decontamination      | <input type="checkbox"/> Stations established |
| <input type="checkbox"/> Sanitation           | <input type="checkbox"/> Facilities provided  |
| <input type="checkbox"/> Illumination         | <input type="checkbox"/> Facilities provided  |
| <input type="checkbox"/> Medical Surveillance | <input type="checkbox"/> Provided             |

## ICS 208 – Site Safety Plan

<b>Incident:</b> _____	<b>Prepared By:</b> _____ <b>at:</b> _____
------------------------	--

<b>Period:</b> ____ / ____ / ____ : ____ to ____ / ____ / ____ : ____	<b>Version Name:</b> _____
---	----------------------------

**WORK PLAN**

- |                                      |                                       |                                     |                                   |   |
|--------------------------------------|---------------------------------------|-------------------------------------|-----------------------------------|---|
| <input type="checkbox"/> Booming     | <input type="checkbox"/> Skimming     | <input type="checkbox"/> Vac trucks | <input type="checkbox"/> Pumping  | <input type="checkbox"/> Excavation               |
| <input type="checkbox"/> Heavy Equip | <input type="checkbox"/> Sorbent pads | <input type="checkbox"/> Patching   | <input type="checkbox"/> Hot work | <input type="checkbox"/> Appropriate permits used |
| <input type="checkbox"/> Other _____ |                                       |                                     |                                   |   |

**TRAINING**

- 
- Verified site workers trained

**ORGANIZATION**

<u>Title</u>	<u>Name</u>	<u>Telephone/Radio</u>
Incident Commander:	_____	_____
Deputy Incident Commander:	_____	_____
Safety Officer:	_____	_____
Public Affaire Officer:	_____	_____
Other:	_____	_____
_____	_____	_____

**EMERGENCY PLAN**

- |   |       |
|---|-------|
| <input type="checkbox"/> Alarm system:      | _____ |
| <input type="checkbox"/> Evacuation plan:   | _____ |
| <input type="checkbox"/> First aid location | _____ |

**Notified**

- |  |       |              |
|--|-------|--------------|
| <input type="checkbox"/> Hospital                  | _____ | Phone: _____ |
| <input type="checkbox"/> Ambulance                 | _____ | Phone: _____ |
| <input type="checkbox"/> Air ambulance             | _____ | Phone: _____ |
| <input type="checkbox"/> Fire                      | _____ | Phone: _____ |
| <input type="checkbox"/> Law enforcement           | _____ | Phone: _____ |
| <input type="checkbox"/> Emergency response/rescue | _____ | Phone: _____ |

**PRE-ENTRY BRIEFING**

- 
- Initial briefing prepared for each site

**INCLUDING ATTACHMENTS/APPENDICES**Attachments

- Site Map
- Hazardous Substance Information Sheets
- Site Hazards
- Monitoring Program
- Training Program
- Confined Space Entry Procedure
- Safe Work Practices for Boats
- PPE Description
- Decontamination
- Communication and Organization
- Site Emergency Response Plan

Appendices

- Site Safety Program Evaluation Checklist
- Confined Space Entry Checklist
- Heat Stress Consideration
- Cold Stress and Hypothermia Consideration
- First Aid for Bites, Stings, and Poisonous Plant Contact
- Safe Work Practice for Oily Bird Rehabilitation
- SIPI Site Pre-Entry Briefing
- Personnel Tracking System
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### Incident Status Summary (ICS FORM OS-209 – oIL sPILL)

**Purpose:** The Incident Status Summary serves the following purposes:

1. Used by Situation Unit personnel for posting information on Status Boards.
2. When duplicated and provided to Command Staff members, it provides them with basic information for use in planning for the next operational period.
3. It provides information to the Information Officer for preparation of media releases.
4. It summarizes incident information for local and off-site coordination centers.

**Preparation:** The Situation Unit prepares the Incident Status Summary. Resources information should be obtained from the Resources Unit. It is scheduled for presentation to the Planning Section Chief and other General Staff members prior to each Planning Meeting and may be required at more frequent intervals by the Incident Command or Planning Section Chief.

**Distribution:** When completed, the form is duplicated and copies are distributed to the Incident Command and staff, and all Section Chiefs, Planning Section Unit Leaders, and the Joint Information Center. It is also posted on a status board located at the ICP.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Situation Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Spill Status	Enter the estimated amounts in barrels or gallons for each category.
6.	Mass Balance	Enter the estimated amounts in barrels or gallons for each category initially using a trajectory model or the NOAA Adios model. Actual numbers reported by operations should be used when available.
7.	Waste Management	Enter the estimated amounts in barrels or gallons for each category based on report from operations.
8.	Shoreline Impacts	Enter the total miles of shoreline oiled categorized by the degree of oiling(light, medium, heavy).
9.	Wildlife Impacts	Indicate the number of oiled wildlife.
10.	Safety Status	Indicate the number of serious injuries.
11.	Onshore Equipment Resources	Indicate which types are deployed, are expected on scene, and their availability.
12.	Offshore Equipment Resources	Indicate which types are deployed, are expected on scene, and their availability.
13.	Personnel Resources	Indicate the numbers of personnel assigned by agency.
14.	Comments	Use this area for other information



## Change Status (ICS FORM 210)

**Purpose:** The Change Status Form is used by the incident Communications Center Manager to record status change information received on resources assigned to the incident.

**Initiation of Form:** The form is completed by radio/telephone operators who receive status change information from individual resources, Task Forces, Strike Teams, and Division/Group Supervisors. Status information could also be reported by Staging Area and Helibase Managers and fixed-wing facilities.

**Distribution:** The Status Change Form is given to the Resources Unit.

Item	Item Title	Instructions
1.	Designator Name/ID No.	Enter the appropriate designator for the kind of resource. The resource type codes are in ICS 020-1, Resource Listings.
2.	Status	Determine the current status of the resource. If out-of-service status is checked, enter the time when the resource will return to service (ETR).
3.	From/Location/To	Place a checkmark in the FROM column indicating the current location of the resource (where it came from). Also place a check in the TO column indicating the assigned location of the resource. When more than one Division, Staging Area, or Camp is used, identify the specific location (e.g., Division A, Redfern Staging Area, Camp Hood).
4.	Message	Enter any special information provided by the resource or dispatch center such as individual designators of strike teams and task forces.
5.	Time	Enter the time of the status change (24-hour clock).
6.	Resources Process	Resources Process

## ICS 210 Change Status

Incident: \_\_\_\_\_ Prepared By: \_\_\_\_\_ at: \_\_: \_\_:

Period: \_\_/\_\_/\_\_\_\_ \_\_: \_\_ to \_\_/\_\_/\_\_\_\_ \_\_: \_\_ Version Name: \_\_\_\_\_

## Incident Resources to Change

ID	Supplier	Resource Type	Description	Quantity	Size	Current Location	Current Status

## New Status and/or Location

New Status: \_\_\_\_\_  
 New Location: \_\_\_\_\_  
 Date/Time of Change: \_\_\_\_\_

## Notes (Special Instructions, Safety Notes, Hazards, Priorities)

### Check In List (ICS FORM 211)

**Purpose:** Provides written documentation as to when personnel and equipment arrive at various incident locations. Check-in consists of reporting specific information, which is recorded on the Check-In List.

**Initiation of Form:** The Check-in List is initiated at a number of incident locations including: Staging areas, base, camps, helibases, and ICP. Managers at these locations record the information and give it to the Resources Unit as soon as possible.

**Distribution:** Check-In Lists, which are completed by personnel at the various check-in locations, are provided to both the Resources Unit and the Finance Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Check-in Location	Check the appropriate location.
3.	Operational Period	Enter the date and time interval for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Date/Time Prepared	Enter date & time prepared (e.g. 09/17/2000 1500hrs.).
5.	Prepared By	Enter the name of the Resource Unit Leader or person preparing the form.
6.	Name	Enter name (last, first).
7.	Classification	Enter job classification (e.g. spill tech, supervisor...).
8.	Company	Enter name of individual's employer.
9.	Check-In Date/Time	Enter date and time entering site (01/01/01 / 0600 hr).
10.	Check-Out Date/Time	Enter date and time exiting site (01/01/01 / 0600 hr).
11.	Home Base	Location at which the resource/individual is normally assigned. (May not be departure location).
12.	Method of travel	Means of travel to incident (bus, truck, engine, personal vehicle, etc.)
13.	Assigned Position	Assignment at time of dispatch.





**Requisition Request (ICS FORM 213)****REQUESTOR:** The requestor must fill in Blocks 1 through 8.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Requested by	Person requesting resource(s).
2.	Priority	Low, Medium, High, or Immediate. This information is needed for the ordering official. This will be considered routine or low priority unless otherwise indicated.
3.	Approval	This must be approved by the Section Chief or Deputy Section Chief.
4.	Requested Delivery Date/Time	When resources need to be delivered.
5.	Requested Delivery Location	Initial delivery location for resources (Staging Areas).
6.	Final Destination	Where resources will be deployed.
7.	Notes	Suggested Sources: Enter applicable information if known.
8.	Items requested	Must include quantity, resource type, detailed description of requirements, estimated time needed (for rentals), and estimated price. <b>BE AS SPECIFIC AS POSSIBLE.</b>

**LOGISTICS SECTION:** The following blocks are to be filled out by the Supply Unit.

9.	Checked Out By	Person fulfilling request.
10.	Checked Out Date/Time	
11.	Supplier	This information is needed for Credit Card purchases and/or Purchase Orders, and Resource Tracking.
12.	Items procured	Must include detailed description resource, quantity, estimated time of arrival, unit price, and rental/purchase.



**ICS 213 Resource Request**

Incident: \_\_\_\_\_ Prepared By: \_\_\_\_\_ at: \_\_: \_\_

Period: \_\_/\_\_/\_\_\_\_ \_\_: \_\_ to \_\_/\_\_/\_\_\_\_ \_\_: \_\_ Version Name: \_\_\_\_\_

Requisition Number:	Created Date/Time:	Requested Delivery Date/Time:
Requested By:	Requestor Phone:	Requested Delivery Location:
Priority:	Completed By:	Final Destination:

Notes: \_\_\_\_\_

Requested (Requestor)				Procured (Logistics)						
Quantity	Resource Type	Description	Size	Supplier	Quantit	Size	ETA	Rental?	Unit Price	P.O. #
								Yes/No		
								Yes/No		
								Yes/No		
								Yes/No		
								Yes/No		
								Yes/No		
								Yes/No		

**Supplier Contact Information**

Supplier	Contact Name	Phone 1	Phone 2	Fax	Email

**Approvals**

Name/Position	Name/Position	Name/Position
---------------	---------------	---------------

## Unit Log (ICS FORM 214)

**Purpose:** The Unit Log is used to record details of unit activity including specialized team activity (e.g., Strike Team). The file of these logs provides a basic reference from which to extract information for inclusion in any after-action report.

**Initiation of Form:** A Unit Log is initiated and maintained by Command Staff members, Division/Group Supervisors, Air Operations Groups, Strike Team/Task Force Leaders, and Unit Leaders. Completed logs are forwarded to supervisors who provide copies to the Documentation Unit.

**Distribution:** The Documentation Unit maintains a file of all Unit Logs. It is necessary that one copy of each log be submitted to the Documentation Unit.

Item	Item Title	Instructions
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Unit Name/Designators	Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team).
6.	Unit Leader	Enter the name of the individual in charge of the Unit.
7.	Personnel Roster Assigned	List the name, position, and home base of each member assigned to the unit during the operational period.
8.	Activity Log	Enter the time and briefly describe each significant occurrence or event (e.g., task assignments, task completions, injuries, difficulties encountered, etc.)





## Operational planning worksheet (ICS FORM 215)

**Purpose:** The purpose of this form is to communicate the decisions made during the Planning Meeting concerning resource assignments to the Resources Unit. The Worksheet is used by the Resources Unit to complete Assignment Lists and by the Logistics Section Chief for ordering resources for the incident.

**Initiation of Form:** The Operations & Planning Section Chiefs initiate this form at each Planning Meeting. It is recommended that the format be drawn on the chalkboard, and when decisions are reached, the information is recorded on the form.

**Distribution:** When the division work assignments and accompanying resource allocations are agreed to, the form is distributed to the Resources Unit to assist in the preparation of the Assignment Lists. The Planning Section will use a copy of this worksheet for preparing requests for resources required for the next operational period.

Item	Item Title	Instructions
1.	Incident Name	Enter the name assigned to the incident.
2.	Date / Time Prepared	Enter date (e.g. 09/17/1996) and time (e.g. 1530) prepared.
3.	Operational Period	Enter the time interval for which the information applies (e.g. 1800 09/17/1996 to 0600 09/18/1996).
4.	Area of Operation	Enter the Division letter or location of the work assignment for the resources.
5.	Work Assignments	Enter the specific work assignments given to each of the Divisions.
6.	Resource	Complete resource headings, both for kind and type appropriate for the incident. Enter, for the appropriate resources, the number of resources by type (engines, crew, etc.) required "REQ", and the number of resources available "HAVE" to perform the work assignment. The number of resources needed "NEED" is automatically calculated.
7.	Reporting Location	Enter the specific location the "needed" resources are to report for the work assignments (staging area, etc.).
8.	Requested Arrival Time	Enter time resources are requested to arrive at the reporting location (e.g. 1530).
9.	Total Resources Required, On Hand, Needed	Enter the total number of resources by type (crew, dozers, etc.) required, on hand). The number of resources needed is automatically calculated.
10.	Prepared By	Record the name and position of the person completing the form.



**ICS 215 Operational Planning Worksheet**

**Incident:** \_\_\_\_\_ **Prepared By:** \_\_\_\_\_ **at:** \_\_\_:

**Period:** \_\_\_/\_\_\_/\_\_\_ : \_\_\_ to \_\_\_/\_\_\_/\_\_\_ : \_\_\_ **Version Name:** \_\_\_\_\_

Branch/ vision/Area of Operation	Work Assignments	Resource							Reporting Location	Requested Arriva Date/Time
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								
		Req								
		Have								
		Need								



### Incident Action Plan Safety Analysis (ICS FORM 215A-CG)

**Purpose:** This form communicates to the Operations and Planning Section Chiefs safety and health issues identified by the Safety Officer. The Worksheet is used by the Resources Unit to complete ICS 204 Forms and Operations briefings.

**Preparation:** This form is principally crafted by the Safety Officer. Use additional sheets, as needed.

**Distribution:** When the safety analysis is completed, the form is distributed to the Resources Unit to help Prepare Operations briefing packages. All completed original forms MUST be given to the Documentation Unit.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Date / Time Prepared	Enter date (e.g. 09/17/1996) and time (e.g. 1530) prepared.
3.	Operational Period	Enter the time interval for which the information applies (e.g. 1800 09/17/1996 to 0600 09/18/1996).
4.	Area of Operation	Enter the Division letter or location of the work assignment for the resources.
5.	Work Assignments	Obtain specific work assignments from Operations given to each of the Areas of Operations.
6.	Blank Risk Header	Enter appropriate title for risk.
7.	Blank Risk Mitigation Header	Enter appropriate title for risk mitigation.
8.	Blank Risk Cells	Enter an X to indicate a risk type of concern in a Division/group.
9.	Blank Risk Mitigation Cells	Enter an X to indicate mitigation for risk to Division or group.
10.	Prepared By	Record the name and position of the person completing the form.



ICS 215a – CG: Safety Analysis

Incident: \_\_\_\_\_ Prepared By: \_\_\_\_\_ at: \_\_\_\_\_

Period: \_\_\_/\_\_\_/\_\_\_ : \_\_\_ to \_\_\_/\_\_\_/\_\_\_ : \_\_\_\_\_ Version Name: \_\_\_\_\_

Area/Division/Group	Work Assignment	Gain	Hazards					Controls					S E V E R I T Y	P R O B .	E X P O S U R E	G A R	
		Human Health <input type="checkbox"/> Security <input type="checkbox"/> Environment <input type="checkbox"/> Economy <input type="checkbox"/>															
		Human Health <input type="checkbox"/> Security <input type="checkbox"/> Environment <input type="checkbox"/> Economy <input type="checkbox"/>															
		Human Health <input type="checkbox"/> Security <input type="checkbox"/> Environment <input type="checkbox"/> Economy <input type="checkbox"/>															

Operational Risk Management Key	Scale	1	2	3	4	5	GAR Scale	#	1-19	20-39	40-59	60-79	80-100
	Severity	Slight	Minimal	Significant	Major	Catastrophic		Risk	Slight	Possible	Substantial	High	Very High
	Probability	Remote	Unlikely	50/50	>50%	Very Likely		Color	Green	Amber	Red	Red	Red
	Exposure	Below Avg	Avg	Above Avg	Great	N/A		Action	Possibly Acceptable	Attention Needed	Correction Required	Immediate Correction	Discontinue/Stop

### Support Vehicle/Equipment Inventory (ICS Form 218)

**Purpose:** The Support Vehicle/Equipment Inventory (ICS 218) provides an inventory of all transportation and support vehicles and equipment assigned to the incident. The information is used by the Ground Support Unit to maintain a record of the types and locations of vehicles and equipment on the incident. The Resources Unit uses the information to initiate and maintain status/resource information.

**Preparation:** The ICS 218 is prepared by Ground Support Unit personnel at intervals specified by the Ground Support Unit Leader.

**Distribution:** Initial inventory information recorded on the form should be given to the Resources Unit. Subsequent changes to the status or location of transportation and support vehicles and equipment should be provided to the Resources Unit immediately.

ITEM	ITEM NAME	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Incident Number	Enter the number assigned to the incident.
3.	Date/Time Prepared	Enter the date (month/day/year) and time (using the 24-hour clock) the form is prepared.
4.	Vehicle/Equipment Category	Enter the specific vehicle or equipment category (e.g., buses, generators, dozers, pickups/sedans, rental cars, etc.). Use a separate sheet for each vehicle or
5.	Vehicle/Equipment Information	Record the following information:
	Incident Identification Number	Enter any special incident identification numbers or agency radio identifier assigned to the piece of equipment used only during the incident, if this system is used (e.g., "Decontamination Unit 2." or "Water
	Type	Enter the specific vehicle or equipment classification (e.g., bus, backhoe, Type 2 engine, etc.) as relevant.
	Make	Enter the vehicle or equipment manufacturer name (e.g., "GMC," "International").
	Capacity, or Size	Enter the vehicle or equipment category/kind/type, capacity, or size (e.g., 30- person bus, 3/4-ton truck, 50 kW generator).
	Owner	Enter the operator name and/or contact information (cell phone, radio frequency, etc.).
	Location & Release Date/ Time	Enter where the vehicle or equipment will be located at the incident and its function (use abbreviations per discipline or jurisdiction).



### Air Operations Summary (ICS FORM 220)

**Purpose:** This form provides Air Operations Unit with the number, type, location and specific assignments of helicopters and fixed-wing aircraft.

**Initiation of Form:** The Unit Leader of the Air Operations Unit or Logistics Section Chief completes the summary during each Planning Meeting. The Air and Fixed-Wing Support Groups provide specific designators of the air resources assigned to the incident.

**Distribution:** After the summary is completed by Air Ops. Personnel, the form is given to the Air Support Group Leader and Fixed Wing Support Personnel. These personnel complete the form by indicating the designators of the helicopters and fixed-wing aircraft assigned missions during the specified operational period. This information is provided to Air Operations personnel who, in turn, give the information to the Resources Unit.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Air Operations, Logistic Section Chief, or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Type of Aircraft	Enter the type of aircraft being used for the incident. (e.g. Helo Bell 206, Fixed Wing DC-4)
6.	Operating Base	Enter the base (helibase, helispot, fixed-wing base) from which each air resource is expected to initiate operations.
7.	Aircraft Company	Enter the name of the company providing the aircraft.
8.	Passenger Capacity	Indicate the numbers of passengers the aircraft will accommodate.
9.	Purpose	Indicate the function or role the aircraft is being used for the incident.
10.	Scheduled Flights	Indicate when aircraft will be available for use and when flights are scheduled.

## ICS 220 - Air Operations

Incident:	Prepared By:	at:
Period: ___ / ___ / ___ : ___ to ___ / ___ / ___	Version Name:	

## Personnel and Communications

Title/Position	Name	Air/Air Frequency	Air/Ground Frequency	Phone

## Planned Flight Information

Type Of Aircraft	Operating Base	Aircraft Company	Passenger Capacity	Purpose	Scheduled Flights

## Notes (Special Instructions, Safety Notes, Hazards, Priorities)

--



### Demobilization Check Out (ICS FORM 221)

**Purpose:** The Demobilization Check Out form is used to provide information to the Planning Section about resources that are released from the incident response.

**Preparation:** The Demobilization Unit Leader or the Planning Section Chief prepares the Demobilization Check Out form. The Demobilization Unit Leader completes the top portion of the form after the resource supervisor has given written notification that the resource is no longer needed.

**Distribution:** The individual resource will have the unit leader initial the appropriate box(es) in item 5 prior to release from the incident. After completion, the form is returned to the Demobilization Unit Leader or the Planning Section. All completed original forms MUST be given to the Documentation Unit.

For each released resource, enter the unit/personnel released, released time/date, resource type, description, supplier, quantity and size. Use more than one line per resource if necessary. Obtain the appropriate signatures for authorization.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Demobilization Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Unit/Personnel Released	Enter the specific name of the resource being released.
6.	Released Date/Time	Enter the date and time the resource was released (e.g. 09/17/2000 1500hrs.).
7.	Resource Type	Enter the type of the resource released.
8.	Description	Enter a description of the resource released
9.	Supplier	Enter the name of the company that provided the resource.
10.	Quantity	Enter the quantity of the resource released.
11.	Size	Enter the size of the resource released (if applicable).



**ICS 221 - Demob. Check Out**

Incident: _____	Prepared By: _____ at: _____
Period: ___/___/___ : ___ to ___/___/___ : ___	Version Name: _____

Unit/Personnel Released: \_\_\_\_\_

Released Date/Time: \_\_\_\_\_

You and your resources have been released, subject to signoff from the following:

**Resources**

Resource Type	Description	Supplier	Quantity	Size

**Signatures**

<input type="checkbox"/>	_____

**Comments**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Integrated  
Contingency  
Plan



**KINDER MORGAN**  
INC.



Section IV:  
Forms

### ICS 223 - Health and Safety Message

Incident:

Prepared By:

at:

Period: \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_ to \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_

Version Name:

#### Major Hazards and Risks

#### Narrative

Signature:

ICS 223 Health and Safety Message

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**Environmental Unit Summary (ICS FORM 224)**

**Purpose:** The Environmental Unit Summary is used to record and identify details of the Environmental Unit including forecasts of activities. It also serves as the Environmental Operations Plan

**Initiation of Form:** The Environmental Unit Leader, in coordination with operational units and with input from the resource trustees, will complete this form for each operational period.



### ICS 224 - Environmental Unit Summary

Incident:	Prepared By:	at:
Period: __/__/__:__ to __/__/__:__	Version Name:	

#### Area Environmental Data

--

#### Priorities for Mitigating Environment and Cultural Impacts

--

#### Wildlife Assessments and Rehabilitation

--

#### Permits (Dispersants, Burning, and/or Other)

--

#### Waste Management

--

#### Other Environmental Concerns

--

#### Logistical Support Needs

--





### The Daily Meeting Schedule (ICS FORM OS-230)

**Purpose:** The Daily Meeting Schedule is use to record daily scheduled meeting activities, for information purposes.

**Preparation:** The Situation Unit Leader and Planning Section Chief prepare The Daily Meeting Schedule coordinated through the Incident Command for DAILY MEETING SCHEDULE (ICS FORM OS-230) each Operational Period or as needed.

**Distribution:** After coordination with the Incident Command, the Situation Unit Leader will duplicate and post a copy at the command post and distribute to the Command Staff, Section Chiefs, Branch Directors, Division/Group Supervisors, and appropriate Unit Leaders.

For each scheduled meeting, enter the time, meeting name, purpose and location. Use more than one line per meeting if necessary.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Situation Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Meeting Date/Time	Enter the date/time the meeting is planned for.
6.	Meeting Name	Enter the meeting name.
7.	Purpose	Enter the purpose of the meeting.
8.	Attendees	Enter who should attend the meeting.
9.	Location	Enter the location the meeting will be held.



**ICS 230 - Daily Meeting Schedule**

**Incident:** \_\_\_\_\_ **Prepared By:** \_\_\_\_\_ **at:** \_\_\_\_\_

**Period:** \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_ to \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_ **Version Name:** \_\_\_\_\_

Meeting Name & Date/Time	Purpose	Attendees	Location

### Meeting Summary (ICS FORM OS-231)

**Purpose:** The Meeting Description form is used to provide more detailed information concerning the attendees and agenda for a particular meeting.

**Preparation:** The Meeting Description is prepared by the person facilitating the meeting and coordinated through the Incident Command for each Operational Period or as needed.

**Distribution:** After coordination with the Incident Command, the Situation Unit Leader will add the meeting to the Daily Meeting Schedule and post a copy of the Meeting Description at the command post and distribute it to appropriate staff upon request.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Situation Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Meeting Name	Enter the meeting name from the Daily Meeting Schedule (ICS Form 230).
6.	Meeting Time/Date	Enter time and date that the meeting takes place (e.g. 0800hrs. 09/17/2000).
7.	Meeting Location	Enter the location of the meeting.
8.	Facilitator	Enter the name of the person facilitating the meeting.
9.	Purpose	Enter the purpose the meeting is being held.
10.	Who Should Attend	Enter the names of those who should attend the meeting.
11.	Agenda Outline	List the issues/concerns that are to be addressed at the meeting.



## ICS 231 - Meeting Summary

Incident:

Prepared By:

at:

Period:

\_\_\_ / \_\_\_ / \_\_\_ : \_\_\_ to \_\_\_ / \_\_\_ / \_\_\_ : \_\_\_

Version Name:

## Meeting Information

Meeting  
Name:Meeting  
Date/Time:Meeting  
Location:Meeting  
Facilitator:

## Purpose and Attendees

Purpose:

Attendees:

## Agenda Outline

## Meeting Minutes



### Resources At Risk (ICS FORM OS-232)

**Purpose:** The Resources at Risk Summary is used to record and identify details of the Situation Unit including Technical Specialist activity. It also serves as the Environmental Operations Plan.

**Preparation:** The Situation Unit Leader in coordination with the Scientific Support Coordinator (SSC) Specialist, with input from the Resources at Risk (RAR) Technical Specialists, and other resources trustees, will complete this form for each Operational Period.

**Distribution:** Each Operational Period, a copy must be forwarded to the Planning Section Chief for the Incident Command to serve as an Environmental Operations Plan (part of the Incident Action Plan). The SSC Specialist must also maintain a copy.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident	Enter the name assigned to the incident.
2.	Prepared By	Enter the name of the Environmental Unit Leader or person preparing the form and the date & time prepared (e.g. 09/17/2000 1500hrs.).
3.	Period	Enter the date and time interval of the operational period for which the form applies (e.g. 0600 09/17/2000 to 0600 09/18/2000).
4.	Version Name	
5.	Site Number	Enter number assigned to site.
6.	Priority	Enter priority as it relates to degree of sensitivity.
7.	Site Name &/or Location	Enter the site name and the physical location of the site.
8.	Site Issues	Enter a narrative clarifying the sites and wildlife issues described for each.



## ICS 232 - Resources at Risk

Incident:

Prepared By:

at:

Period: \_\_\_/\_\_\_/\_\_\_ : \_\_\_ to \_\_\_/\_\_\_/\_\_\_ : \_\_\_

Version Name:

## Environmentally Sensitive Areas and Wildlife Issues

Site #	Priorit y	Site Name and/or Physical Location	Site Issues
--------	-----------	------------------------------------	-------------

Notes:

Notes:

Notes:

Notes:

Notes:

## Archaeo-cultural and Socio-economic Issues

Site #	Priorit y	Site Name and/or Physical Location	Site Issues
--------	-----------	------------------------------------	-------------

Notes:

Notes:

ICS 232 Resources at Risk

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### ACP Site Index (ICS FORM 232a)

**Special Note:** This optional form is designed to be a key to the site numbers or site names shown on the Situation Map. The information on priorities for environmentally-sensitive areas and archaeo-cultural and socio-economic issues from the ICS form 232-OS may be transferred to ICS form 232a-OS, which provides more information on the Area Contingency Plan (ACP) or Geographic Response Plan (GRP) site numbers or names shown on the Situation Map.

**Purpose:** If used, this form is posted next to the Situation Map, providing a key to the ACP/GRP sites shown on the map.

**Preparation:** The Situation Unit personnel responsible for the Situation Map prepare this form, using ICS form 232-OS prepared by the Environmental Unit.

**Distribution:** This form is posted next to the Situation Map and copies of this form should accompany any distributed copies of the Situation Map. All completed original forms MUST be given to the Documentation Unit.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident
2.	Operational Period	Enter the time interval for which the form applies Record the start and end date and time.
3.	Index to ACP/GRP sites shown on Situation Map	Enter site information from the Area Contingency Plan (ACP) or Geographic Response Plan (GRP) or other sources specified to this incident
4.	Site Number	Can come from an Area Contingency Plan (ACP) of Geographic Response Plan (GRP) or can be created during an incident.
5.	Priority	Priority specific to this incident.
6.	Site Name and/or Physical Location	Name of the site (e.g., Marsh Point., Glacier Creek, etc.) and/or physical location (e.g., address, lat/long, landmarks, etc.)
7.	Action	Actions to be taken for designated protection and collection strategies or for other sites identified specifically for this incident.
8.	Status	Status of site action implementation (e.g., scheduled, in progress, completed).
9.	Prepared By Date/Time	Enter name and title of the person preparing the form. Enter date (month, day, year) and time prepared (24-hour clock).



**ICS 232a - ACP Site Index**

Incident: _____	Prepared By: _____ at: _____
Period: __/__/____ :__ to __/__/____ :__	Version Name: _____

**Index to ACP/GRP sites shown on Situation Map**

Site #	Priority	Site Name and/or Physical Location	Action	Status
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				
Notes:				

### Open Action Tracker (ICS 233)

**Purpose:** Open Action Tracker

1. Is used by the Incident Commander/Unified Command (IC/UC) to assign and track tasks/actions to IMT personnel that do not rise to the level of being an Incident Objective.
2. Is duplicated and provided to Command and General Staff members, giving them the open tasks/actions needing to be completed and a means to track the open tasks/actions they have been assigned.
- 3.

Note: This form may also be used by Command and General Staff for tracking tasks/actions within a Section/Staff element.

**Preparation:** The Planning Section Chief (PSC) is responsible for maintaining the Open Action Tracker for the IC/UC and typically utilizes the Documentation Unit Leader (DOCL) to assist in this forms development and updating. The PSC should ensure all Command and General Staff are prepared to discuss their assigned tasks/actions during the Command and General Staff and Planning Meetings.

**Distribution:** When completed. The form is duplicated and copies are distributed to the Unified Command and Command and General Staff. It is also posted on a status board located at the ICP. All completed original forms MUST be given to the Documentation Unit.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	No.	Enter number of task in sequential order (1,2,3,...).
3.	Item	Enter short descriptive of the task/action to be completed. Task/Actions are important to be completed but are not an Incident Objective which are documented on the ICS-202 form.
4.	For/POC	Enter the Point of contact (POC), the responsible person/section.
5.	Briefed to POC	Enter "X" when the task/action has been briefed to the POC/responsible person. This is to ensure that tasks/actions identified outside of the POC's presence (during Unified Command Meeting for example) are briefed to and acknowledged by the identified POC.
6.	Start Date	Enter the date the task/action was initially assigned under "Start Date."
7.	Status	Enter Status of item. For example: "Awaiting Le Gear", Updated needed", "Awaiting Feedback". When the item is completed, the word "completed" is entered and if working in MS Excel, the task is cut and pasted into the worksheet labeled "COMPLETED."
8.	Target Date	Enter deadline task/action should be completed. In the Excel Worksheet, there is a hidden formula that shows green, yellow and red blocks. When the target date is one day away, the block turns yellow. When it is overdue it turns red. When the block is yellow, it serves as a reminder to the UC/POC that the target date is nearing and the POC needs to complete the task or the target date needs to be updated.
9.	Actual Date	Enter actual date task/action completed
	Note:	In order to ensure the red and yellow reminders work for new tasks, the user simply copies a task line, inserts it into the worksheet and overtypes the new task information.



### Work Analysis Matrix Form Instructions (ics form 234)

**Purpose:** The Work Analysis Matrix is designed to help select the best strategies and tactics to achieve the operational objectives. This optional form assists staff in carrying out incident objectives by outlining the who, what, where, when, and how of the response. The tactics from this form carry forward to the "Work Assignment" on the ICS-215. Another purpose of the ICS-234 is that it presents alternative (or what-if) strategies and tactics to respond to bad weather, sudden changes in operational conditions, etc. This form is simply a formalized version of how OSCs tend to think in order to turn objectives into tactical field work.

**Preparation:** The Work Analysis Matrix, if used, is usually completed by the Operations Section Chief and Planning Section Chief prior to the Tactics Meeting.

**Distribution:** All completed original forms must be submitted to the Documentation Unit.

ITEM	ITEM TITLE	INSTRUCTIONS
1.	Incident Name	Enter the name assigned to the incident.
2.	Operational Period	Enter the time interval for which the form applies. Record the start and end date and time.
3.	Operational Objectives	Enter the relevant Operational Objectives from the ICS 202, with numbers.
4.	Operational Strategies	Enter all strategies that could be used to meet the objective ("how")
5.	Tactics/Work Assignments	Enter details, including as much as possible, who, what, where, and when. Of work assignments to carry out Operational Strategies.
6.	Prepared By	Enter the name and position of the person preparing the form.
7.	Date/Time	Enter the date and time (24-hour format) the form was prepared.

**ICS 234 - Work Analysis Matrix**

<b>Incident:</b>	<b>Prepared By:</b>	<b>at:</b>
<b>Period:</b> /    /    :    to    /    /    :	<b>Version Name:</b>	

**Objectives**

<b>Operations Objectives</b>	<b>Optional Strategies</b>	<b>Tactics/Work Assignments</b>

**Galena Park Terminal – Table of Contents**

<b>A</b>	<b>Facility and Locality Information</b>
<b>B</b>	<b>Notification Lists</b>
<b>C</b>	<b>Training / Exercise Program</b>
<b>D</b>	<b>Regulatory Cross References</b>
<b>E</b>	<b>Administration</b>
<b>F</b>	<b>Emergency Response Action Plan (ERAP)</b>

**Annex A – Table of Contents**

<b>A.1 Facility Description/Area</b>
<b>A.2 Daily Operations</b>
<b>A.3 Loading Operations</b>
<b>A.4 Tank Table</b>
<b>A.5 List of Oils And Hazardous</b>
<b>A.6 Secondary Containment</b>
<b>A.7 Maps and Diagrams</b>
<b>A.8 Applicability of Substantial Harm Criteria</b>
<b>A.9 Reportable Spill History</b>
<b>A.10 Hazard Evaluation</b>
<b>A.11 Discharge Scenarios</b>
<b>A.12 Worst Case Discharge Calculations</b>
<b>A.13 Planning Volume Calculations</b>
<b>A.14 Planning Distance Calculations</b>
<b>A.15 Demonstration of Adequate Response Capability</b>
<b>A.16 Analysis of The Potential For A Spill</b>
<b>A.17 Evacuation and/or Sheltering-In-Place</b>

## A.1 FACILITY DESCRIPTION/AREA

### A.1-1 General Facility Information

General Facility Information		
Facility Name:	KM Liquids Terminals LLC	
Facility Address:	906 Clinton Galena Park, Texas 77547	
Facility Main Phone	(713) 455-1231	
Latitude and Longitude:	(b) (7)(F), (b) (3)	
Owner of Facility:	KM Liquids Terminals LLC	
Owner Address (if different from Terminal):	500 Dallas St., Suite 1000 Houston, TX 77002	
Owner Phone:	(713) 369-9000	
Owner County:	Harris	
Operator of Terminal:	KM Liquids Terminals LLC	
Largest Oil Storage Tank Capacity:	(b) (7)(F), (b) (3)	
Worst Case Discharge Amount:		
Average Daily Throughput:		
Number of Aboveground Oil Storage Tanks:	147	
Terminal Distance to Navigable Waters:	1/4 -1/2 mile	
Description of Area	Industrialized waterfront surrounded by manufacturing facilities, marine service companies, and other petroleum terminals.	
Products Handled:	Gas, fuel, ethanol, specialty chemicals (sodium sulfide, benzene)	
Date of Oil Storage Startup:	1935	
Wellhead Protection Area:	Not Applicable	
Worst Case Discharge	USCG: (b) (7)(F), (b) (3)	DOT: (b) (7)(F), (b) (3)

Other Identifying Information:

**SIC:** 4226 Oil Storage    **EPA ID#:** TXD026481523    **TCEQ Solid Waste #:** 30573

Qualified Individual	
Name	Contact Number (24 Hours/Day)
<b>Primary</b>	
David Nevada	281-635-4751
<b>Alternate</b>	
Jeff Hersperger	713-202-9183



### A.1-2 Response Zone

Kinder Morgan Galena Park Terminal is located in only one response zone. The response zone is located in the Houston Marine Inspection Zone/Captain of the Port Zone. This is also the Galveston Bay area. All pipelines are located in Harris County in the state of Texas, and are identified by section markers. Pipeline Sections in the Kinder Morgan Galena Park Response Zone Kinder Morgan Galena Park Terminal used to operate 3 pipelines. But the 12" MTBE pipeline has been abandoned from last year:

- 12" MTBE (abandoned) 13,606
- 16" LCRC 1,056
- 8" ARCO 1,056

**A.1-3 Date(s) and Type(s) of Substantial Expansion(s)**

1933—GATX purchased Central Plant property from Texaco (approximately 70 tanks)

1960—Dale Moore Annex (West Plant) was purchased; GATX has since built 78 tanks in the West Plant.

1982—North and East Plants were purchased for Texaco (13 Tanks)

1998—Constructed (4) 100,000 BBL tanks in East Plant for oil storage

2001-Kinder Morgan purchased GATX Terminals Corporation (domestic operations).

2002 – Demolished 3- 80,000 BBL and 2 118,000 BBL tanks. Constructed 2 – 90,000 BBL and 2-100,000 BBL tanks

2006 – Constructed 2- 100,000 BBL tanks, 8 tanks central plant

2007 – Constructed (2) 100,000 BBL tanks West Plant

2008 – Constructed (7) 100,000 BBL tanks East Plant, Constructed manifold # 33 and began first half of # 3400 manifold, Constructed # 4 ship dock

2009 – Constructed (7) 150,000 BBL tanks East Plant, Constructed manifold # 3500 and completed second half of # 3400 manifold, Constructed # 3 Barge dock, Construction begun on (1) 125,000 BBL tank West Plant

2010 – Completed construction of 125-1

2010 – Added # 3 Barge Dock fire pump

2010 – Demolished waste water tank 5-20

2011 – Constructed (1) 15,000 BBL tank 15-3

2012 – Demolished Tank 7, 80,000 BBL Tank.

2013 – Begin construction (5) – 150,000 BBL tanks



## A.2 DAILY OPERATIONS

Bulk liquid product is transported into the terminal facility via tank truck, railcar, pipeline, barge or ship. It is unloaded dockside through pipelines leading directly to the storage tanks. The product is transported from the facility via tank truck, railcar, pipeline, barge or ship.

The terminal facility operates 24 hours per day, seven days per week. The number of staff on-site is reduced during evening hours.

### A.2-1 Nature of Hazards

The Galena Park Terminal loads/offloads chemicals, and refined petroleum products. Potential hazards and incidents that may result in a spill include:

- Hose, gasket or valve failure; Pump failure;
- Vehicular accident, including train derailment; Digging operation;
- Post-Accident cleanup activity; Crossing by heavy equipment; Overfill;
- Other unintentional spill on land and water; and
- Sabotage.

### A.2-2 Required Personal Protective Equipment

The following protective equipment is required for site workers:

- Hard hat
- Safety glasses
- Protective gloves
- Fire retardant clothing
- Boots (steel toes preferred)
- Sleeved shirts and pants, or coveralls. Tyvek®, poly-coated Tyvek®, or equivalent disposable coveralls will be worn when skin exposure to fluids or contaminated materials is likely.
- Air-purifying respirator (APR) with organic vapor cartridges (see below for guidelines).
- Hearing protection (optional)



## A.3 LOADING OPERATIONS

### Vessel Operations

Dock	Type of Vessel	Number and Maximum Size of Vessels
S/D #1	Cargo Ship	1-750' Ship
	Tank Ship	1-300' Barge
	Tank Barge	2-300' Barges
B/D #1	OUT OF SERVICE	
S/D #2	Cargo Ship	1- 850' Ship
	Tank Ship	2- 300' Barges
B/D #2	Tank Barge	4-300' Barges
S/D #3	Cargo Ship	1- 850' Ships
	Tank Ship	2- 300' Barges
	Tank Barge	
B/D #3	Tank Barge	2- 300' Barges
S/D #4	Cargo Ship	1- 750' Ship
	Tank Ship	1- 750' Ship



CONTRACTOR BLOCK

NOTES

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
		A	GENERAL UPDATE	06-17-08	JLM	JS	JS

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 CHECKED: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ PROJ. ENGR.

APPROVED: \_\_\_\_\_ REGIONAL ENGR.  
REGIONAL ENGR.

GALENA PARK TERMINAL

PLOT PLAN

NORTH, EAST, CENTRAL, AND WEST PLANTS

EMERGENCY RESPONSE EQUIPMENT

DWG. NO. 88-MS-0016

SCALE: NONE    TERMINAL: 88    DATE:

The following pages include the Attachments referenced in the “Galena Park Plot Plan – Jurisdictional Systems” diagram. These attachments contain a comprehensive list of all lines that connect the transfer area to the associated tank farm. These lines are considered Coast Guard jurisdiction.

### Ship Dock #2 – Attachment “A”

Line Number	Size	Pressure
TK 12-21	8"	225 PSI
TK 12-22	8"	225 PSI
TK 12-23	8"	225 PSI
TK 12-24	8"	225 PSI
TK 12-25	8"	225 PSI
TK 12-26	8"	225 PSI
TK 12-27	8"	225 PSI
TK 12-28	8"	225 PSI
TK 12-29	8"	225 PSI
TK 12-30	8"	225 PSI
TK 25-21	8"	225 PSI
TK 25-22	8"	225 PSI
TK 25-23	8"	225 PSI
TK 25-24/80-21	8"	225 PSI
TK 25-25	8"	225 PSI
TK 25-26	8"	225 PSI
TK 25-27	8"	225 PSI
TK 25-28	8"	225 PSI
TK 80-15	12"	225 PSI
TK 80-16	12"	225 PSI
TK 80-17	12"	225 PSI
TK 80-18	12"	225 PSI
TK 80-19	12"	225 PSI
TK 80-20	12"	225 PSI
TK 80-22	12"	225 PSI
TK 100-23	12"	225 PSI
TK 100-24	12"	225 PSI
6-B	6"	225 PSI
8-D	8"	225 PSI
TK 144-1	16"	225 PSI
12" UTILITY	12"	225 PSI
MARPOL	3"	225 PSI
Vapor Line	8"	150 PSI
TK 125-1	12"	225 PSI
TK 187-1	12"	225 PSI

**Barge Dock #2 – Attachment “B”**

Line Number	Size	Pressure
TK 10-9	8"	225 PSI
TK 10-10	8"	225 PSI
TK 10-11	8"	225 PSI
TK 10-12	8"	225 PSI
TK 12-1	8"	225 PSI
TK 12-3	8"	225 PSI
TK 12-4	8"	225 PSI
TK 12-5	8"	225 PSI
TK 12-6	8"	225 PSI
TK 12-7	8"	225 PSI
TK 12-8	8"	225 PSI
TK 12-9	8"	225 PSI
TK 12-10	8"	225 PSI
TK 12-11	8"	225 PSI
TK 12-12	8"	225 PSI
TK 12-13	8"	225 PSI
TK 12-14	8"	225 PSI
TK 12-15	8"	225 PSI
TK 12-16	8"	225 PSI
TK 12-17	8"	225 PSI
TK 12-18	8"	225 PSI
TK 12-19	8"	225 PSI
TK 12-20	8"	225 PSI
TK 25-2	8"	225 PSI
TK 25-3	8"	225 PSI
TK 25-4	8"	225 PSI
TK 25-5	8"	225 PSI
TK 25-6	8"	225 PSI
TK 25-7	8"	225 PSI
TK 25-8	8"	225 PSI
TK 25-9	8"	225 PSI
TK 25-10	8"	225 PSI
TK 25-11	8"	225 PSI
TK 25-12	8"	225 PSI
TK 25-13	8"	225 PSI
TK 25-14	8"	225 PSI
TK 25-15	8"	225 PSI
TK 25-16	8"	225 PSI
TK 25-17	8"	225 PSI
TK 25-18	8"	225 PSI
TK 25-19	8"	225 PSI
TK 80-9/10	12"	225 PSI
TK 80-11	12"	225 PSI
TK 80-12	12"	225 PSI

**Barge Dock #2 – Attachment “B” (Cont’d)**

Line Number	Size	Pressure
TK 80-13	12"	225 PSI
TK 80-14	12"	225 PSI
TK 100-5/6	12"	225 PSI
L/L 8-1	12"	225 PSI
L/L 8-2	12"	225 PSI
L/L 6-2	8"	225 PSI
L/L 6-3	8"	225 PSI
L/L 6-A	6"	225 PSI
L/L 6-B	6"	225 PSI
L/L 8-E	6"	225 PSI
L/L 12-D	6"	225 PSI
L/L 12-C	12"	225 PSI
Vapor Line	8"	225 PSI
L/L 8-3	8"	225 PSI
L/L 8-4	8"	225 PSI

**Ship Dock #1 – Attachment “C”**

Line Number	Size	Pressure
TK 10-14/15	8"	225 PSI
TK 10-13/16	6"	225 PSI
TK 10-17	8"	225 PSI
TK10-18	8"	225 PSI
TK 10-19	8"	225 PSI
TK 10-20	6"	225 PSI
TK 25-1	8"	225 PSI
TK 25-20	8"	225 PSI
TK 25-30	8"	225 PSI
TK 25-29	8"	225 PSI
TK 22	8"	225 PSI
TK 40-1	12"	225 PSI
TK 31	8"	225 PSI
TK 7	12"	225 PSI
TK 37	10"	225 PSI
10" S/S	12"	225 PSI
20" GAS	20"	225 PSI
MARPOL	3"	225 PSI
TK 15-2	8"	225 PSI
TK 50-3	12"	225 PSI
TK 50-1/2	12"	225 PSI
L/L 12-C	12"	225 PSI

**Ship Dock #3 – Attachment “D1 & D2”**

Line Number	Size	Pressure
20" Gas	20"	225 PSI
20" MTBE	20"	225 PSI
SE-1	8"	225 PSII
SE-2	8"	225 PSI
SE-3	8"	225 PSI
SE-4	8"	225 PSI
15-1	6"	225 PSI
PE-7	8"	225 PSI
Vapor Line	8"	150 PSI
100-9 O/L	16"	225 PSI

**Barge Dock #3 – Attachment “E”**

Line Number	Pressure
12" North	225 PSI
12" South	225 PSI
Trasmix	225 PSI
TK.40-1	225 PSI
TK.40-1	225 PSI
TK.22	225 PSI

**Ship Dock #4 – Attachment “F”**

Line Number	Size	Pressure
16" East	16"	225 PSI
16" West	16"	225 PSI
MTBE	12"	225 PSI
Trasmix	12"	225 PSI



## A.4 TANK TABLE

An updated Tank Table which includes materials stored is found in the SPCC Plan.

## A.5 LIST OF OILS AND HAZARDOUS MATERIALS

### A.5-1 Information on Oils and Hazardous Materials Stored

Kinder Morgan Galena Park Terminal is a bulk liquid storage terminal. Due to the frequency of product changes MSDS sheets are not provided in this plan. To obtain an MSDS on a particular tank/chemical, obtain a current Tank Inventory List, find the tank number the product is stored in and look up the tank in the MSDS Vault located at [MSDSVault.com](http://MSDSVault.com).

### A.5-2 Oil Groups

Oil Groups (I-IV) were determined based on the following:

- A petroleum based oil that, at the time of shipment, consists of
- hydrocarbon fractions – (1) at least 50% of which by volume, distill at a temperature of 340° C and (2) at least 95% of which by volume, distill at a temperature of 370° C.
- A petroleum based oil that does not meet the criteria for Group I and has a specific gravity less than 0.85.
- A petroleum based oil that does not meet the criteria for Group I and has a specific gravity greater than or equal to 0.85 and less than 0.95.
- A petroleum based oil that does not meet the criteria for Group I and has a specific gravity greater than or equal to 0.95 and less than 1.0.

To obtain an MSDS on a particular tank/chemical, obtain a current Tank Inventory List, find the tank number the product is stored in and look up the tank in the MSDS Vault is located at <http://www.actiocms.com/msdsvault/dashboard.cfm>

## A.6 SECONDARY CONTAINMENT

Drainage from the dike areas flows by gravity with the natural gradient of the land. Intermediate dike sluice gates may be kept closed to prevent uncontrolled flow between dike areas. Operation of the drainage system is assigned to operators trained in the proper inspection, discharge and record keeping procedures. Uncontaminated surface water drainage from the undiked areas such as terminal roads, buildings, and service areas is directed to the Storm Water sewer system which is then directed to Houston Ship Channel.

### A.6-1 Containment and Drainage Planning: Tank Truck Racks

A release from the truck/railcar loading racks would be collected in below ground sumps and pumped to the product /waste water recovery tank. All materials related to the release will be recovered and disposed of in accordance with all local, state, and federal regulations.

### A.6-2 Containment and Drainage Planning: Tank Farm

Any spill within the tank farm will be contained within the surrounding earthen dike walls, all of which are volumetrically capable of containing 110% of the quantity of product stored within the largest above ground storage tank. The perimeter tank farm dike walls are equipped with a manually operated drain valve for the release of uncontaminated Storm Water runoff. Dike drains are maintained in a closed position and are opened ONLY after visual inspections have been conducted and recorded in an inspection log, which verifies the absence of any visible sheen or iridescent qualities of the Storm Water. If visual contamination is present, remedial procedures must be employed prior to the opening of the tank farm drain valves.



## A.7 MAPS AND DIAGRAMS

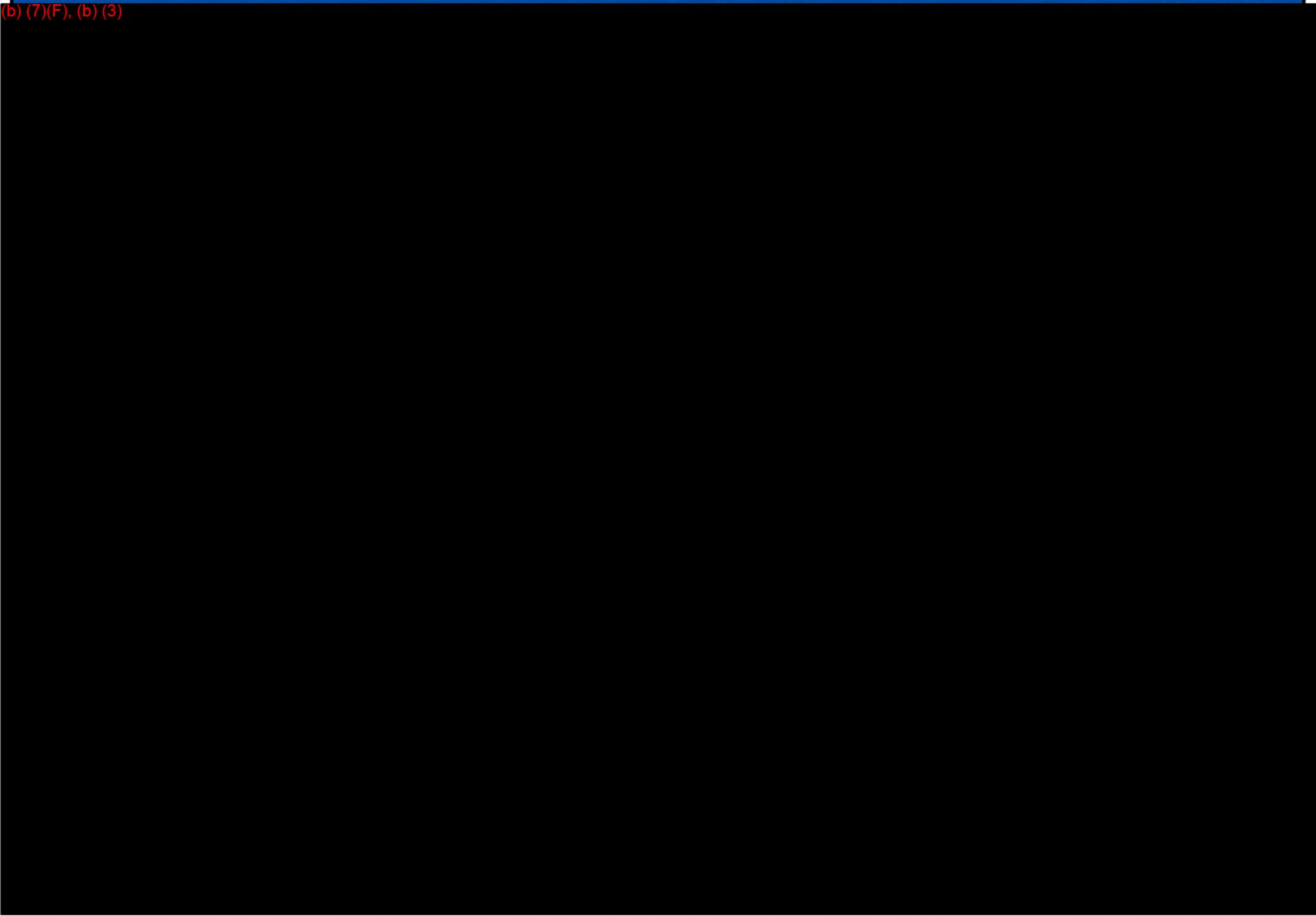


# *Kinder Morgan Galena Park Terminal General Facility Overview Map Intergrated Contingency Plan*



Scale: 1:12,500

(b) (7)(F), (b) (3)



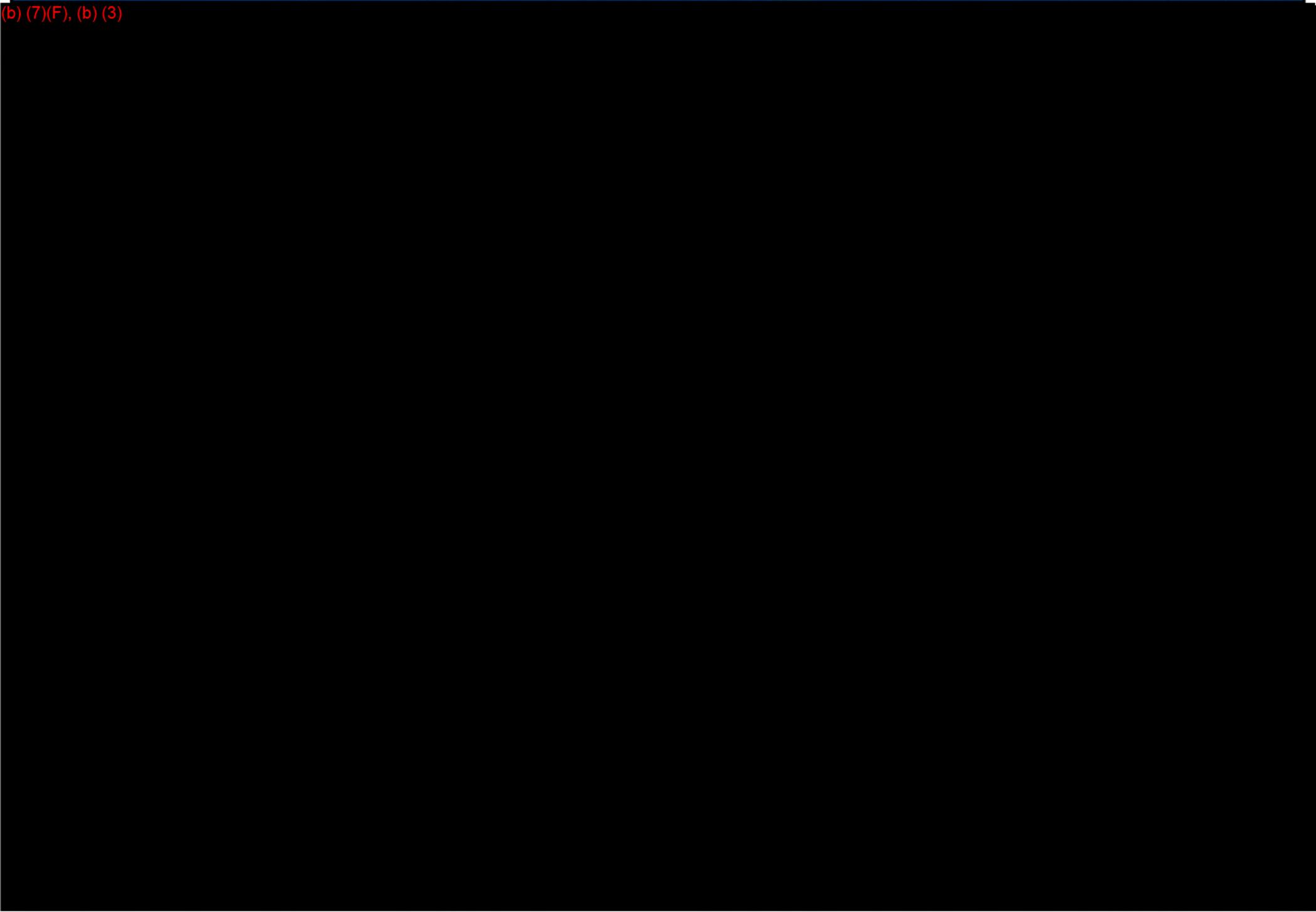


***Kinder Morgan Galena Park Terminal  
General Facility Detailed Overview Map  
Integrated Contingency Plan***



Scale: 1:6,000

(b) (7)(F), (b) (3)



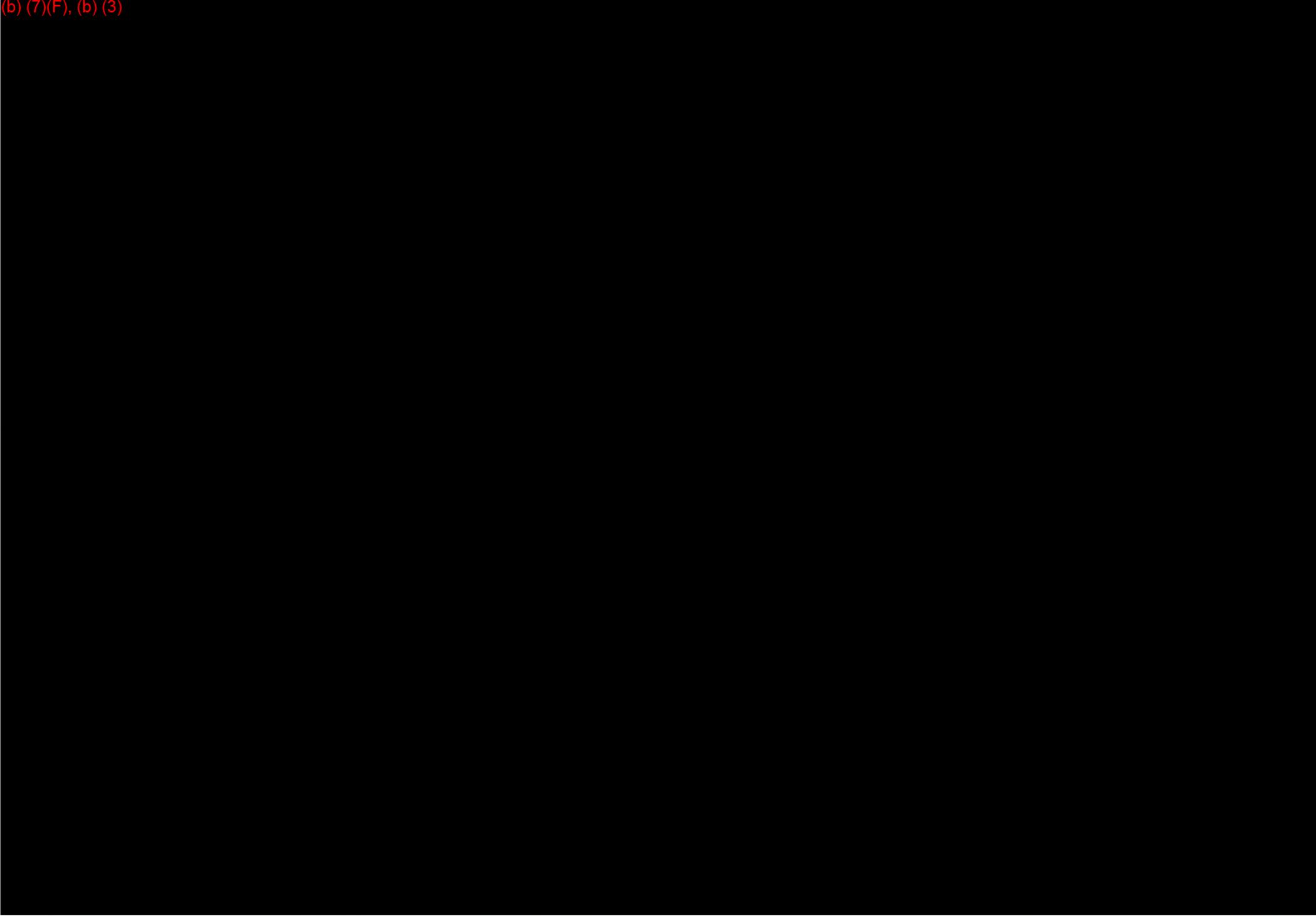


# Kinder Morgan Galena Park Terminal Direction Map Integrated Contingency Plan



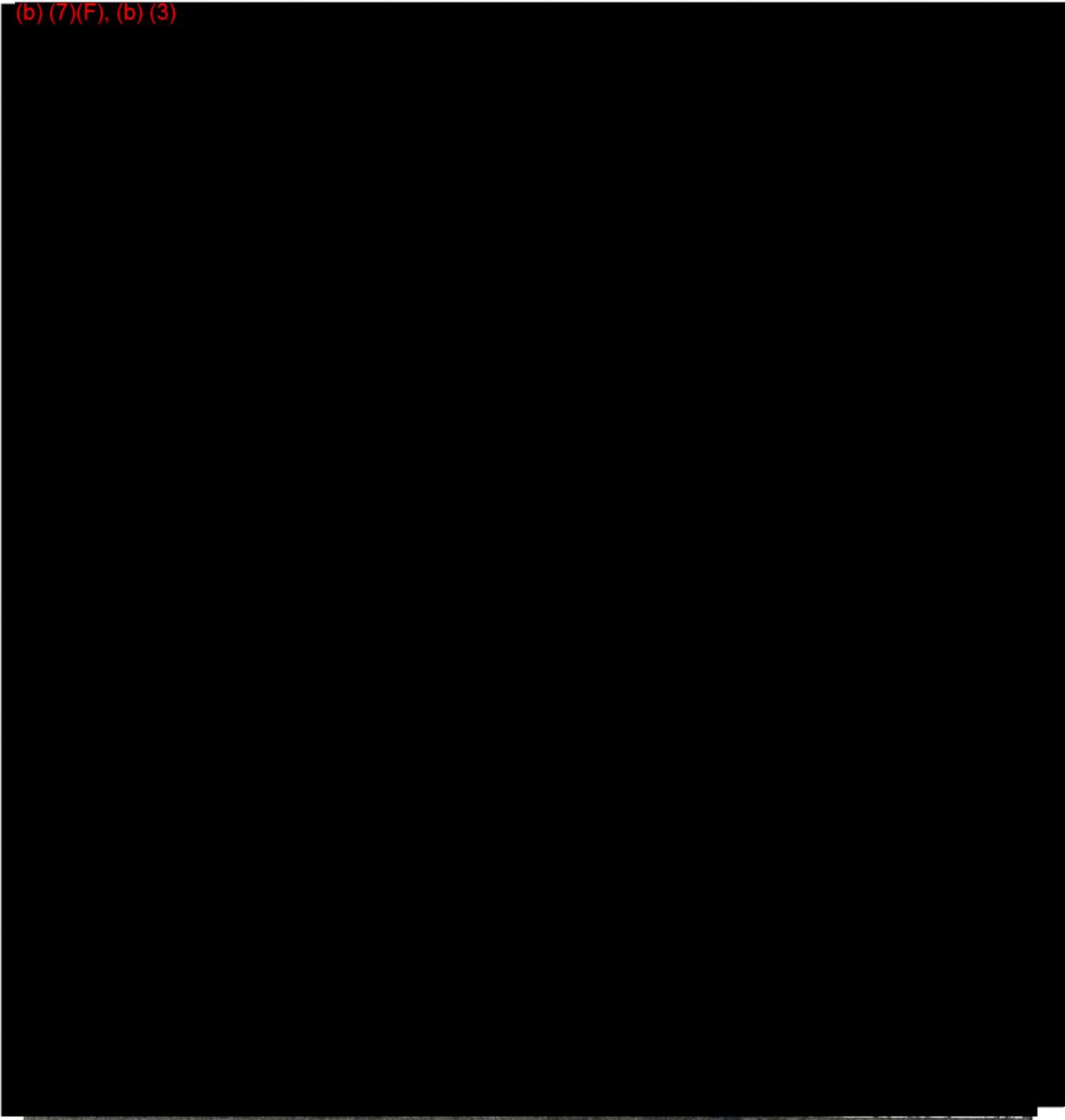
Scale: 1:62,500

(b) (7)(F), (b) (3)





(b) (7)(F), (b) (3)



LEGEND

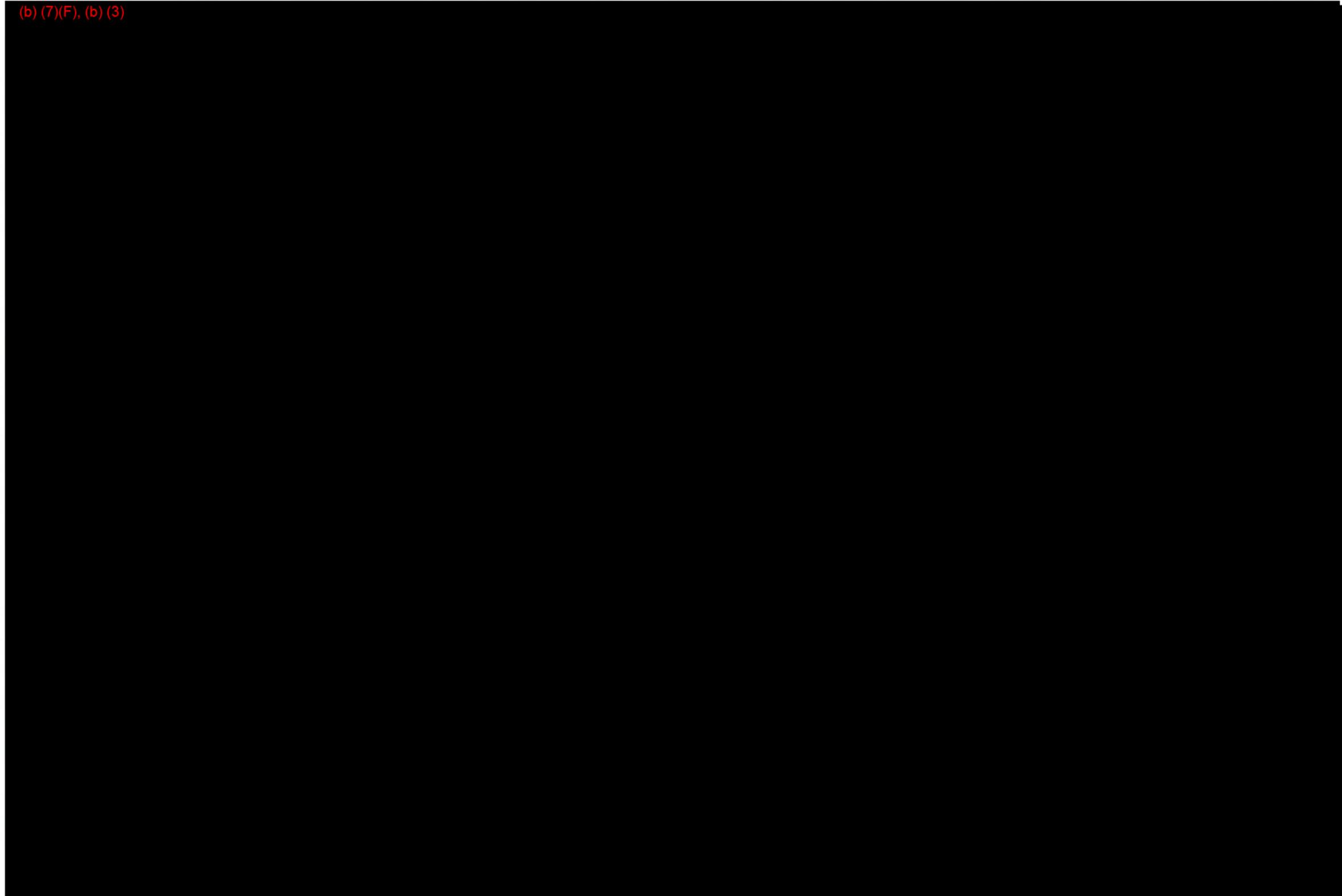
- Schools 
- Hospitals 
- Churches 

APPROXIMATE SCALE

0  0.5mi

*Galena Park Terminal*

(b) (7)(F), (b) (3)



**KM LIQUIDS TERMINALS, LP**

**16" MTBE**

**APPROXIMATE SCALE**

**N**

**GALENA PARK TERMINAL**

T-4#: 05123  
Sys ID: 552309

**1 inch = 0.25 miles**





GALENA PARK TERMINAL

PLOT PLAN

NORTH, EAST, CENTRAL AND WEST PLANTS

STORMWATER FLOW DIAGRAM

DWG. NO. 88-MS-0139

SCALE NONE TERMINAL 88 DATE 03-06-2010

APPROVED PA REGIONAL ENGR.

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DRAWN J.L.MORRIS

CHECKED SC

APPROVED PA PROJ. ENGR.

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
88-MS-0048	SITE DRAINAGE	C	ADDED STORMWATER DIKE DRAINS	03-29-12	JLM	AQ	JS
88-MS-01	SITE SRAINAGE	B	GENERAL UPDATES	06-14-11	JLM	JS	JS
88-MS-0109	STORMWATER OUTFALL LOCATIONS	A	ISSUED FOR REVIEW	03-06-10	JLM	JS	JS



## A.8 APPLICABILITY OF SUBSTANTIAL HARM CRITERIA

**RESPONSE PLAN COVER SHEET**

40 CFR 112.7(11)

**GENERAL INFORMATION**

Owner / Operator of Facility: Kinder Morgan Liquid Terminals, LLC  
 Facility Name: Galena Park Terminal  
 Facility Address (street address or route): 906 Clinton Drive  
 City, State, U.S. Zip Code: Galena Park, TX 77547  
 Facility Phone No.: 713-455-1231  
 Latitude (Degrees North): (b) (7)(F), (b) (3) degrees, minutes, seconds  
 Dun & Bradstreet Number: 00-694-3500  
 Largest Aboveground Oil Storage Tank  
 Capacity (gallons): (b) (7)(F), (b) (3)  
 Number of Aboveground Oil Storage Tanks: 144  
 Longitude (Degrees: West): (b) (7)(F), (b) (3) degrees, minutes, seconds  
 Standard Industrial Classification (SIC) Code: 4226  
 Maximum Oil Storage Capacity (Gallons): (b) (7)(F), (b) (3)  
 Worst Case Oil Discharge Amount (Gallons): (b) (7)(F), (b) (3)

Facility Distance to Navigable Water. Mark appropriate line.

0 – 1/4 mile	<u>                    </u>
1/4 – 1/2 mile	<u>  X                  </u>
1/2 – 1 mile	<u>                    </u>
> 1 mile	<u>                    </u>

**APPLICABILITY OF SUBSTANTIAL HARM CRITERIA**

Does the facility transfer oil over-water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons? Yes:   X                    
 No:                     

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation? Yes:                       
 No:   X                  

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? Yes:   X                    
 No:                     

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake? Yes:                       
 No:   X                  

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years? Yes:                       
 No:   X                  

**CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate and complete.

Signature:   
 Name (please type or print): Dave Nevada  
 Title: Terminal Manager  
 Date: 11/8/2013

Facility Name: 16" LCRC Cross Channel	
Facility Address: Harris County, Texas	
Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than ten (10) miles in length	
YES _____	X _____ NO _____
Has any line section experienced two or more reportable releases, as defined in 49 CFR 195.5, within the past five (5) years, or	
YES _____	NO _____ X _____
Does any line section contain any electric resistance welded pipe, manufactured prior to 1970 and operates at a maximum operating pressure established under 49 CFR 195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe, or	
YES _____	NO _____ X _____
Is any line located within a 5-mile (8 km) radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes, or	
YES _____	X _____ NO _____
Is any line located within a 1-mile (1.6 km) radius of potentially affected environmentally sensitive areas and could reasonably be expected to reach these areas?	
YES _____	NO _____ X _____
Based on the DOT-PHMSA criteria above, the <u>16" LCRC Cross Channel</u> Pipeline is considered to be a system of "Significant and Substantial Harm".	
<u>Kinder Morgan Liquid Terminals</u> certifies to the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation that we have obtained, by contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst-case discharge.	
	
Signature	Manager – Regulatory Compliance Title
Danielle Stephens Name	July 17, 2013 Date



## A.9 REPORTABLE SPILL HISTORY

## Spill History - Galena Park Terminal

3/22/2005

Date	Cause	Media	Product/Material	Amount Gal.	Amt. (Gal.) In Navigable Water	Effectiveness & Capacity Of Secondary Containment	Clean-Up Actions	Corrective Actions	Capacity of Source	Enforcement Actions	Spill Detected
8/15/1998	EF	water	petroleum lubricant	1/2	1/2	over water	dissipated	repairs	NA	USCG-NOV	operator
8/24/1999	HE/EF	water	petroleum lubricant	2	2	over water	sorbent boom deployed	consultation/repairs	NA	USCG-NOV	operator
4/12/2000	EF	water	petroleum lubricant	15	15	over water	sorbent boom deployed	repairs	NA	USCG-NOV	operator
5/16/2000	EF	water	naphtha	1050	1050	overflowed containment	sorbent boom deployed	repairs	100K BBLs	USCG-NOV	operator
12/15/2000	EF	water	MTBE	<1	<1	over water	dissipated	repairs	100K BBLs	NONE	operator
6/8/2001	Act of God	water	oil sheen	<1	<1	over water	NONE	NONE	NA	NONE	operator
3/27/2002	HE	water	Lube Oil	<5	<5	over water	sorbent boom deployed	Re-locate sample ports, 3rd party awareness	25K BBLs	GLO NOV	operator
6/24/02	HE	water	PAO-5	sheen	<1	overwater	NONE	Training	25K BBLs	GLO NOV	operator
8/16/02	HE	water	Sodium Sulfide	<1	<1	overwater	Kinder Morgan not the responsible party	3rd party	NA	NONE	operator
11/6/2002	EF	water	Oxo-Lights	<1	<1	overwater	None	repaired pipeline	NA	Glo - declared non-event	operator
1/14/2003	EF	water	MTBE	0.5	0.5	overwater	Product water soluble, dissipated	repaired pipeline	NA	None	operator
5/8/2003	EF	water	Diesel	25	25	overwater	vacuum truck, pressure spray bulkhead	replaced fuel line	500 gal	Fine GLO, USCG	GLO
7/8/2003	EF	water	Transmix	20	20	overwater	OSRO clean up	Changed procedures	250 gal	Fine GLO, USCG	contractor
8/8/2003	EF	water	JMP-99 (acid)	5	5	overwater	Leak stopped, absorbent pads	repaired line	N/A	None	operator
5/15/2004	HE	water	Six Oil	60	60	Shoreline/overwater	KM not the responsible party	3rd Party	60 gallons	Fine GLO, USCG	contractor
12/30/2004	EF	water	Transmix	< 1 pint	< 1 pint	over water	Dissipated	Training	NA	None	operator
1/23/2005	EF	water	LCO	<1	<1	over water	sorbent boom deployed	Repairs	NA	Fine -GLO	operator
4/17/2005	HE	water	Aromatic Concentrate	<1	<1	Shoreline/overwater	Dissipated	Training	NA	NONE	operator
6/24/2005	EF	water	Low Sulfur Fuel Oil	<1	<1	overwater	Dissipated	Repairs	NA	Fine TGLO	operator
8/13/2005	HE	water	Gasoline Blendstock	1	1	overwater	Dissipated	Training	NA	NONE	operator
11/30/2005	EF	water	High Sulfur Diesel	10	10	overwater	sorbent boom deployed	Planned Inspection & Maintenance	NA	NONE	operator
1/9/2006	HE	water	EHC 45	5	5	Shoreline/overwater	sorbent boom deployed	Training	NA	Fine GLO, USCG	operator
3/2/2006	EF	water	Lube Oil	10	10	overwater	vacum truck, pressure spray bulkhead	Repairs	NA	NONE	operator
5/8/2007	EF	water	Transmix	<1	<1	overwater	None	Repairs	NA	NONE	operator
8/27/2007	EF	water	Mineral Oil	84	84	overwater	Oil Mop called for clean-up	Line - Out of Service	N/A	Fine GLO, USCG	operator
5/8/2008	EF	water	Lube Oil	1	<1	overwater	Product water soluble, dissipated	Repairs	N/A	NONE	operator
6/21/2008	HE	water	America Core 150	1	<1	overwater	Oil Mop called for clean-up	Training	N/A	None	operator
7/2/2008	ef	water	Lube Oil	1	<1	overwater	sorbent boom deployed	Training	NA	NONE	operator
8/8/2008	HE	water	biodiesel	1	<1	overwater	dissipated	Training	NA	FINE USCG	operator
9/6/2008	HE	water	Diesel	1	<1	overwater	dissipated	Training	NA	Fine TGLO	operator
10/1/2008	HE	water	Transmix	1	<1	overwater	dissipated	REPA RS	NA	FINE TGLO, USCG	operator
10/7/2008	EF	water	Transmix	30	<30	Shoreline/overwater	GARNER CALLED IN FOR CLEAN UP	REPA RS	NA	FINE USCG, TGLO	operator
2/27/2009	EF	water	Lube Oil	1	<1	overwater	dissipated	REPA RS	NA	FINE USCG, TGLO	operator
7/2/2009	EF	water	Lube Oil	1	<1	overwater	sorbent boom deployed	REPLACED DOCK HOSE	NA	NONE	operator
8/5/2009	HE	water	biodiesel	3	<3	overwater	Oil Mop called for clean-up	REPA RS	NA	FINE USCG	operator
8/11/2009	EF	water	biodiesel	1	<1	overwater	sorbent boom deployed	REPA RS	NA	NONE	operator
12/8/2009	EF	water	biodiesel	756	<756	overwater	Oil Mop called for clean-up	REPA RS	NA	FINE USCG, TGLO	operator
3/5/2010	EF	water	Gasoline	0.25	< 25	overwater	dissipated	REPA RS	NA	NONE	operator
5/12/2010	HE	LAND	Lube Oil	420	0	LAND	USA ENVIRONMENTAL CLEAN UP	Training	NA	NONE	operator
7/24/2010	EF	water	Diesel	0.25	0.25	overwater	dissipated	REPLACED DOCK HOSE	NA	NONE	operator

9/8/2010	EF	Land	Lube Oil	5	0	Dike Wall	Absorbent pads Excavation of impacted soil	REPA RS	10K BBLs	NONE	Contractor
10/25/2010	HE	LAND	Toluene	451	0	LAND	Excavation of impacted soil	Training	50K gallons	NONE	operator
8/19/2011	EF	water	Gas Blend	2 oz	2 oz	overwater	dissipated	Repair	NA	Fine USCG, TGLO	operator
9/15/2011	EF	water	Diesel	1	1	overwater	Absorbent pads and boom	Repairs	NA	Fine USCG, TGLO	operator
11/4/2011	HE	water	ULS Diesel	1	1	overwater	dissipated	Training	NA	FINE USCG, TGLO	operator
5/3/2012	EF	water	Hydraulic Fluid	1 oz	1 oz	overwater	dissipated	Repairs	NA	Fine TGLO	operator
6/5/2012	EF	water	Pygas	0.5	0.5	overwater	dissipated	Repairs	NA	Fine USCG	operator
7/2/2012	HE	water	Oxo Feed	0.25	0.25	overwater	dissipated	Training	NA	Fine USCG	Operator
7/3/2012	EF	water	Transmix	0.02	0.02	overwater	dissipated	Repairs	NA	Fine USCG	operator
7/8/2012	EF	Water	Transmix	5	5	overwater	None	Repairs	NA	Fine USCG	operator
7/13/2012	EF	water	other	25	25	overwater	None	Repairs	NA	Fine USCG	operator
8/10/2012	HE	water	Lube Oil	0.01	0.01	overwater	None	Training	NA	Fine USCG	operator
8/14/2012	EF	water	Hydraulic Fluid	0.13	0.13	overwater	none	repairs	NA	Fine USCG	operator
8/28/2012	EF	water	Biodiesel	42	42	overwater	pulled boom	repairs	NA	Fine TGLO	operator
8/30/2012	EF	water	other	0.01	0.01	overwater	boom	repairs	NA	Fine USCG	operator
9/27/2012	HE	water	Hydraulic Fluid	0.25	0.25	overwater	none	Training	NA	Fine USCG	operator
6/10/2013	HE	water	Naphtha	210	84	overwater	dock was foamed	Training	NA	Fine TGLO	operator
7/28/2013	HE	Water	Lube Oil	1	1	overwater	none	Training	NA	Fine USCG/TGLO	operator
8/5/2013	HE	Land	Lube Oil	37375	0	Dike area contained spill	Remediation	Training	NA	Fine TGLO	operator

LEGEND: HE - Human Error  
EF - Equipment Failure  
UK - Unknown  
N/A - Not applicable



## A.10 HAZARD EVALUATION

### A.10-1 Age and condition of facility and components

The Kinder Morgan Galena Park Terminal has been in operation since 1935. Significant expansions of the original facility have occurred in 1960 and 1982. Kinder Morgan has an electronic maintenance work order system. All tankage is inspected in accordance with API 653. Tanks are equipped with high-level warning devices and cathodic protection. Piping systems have a pressure relief system that vents product to tankage when excess pressures occur. The high-level warning devices and the pressure relief systems are an aid to preventing tank overfills or major piping spills.



## A.11 DISCHARGE SCENARIOS

### A.11-1 Small and Medium Discharges

The following small and medium discharge scenarios are discussed with regard to normal operations at the terminal facility:

- Small Discharge (Average Most Probable Discharge)= <2,100 gallons (50 bbl)
- Medium Discharge (Maximum Most Probable Discharge)= 50,400 gallons (1,200 bbl)

### A.11-2 Spill during Loading of Surface Transportation (Truck Unloading Racks)

Proximity to down gradient wells, waterways, drinking water intakes: Down gradient wells --- none.

Waterways --- The truck unloading racks are located in various areas of the facility. Each loading rack is equipped with a collection system that will collect rainfall and spilled product and divert this liquid to the terminal wastewater system. All truck- loading areas are also equipped with spill response equipment (ie, absorbent boom and absorbent pads).

Drinking water intakes ---See Annex C.1-10. Drinking Water Intakes will be depicted on Environmental Sensitivity Indexes.

Proximity to environmentally sensitive areas --- See Annex C.1-10. Environmentally Sensitive Areas will be depicted on Environmental Sensitivity Indexes.

Likelihood discharge will travel offsite --- All loading of surface transportation is over concrete containment so that no chance of offsite travel is possible.

Location of material spilled --- Will be on a concrete containment area with collection system.

Material discharges --- Group I, II, and III.

Weather and aquatic conditions --- All loading operations are stopped during severe storm events due to lightning hazards. In the unlikely event that there is a medium-sized spill and overland sheet flow occurs during a severe storm event, product could reach the storm water drainage ditch or Houston Ship Channel.

Available remediation equipment --- See Spill Equipment list in this Annex.

Possibility of chain reaction --- none.

Direction of spill pathway --- See facility site/drainage map.

**A.11-3 Spill during Facility Maintenance**

Proximity to down gradient wells, waterways, drinking water intakes: Down gradient wells --- none.

Waterways --- All diked areas of the facility are located in close proximity to either a storm water drainage ditch that runs through the property or navigable waters via overland flow into the Houston Ship Channel. Drainage through the storm water ditches is regulated by valves.

Drinking water intakes ---See Annex C.1-10. Drinking Water Intakes will be depicted on Environmental Sensitivity Indexes.

Proximity to environmentally sensitive areas --- See Annex C.1-10. Environmentally Sensitive Areas will be depicted on Environmental Sensitivity Indexes.

Likelihood discharge will travel offsite --- There is an extremely low likelihood that offsite travel is possible.

Location of material spilled --- Spills would be over concrete containment, temporary impervious containment, or directly on the soil.

Material discharges ---Group I, II, and III.

Weather and aquatic conditions --- Maintenance operations do not occur during adverse weather conditions.

Available remediation equipment --- See Spill Equipment list in this Annex.

Possibility of chain reaction --- none.

Direction of spill pathway --- See facility site/drainage map.

**A.11-4 Spill from Facility Piping**

Down gradient wells --- none.

Waterways --- All diked areas of the facility are located in close proximity to either a storm water drainage ditch that runs through the property or navigable waters via overland flow into the Houston Ship Channel. Drainage through the storm water ditches is regulated by valves.

Drinking water intakes ---See Annex C.1-10. Drinking Water Intakes will be depicted on Environmental Sensitivity Indexes.

Proximity to environmentally sensitive areas --- See Annex C.1-10. Environmentally Sensitive Areas will be depicted on Environmental Sensitivity Indexes.

Likelihood discharge will travel offsite --- There is an extremely low likelihood that offsite travel is possible.

Location of material spilled --- Spills would be over concrete containment, temporary impervious containment, or directly on the soil.

Material discharges ---Group I, II, and III.

Weather and aquatic conditions --- Facility operations do not occur during adverse weather conditions.

Available remediation equipment --- See Spill Equipment list in this Annex.

Possibility of chain reaction --- none.

Direction of spill pathway --- See facility site/drainage map.

**A.11-5 Spill from Pumping Stations**

Down gradient wells --- none.

Waterways --- All dike areas of the facility are located in close proximity to either a storm water drainage ditch that runs through the property or navigable waters via overland flow into the Houston Ship Channel. Drainage through the storm water ditches is regulated by valves.

Drinking water intakes ---See Annex C.1-10. Drinking Water Intakes will be depicted on Environmental Sensitivity Indexes.

Proximity to environmentally sensitive areas --- See Annex C.1-10. Environmentally Sensitive Areas will be depicted on Environmental Sensitivity Indexes.

Likelihood discharge will travel offsite --- There is an extremely low likelihood that offsite travel is possible.

Location of material spilled --- Spills would be over concrete containment, temporary impervious containment, or directly on the soil.

Material discharges ---Group I, II, and III.

Weather and aquatic conditions --- Facility operations do not occur during adverse weather conditions.

Available remediation equipment --- See Spill Equipment list in this Annex.

Possibility of chain reaction --- none.

Direction of spill pathway --- See facility site/drainage map.

**A.11-6 Spill from Storage Tanks**

Down gradient wells --- none.

Waterways --- All diked areas of the facility are located in close proximity to either a storm water drainage ditch that runs through the property or navigable waters via overland flow into the Houston Ship Channel. Drainage through the storm water ditches is regulated by valves.

Drinking water intakes ---See Annex C.1-10. Drinking Water Intakes will be depicted on Environmental Sensitivity Indexes.

Proximity to environmentally sensitive areas --- See Annex C.1-10. Environmentally Sensitive Areas will be depicted on Environmental Sensitivity Indexes.

Likelihood discharge will travel offsite --- There is an extremely low likelihood that offsite travel is possible.

Location of material spilled --- Spills would be over concrete containment, temporary impervious containment, or directly on the soil.

Material discharges ---Group I, II, and III.

Weather and aquatic conditions --- Facility operations do not occur during adverse weather conditions.

Available remediation equipment --- See Spill Equipment list in this Annex.

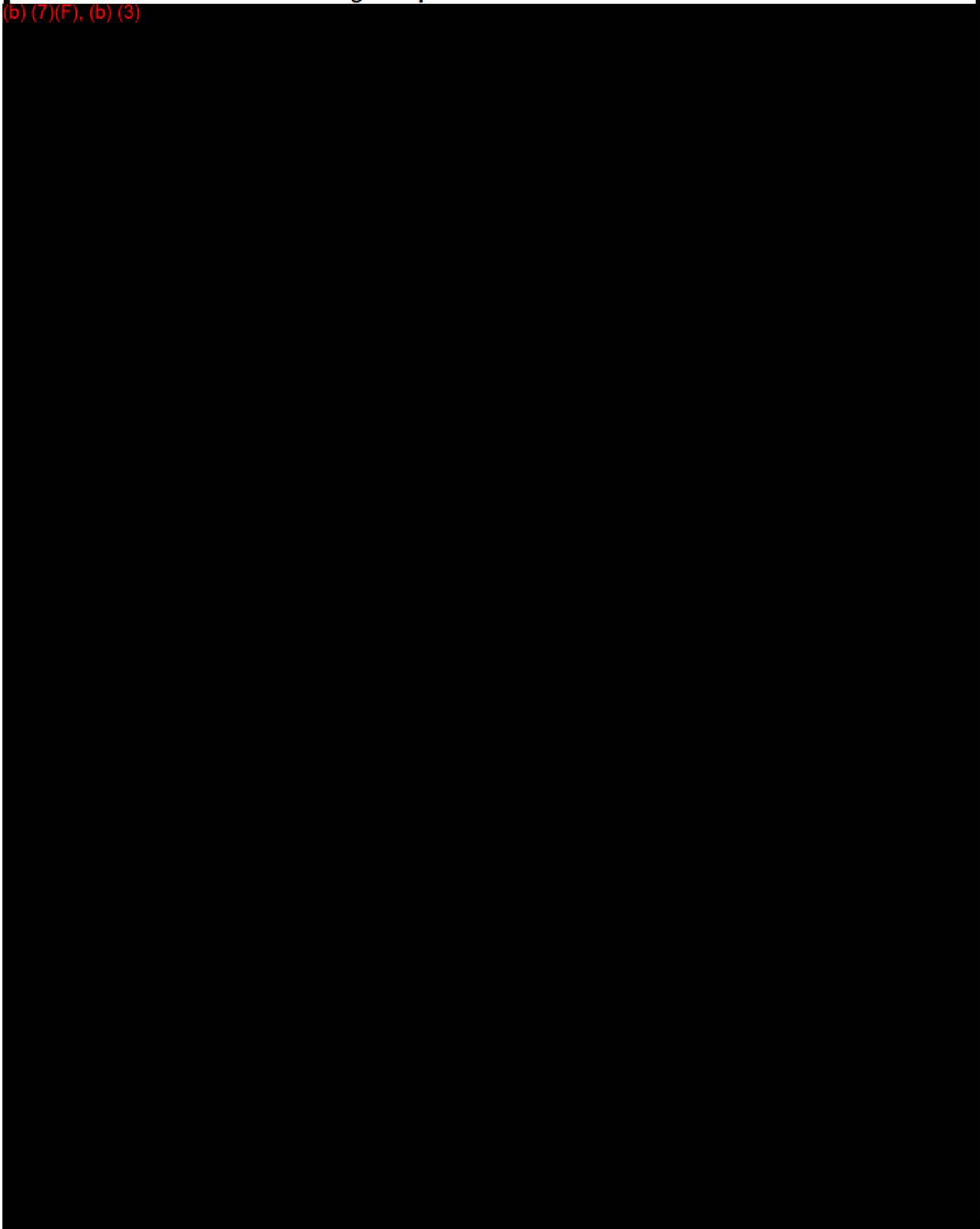
Possibility of chain reaction --- none.

Direction of spill pathway --- See facility site/drainage map.



**A.11-7 Worst-Case Discharge Response Scenario**

(b) (7)(F), (b) (3)



## **A.11-8 Real Time Account of Spill Scenario**

**July 4, 20xx**

0530 - An operator spotted the tornado that hit Tank 150-101

0530 - The operator immediately notifies his foreman of the situation by radio and informs the foreman he will head over to the area and meet the foreman there.

0534 - The foreman arrives at the scene.

0536 - The foreman who is the initial response Incident Commander (IC) calls for deployment of the response boat and begin booming across the slip

0536 - The foreman calls the marine scheduler to call the Incident Commander (IC) and Liaison Officer (LO) immediately and relay the incident.

0536 - The IC tells the marine scheduler to call-out the Galena Park ERT via the all-call.

0539 - The LO contacts the OSRO and informs them of the incident and minimum equipment and manpower needed.

0540 - The LO contacts the USCG (Houston) for an emergency shut-down of the channel and informs them of the incident.

0541 - The LO contacts HL&P of the incident and assists in response to protect the water intake if possible.

0545 - The LO notifies appropriate agencies in transit to the terminal.

0600 - Boom across Slip has been deployed and secured.

0620 - The IC arrives and relieves the foreman IC of command and establishes a command post at the Customer Service Center (CSC). The LO arrives and completes any agencies not called while in transit. SOFR arrives and establishes Site Safety Plan and decon procedures. The Spill Response Contractor arrives.

0625 - Containment of oil on land begins by laying absorbents and building a dike.

0630 - Kinder Morgan and the boat crew are instructed to assist the OSRO in deployment of deflection boom.

0645 - OSRO boats are in the water and ready.

0730 - Kinder Morgan and contractor equipment is used to begin recovery of the oil from the water.



0700 - Land response equipment is set-up and additional equipment dispatched. Clean-up of oil on the land begins.

0730 - Agency officials arrive and the Uniform Command System is put in place.

0800 - Clean-up activities are monitored by ICS/ERT members and continue throughout the night.

#### **July 5, 20xx**

0730 - OSRO tailgate safety meeting conducted.

0800 - Clean-up of release is continued to be monitored.

0830 - Planning meeting in progress (salvageable oil, temporary storage, short term and long term goals, cost, etc.).

0900 - Operation meeting in progress (update, progress, recovery rate, etc.) .

0945 - Shoreline Advisory Team evaluates shoreline area.

1015 - Liaison Officer completes HBU and Houston release notifications as well as claim information.

1600 - Follow-up reports are put together.

#### **July 6, 20xx**

0730 - OSRO tailgate safety meeting conducted.

0800 - Clean-up activities continued to be monitored.

0830 - Planning meeting in progress (salvageable oil, temporary storage, short term and long term goals, cost, etc.).

0900 - Operation meeting in progress (update, progress, recovery rate, etc.).

0945 - Shoreline Advisory Team evaluates shoreline area.

#### **July 7, 20xx**

0800 - Evaluation Team of Kinder Morgan and Agencies deemed clean-up completed.

1100 - Environmental Department begins disposal options investigations.

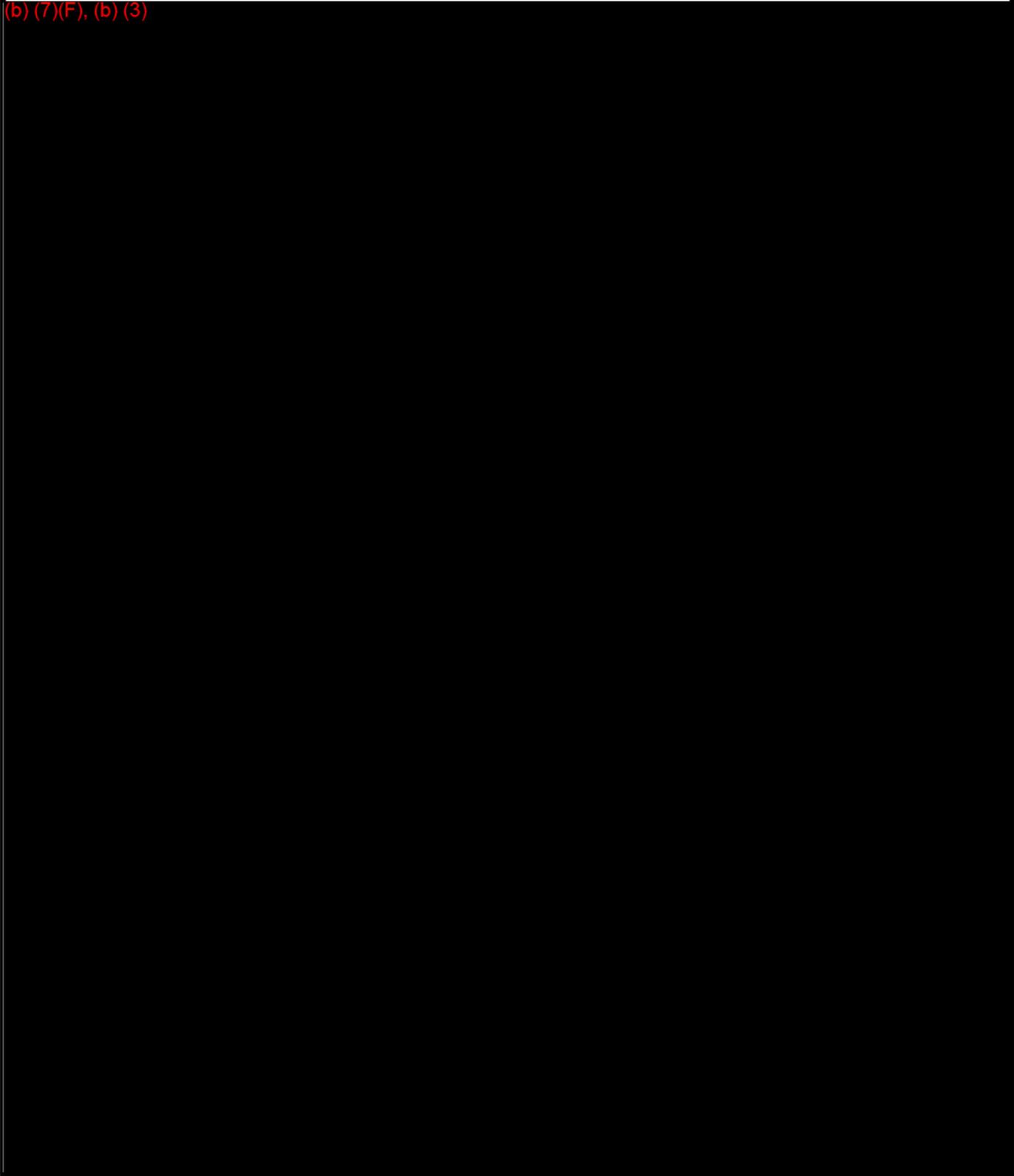
1600 - All reports required are completed to the extent practical.



## A.12 WORST CASE DISCHARGE CALCULATIONS

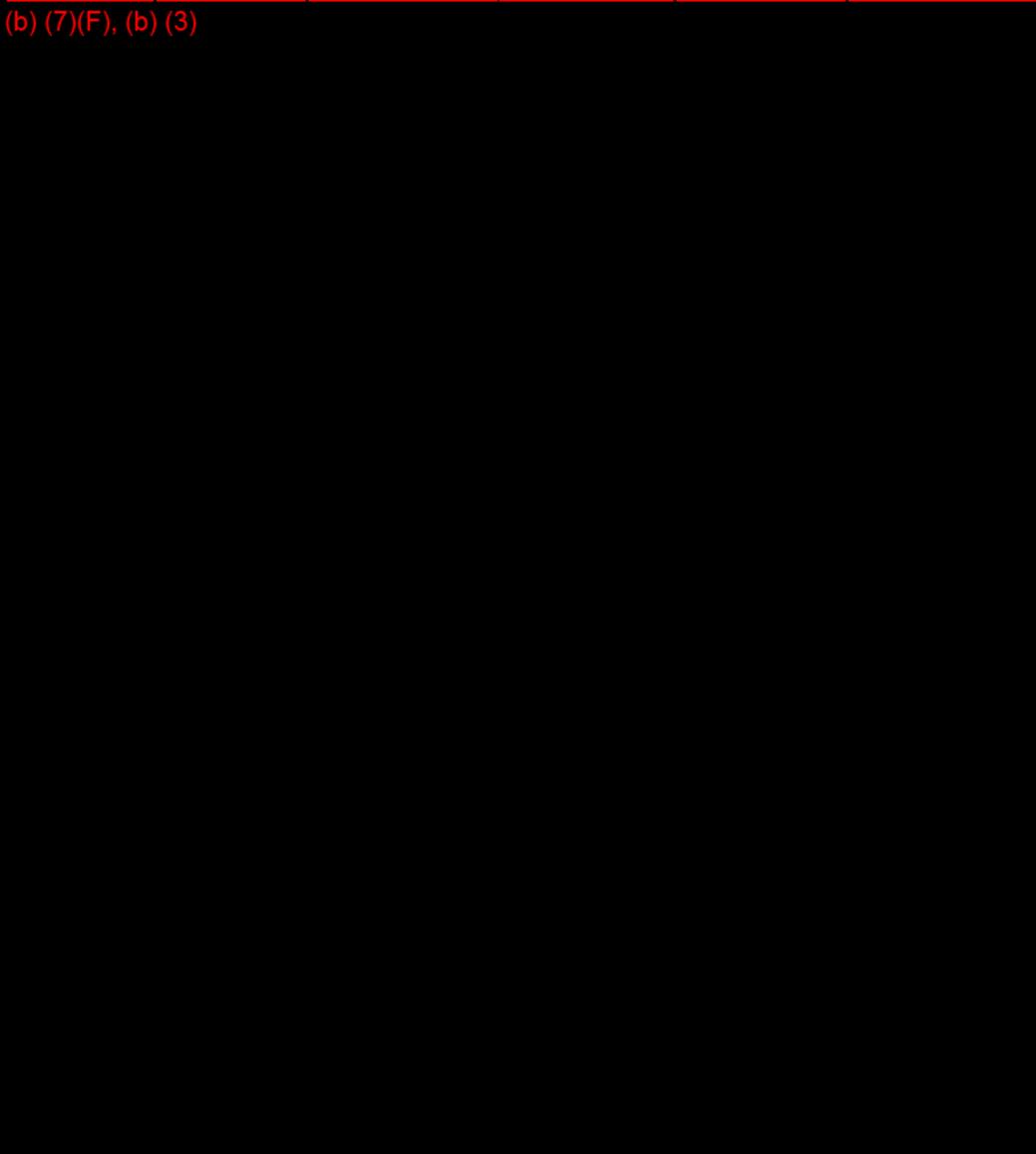
### A.12-1 Worst-Case Discharge USCG

(b) (7)(F), (b) (3)





**USCG WCD by Group of Oil**

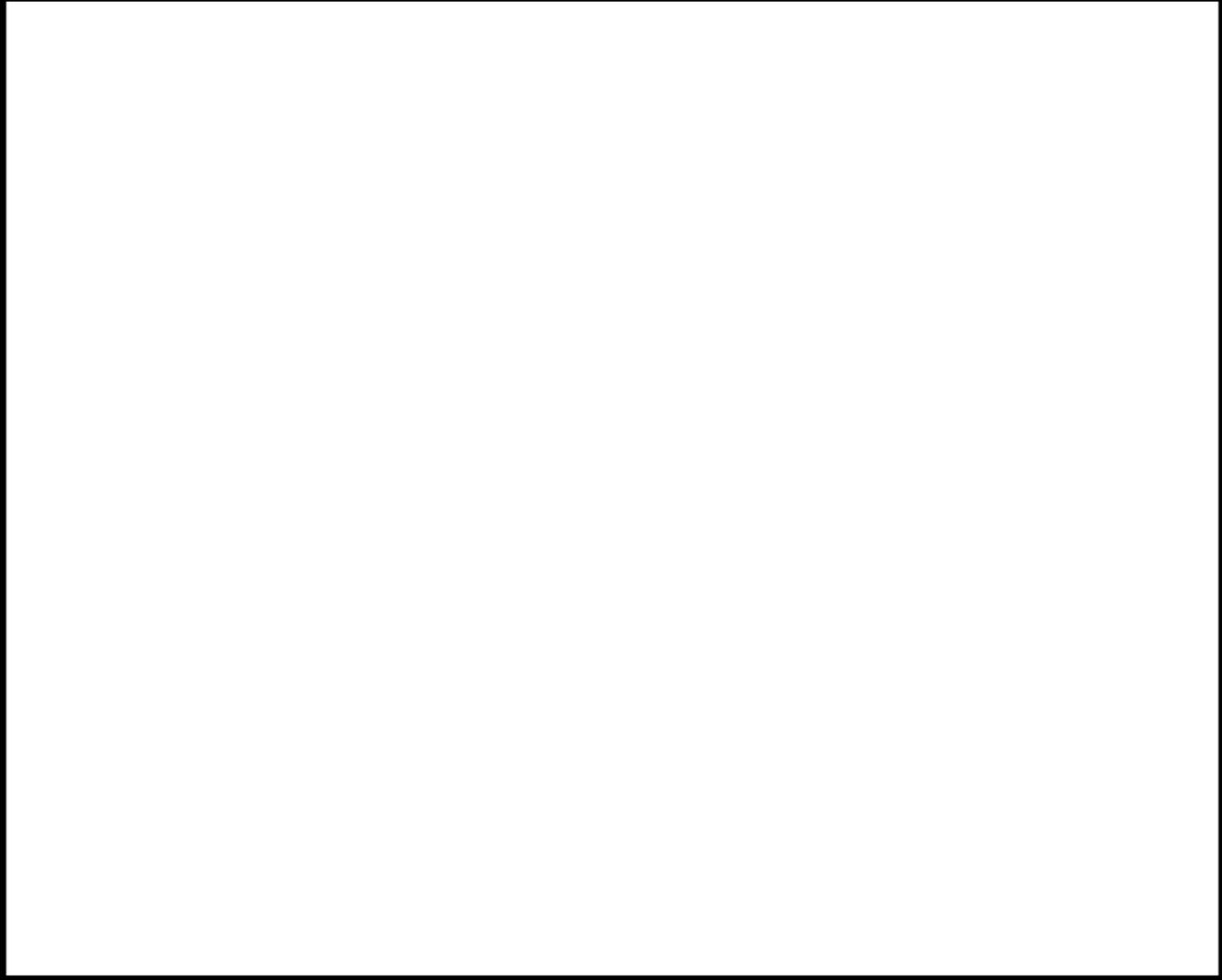
<b>Oil Group</b>	<b>Max. Flow (bbls/hr)</b>	<b>Pipe Length (Feet)</b>	<b>Pipe Diameter (Inches)</b>	<b>Piping Capacity (bbls)</b>	<b>WCD (bbls)</b>
<p>(b) (7)(F), (b) (3)</p> 					

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Annex A:  
Facility  
Information

(b) (3), (b) (7)(F)



### A.12-3 Worst-Case Discharge EPA

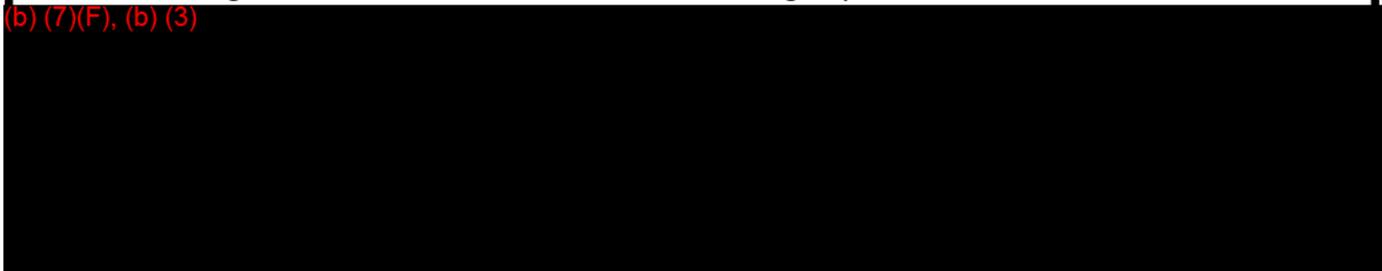
Under EPA requirements, the worst case discharge is defined as follows:

- The capacity of all aboveground storage tanks at the facility without adequate secondary containment, plus
- 100% of the capacity of the largest single above ground storage tank within a secondary containment area or 100% of the combined capacity of a group of above ground storage tanks permanently manifolded together, whichever is greater if the facility is adjacent (within 1/2 mile) to a navigable water; or
- 100% of the capacity of the largest single above ground storage tank within a secondary containment area or 100% of the combined capacity of a group of above ground storage tanks permanently manifolded together, whichever is greater if the facility is not adjacent to a navigable water.

The worst-case discharge was calculated using the total volume of the largest storage tank each oil group, i.e. Groups I and II.

The following are the worst-case scenarios for each oil group:

(b) (7)(F), (b) (3)

A large black rectangular redaction box covers the content of the page below the text "(b) (7)(F), (b) (3)".



## A.13 PLANNING VOLUME CALCULATIONS

### A.13-1 Worst-Case – Group I

#### Worksheet to Plan Volume of Response Resources for Worst-Case Discharge

Calculation	Group I Oil
(b) (7)(F), (b) (3)	

**A.13-2 Worst-Case – Group II****Worksheet to Plan Volume of Response Resources for Worst-Case Discharge**

Calculation	Group II Oil
(b) (7)(F), (b) (3)	

**A.13-3 Worst Case – Group III****Worksheet to Plan Volume of Response Resources for Worst Case Discharge**

Calculation	Group III Oil
(b) (7)(F), (b) (3)	

**A.13-4 Worst Case-Pipeline (LCRC) – Group I****Worksheet to Plan Volume of Response Resources for Worst Case Discharge**

Calculation	Group 1 Oil
(b) (7)(F), (b) (3)	

## A.14 PLANNING DISTANCE CALCULATIONS

### A.14-1 Planning Distance Calculation

The procedures contained in the Environmental Protection's Agency's regulations on oil pollution prevention for non-transportation-related onshore facilities at 40 CFR part 112, appendix C, Attachment C-III have been used to calculate the following distances I

Per 33 CFR 154.1035(b)(4)(iii) the EPA method found in 40 CFR part 112, appendix C, Attachment C-III may be substituted for USCG required distances in tidal and non-tidal waters.

$$D = v \times t \times c$$

v = Average surface velocity (ft/sec) of the water based on measured velocities

t = Time interval (hours) for response actions

c = Constant conversion factor = 0.68 sec-mile/hr-ft

D = Distance (miles) downstream that oil could travel before being contained

### A.14-2 Planning Distance Calculation for Oil Transport on Moving Navigable\* Houston Ship Channel

$$v = 2.2 \text{ knots} \times 1.68781 \text{ ft/s/knots}^{**}$$

$$t = 15 \text{ hours}$$

$$c = .68$$

$$D = 37.8 \text{ miles}$$

\*Planning distance based on a discharge would impact water directly at the marine transfer area.

\*\* Average surface velocity taken from "NOAA Technical Report NOS CS 6, High-Resolution Houston Ship Channel ADCP And CTD Survey: Model-Data Intercomparisons" located here: [http://www.nauticalcharts.noaa.gov/csdl/publications/TR\\_NOS-CS06\\_FY2000-Schmalz\\_ADCP\\_CTD.pdf](http://www.nauticalcharts.noaa.gov/csdl/publications/TR_NOS-CS06_FY2000-Schmalz_ADCP_CTD.pdf)



## A.15 DEMONSTRATION OF ADEQUATE RESPONSE CAPABILITY

### A.15-1 On-Site Equipment

On-site equipment that could be used by Kinder Morgan personnel in the case of a discharge listed on the subsequent pages is intended to satisfy the U.S. Coast Guard requirements found in 33 CFR 33 CFR 154.1035 (b)(4)(iii). Due to the proximity of the Pasadena Terminal and Galena Park Terminal, the equipment listed is intended to be a shared equipment list, meaning that no matter where the equipment may be stored, kept and/or maintained it can at any time be used in the case of a discharge by the opposite facility. Additionally, if equipment indicated on the following list is integrated by either facility in executing the Response Exercise Program in Section 3 of this plan, the opposite facility may take credit for any equipment deployment.



CONTRACTOR BLOCK

NOTES

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
		A	GENERAL UPDATE	06-17-08	JLM	JS	JS

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DRAWN S. MARTIN APPROVED \_\_\_\_\_ REGIONAL ENGR.

CHECKED \_\_\_\_\_

APPROVED \_\_\_\_\_ PROJ. ENGR.

GALENA PARK TERMINAL

PLOT PLAN

NORTH, EAST, CENTRAL, AND WEST PLANTS

EMERGENCY RESPONSE EQUIPMENT

DWG. NO. **88-MS-0016**

SCALE NONE TERMINAL 88 DATE

**A.15-2 Oil Spill Removal Organizations (OSROs)**

The oil spill removal organizations (OSROs) listed below, secured by contract or other means, are capable of responding to the maximum most probable and worst case discharge, and are able to supply the equipment and supplies to meet the guidelines of Section 11 and 11.4 of Enclosure (1) to NVIC 12- 92. ***These OSROs have been classified by the USCG in the Sector Houston/Galveston COTP Zone.***

NOTE: At least 20% of the equipment for cleanup can be used close-to-shore.

Garner Environmental  
1717 W. 13th St.  
Deer Park, Texas 77536  
281-930-1200 (24 Hour Phone Number)  
(800) 424-1786 (24 Hour Phone Number)

## \* Garner Environmental Services - OSRO Number: 27

Operating Environment	Facility MMPD	Facility WCD1	Facility WCD2	Facility WCD3	Vessel MMPD	Vessel WCD1	Vessel WCD2	Vessel WCD3
Inland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
River or Canal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Oil Mop, LLC  
450 Preston Ave  
Pasadena TX. 77503  
(800) 645-6671 (24 Hour Phone Number)

\*Oil Mop Inc. - OSRO Number: 12 - *Group V Capabilities*

Operating Environment	Facility MMPD	Facility WCD1	Facility WCD2	Facility WCD3	Vessel MMPD	Vessel WCD1	Vessel WCD2	Vessel WCD3
Inland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
River or Canal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

T & T Marine  
3110 E. Pasadena Freeway  
Pasadena TX. 77503  
1-409- 744-1222 (24 Hour Phone Number)

\*T&T Marine Salvage, Inc. - OSRO Number: 115 - *Group V Capabilities*

Operating Environment	Facility MMPD	Facility WCD1	Facility WCD2	Facility WCD3	Vessel MMPD	Vessel WCD1	Vessel WCD2	Vessel WCD3
Off Shore	Yes	Yes	~	~	Yes	Yes	Yes	~
Near Shore	Yes	Yes	~	~	Yes	Yes	Yes	~
Inland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
River or Canal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\*Classification Information provided at the following website: <https://carr.uscg.mil/UserReports/WebClassificationReport.aspx>

The oil spill response organizations referenced above have the trained personnel necessary to continue spill response operations for the **first seven (7) days** of the response (in accordance with 33 CFR 154.1035(b)(4)(iii)(A)). These contracted personnel would be employed to protect any threatened sensitive areas.

\*The listed primary OSRO has oil recovery devices with an effective daily rate of 2,861 barrels/day available from their Deer Park Facility. Kinder Morgan - Pasadena has on-site oil/water recovery devices with maximum capacity of 25,000 barrel (wastewater tank). Additionally, the primary OSRO listed liquid recovery storage equipment within six (6) hours delivery time at 214,048 barrels capacity.

#### **A.15-3 Fire Fighting Equipment**

The following firefighting equipment is available at the facility:

- 20 and 150 pound fire extinguishers capable of fighting type A, B, and C fires are located throughout the terminal.
- One 3,000 gpm National Foam truck with 1,000 gallons of foam, 1,000 feet of 5" hose, 700 feet of 3" hose, and 400 feet of 1 3/4" hose located in the Fire House.
- One 1,000 gpm National Foam truck with 1,500 gallons of foam, 1,000 feet of 5" hose, 600 feet of 2 1/2" hose, and 300 feet of 1 3/4" hose located in the Fire House.
- One portable trailer with 500 gallons of AFFF ATC foam stored at the Fire House.
- 12", 10", and 8" fire mains located throughout the plant with fire plugs located approximately every 150 feet and sectional block valves located so that any section of the terminal can be isolated to increase water volume. This system is supplied by three interconnected pumps located at #2 Ship Dock, #3 Ship Dock, and #3 Barge Dock which pump fire water from the Houston Ship Channel.
- Ship and barge docks, truck and tank car racks, and manifolds are protected by fire monitors with foam application.
- Other miscellaneous firefighting equipment is located at the Fire House.
- The ERT has been issued bunker gear, boots, etc. for use in fighting fires.

#### **A.15-4 Decontamination Equipment**

At a minimum, the following equipment will be maintained on-site for decontamination purposes:

- High pressure water
- Water soluble cleaning solution
- Sponges, brushes and mops for decontamination
- Plastic material for ground covering

**A.15-5 First Aid Supplies**

The following first aid supplies are available for emergency response actions:

- Stretcher
- Burn pack
- Portable eye wash
- Emergency oxygen
- Emergency deluge shower and eyewash
- Emergency Trauma Kits
- Schedulers Truck
- Fire Truck
- Control Center
- Emergency Response Truck (Hummer)
- Automated External Defibrillator (AED)
- First Aid stations located in the following areas:
  - Operations building
  - Maintenance warehouse
  - Lab

**A.15-6 Health and Safety for Spill Cleanup Contractors**

Contractors that have a service agreement with Kinder Morgan as well as to those that are brought on site for back up assistance at the time of issuance of the work authorization. A member of the Incident Command System will accompany contractors and will be supervised by designated employee(s).

The contractor will provide for health and safety protection for its employees. The contractor will generate a site (incident) specific health and safety plan to protect Kinder Morgan and contractor's employees for the incident cleanup/remediation activities.



## A.16 ANALYSIS OF THE POTENTIAL FOR A SPILL

### A.16-1 Nature of Hazards

The Galena Park Terminal loads/offloads chemicals, and refined petroleum products. Potential hazards and incidents that may result in a spill include:

- Hose, gasket or valve failure; Pump failure;
- Vehicular accident, including train derailment; Digging operation;
- Post-Accident cleanup activity; Crossing by heavy equipment; Overfill;
- Other unintentional spill on land and water; and
- Sabotage.

### A.16-2 Discharges

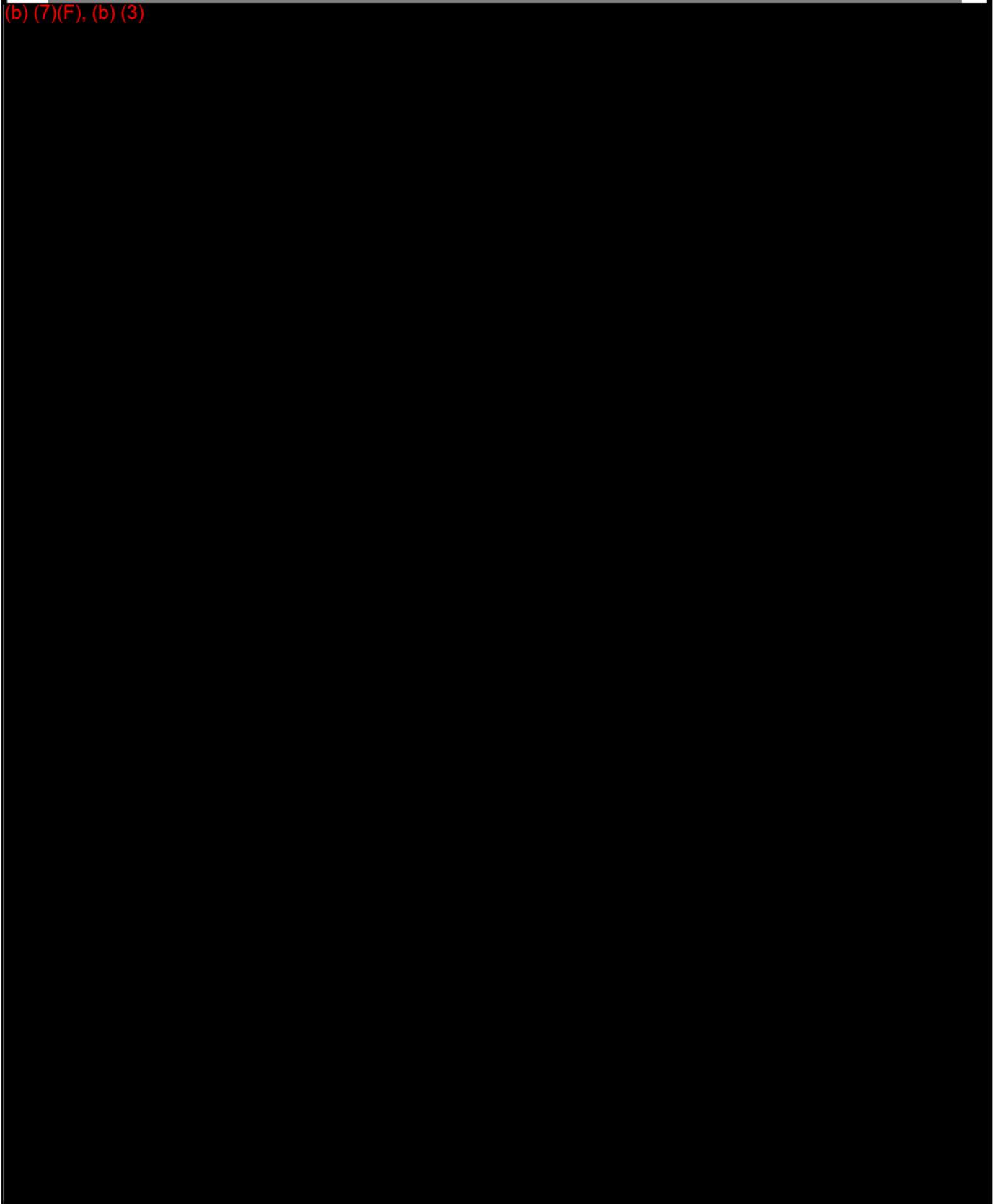
The Galena Park Terminal is located in Harris County on the Houston Ship Channel (Buffalo Bayou). This is a low impact area containing fine-grained sand, and seawalls, bulkheads, and revetments.

The "Texas General Land Office Environmentally Sensitive Area Map" and "Threatened & Endangered Species for the Texas Gulf Region" Annex C identifies sensitive areas and vulnerable receptors along the Houston Ship Channel, and should be referenced in an incident to determine protection priorities.



## A.17 EVACUATION AND/OR SHELTERING-IN-PLACE

(b) (7)(F), (b) (3)

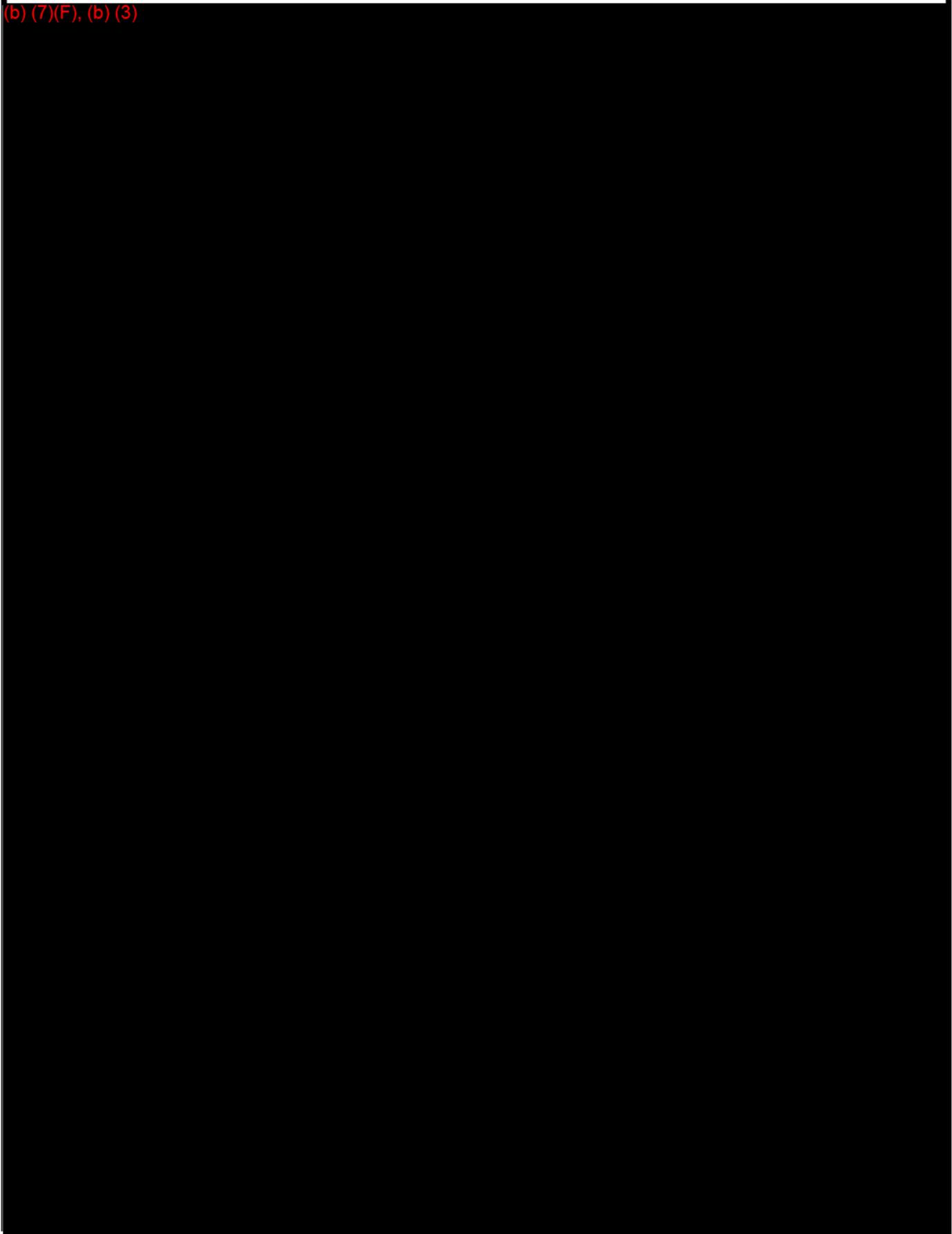


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Annex A:  
Facility  
Information

(b) (7)(F), (b) (3)



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GALENA PARK TERMINAL  
PLOT PLAN  
MUSTER AREAS & EVACUATION ROUTES  
NORTH, EAST, CENTRAL, AND WEST PLANTS

DRAWN J.L.NORRIS  
CHECKED JS  
APPROVED JA  
PROJ. ENGR.

APPROVED PA  
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DWG. NO. **88-MS-0143**  
SCALE NONE TERMINAL 88 DATE 09-01-2010

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
		A	ISSUED FOR REVIEW	09-01-10	J.L.M	JS	JS



## **Annex B – Table of Contents**

**B.1 Notifications Procedures**

**B.2 Oil Spill Removal Organizations (OSROs)**



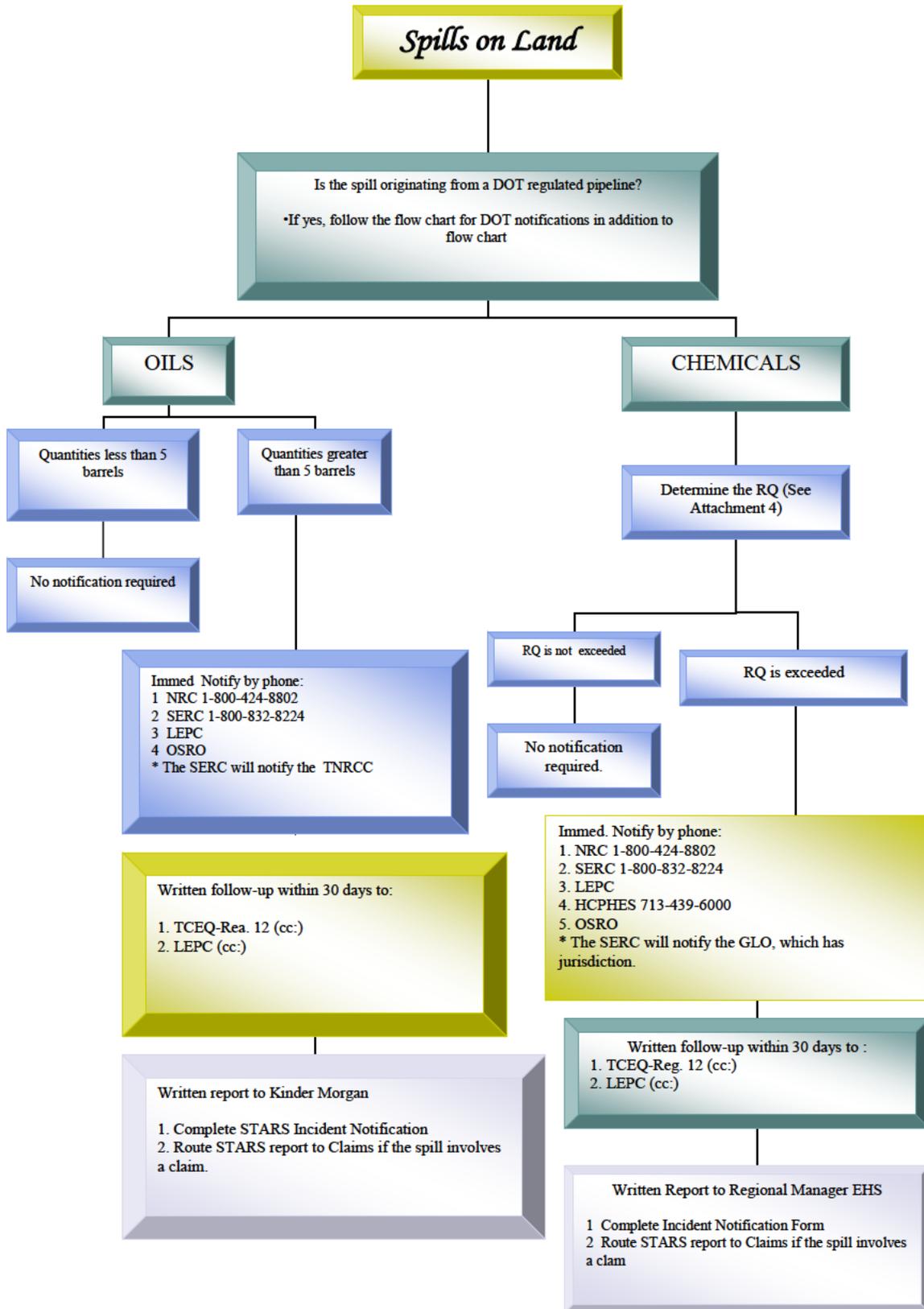
## B.1 NOTIFICATION PROCEDURES

All notification procedures can be found in the Core Plan, Section II.

In no event shall notification be delayed because the immediate supervisor is inaccessible. Authorization is given to bypass management levels if necessary to provide timely notification to appropriate management.

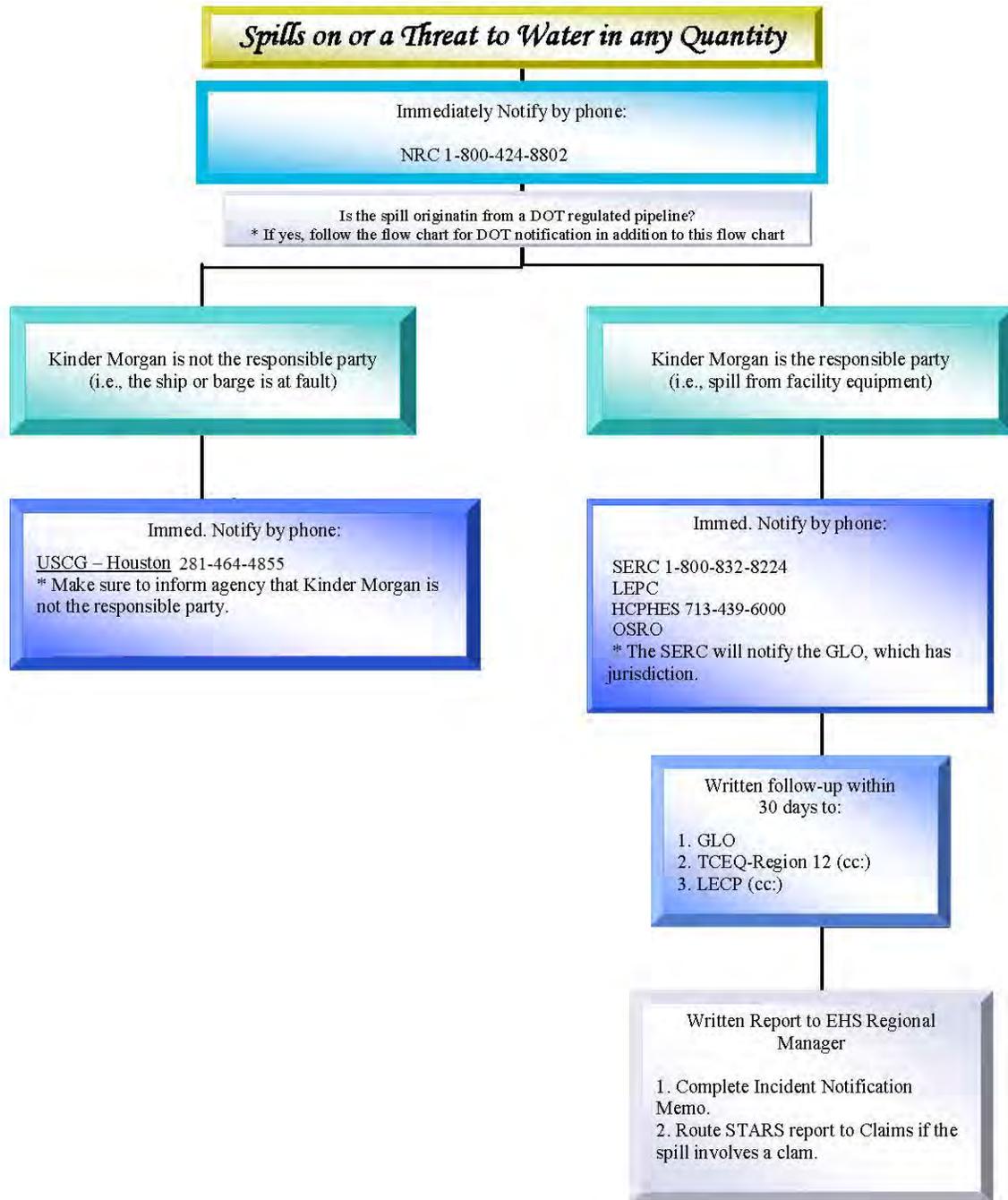
# ICP SPILLS on LAND

Figure III.2.c.ii

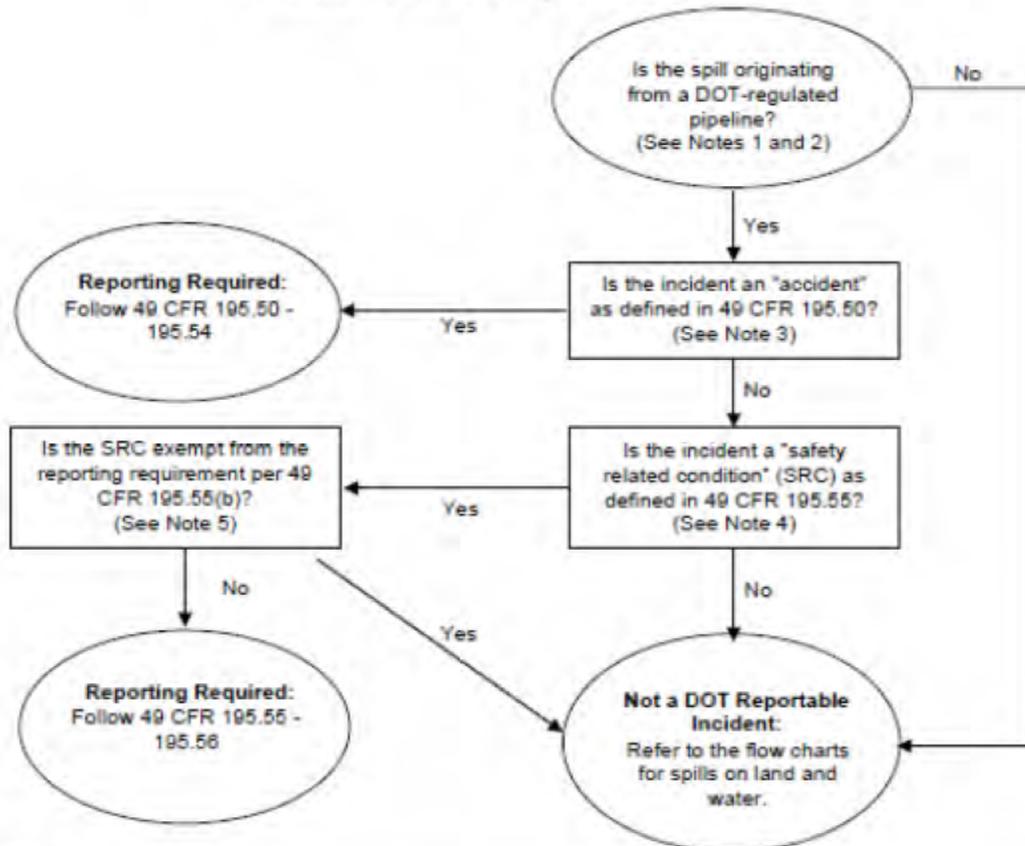


# ICP Spills on or a Threat to Water

Figure III.2.c.iii



## Incidents Involving DOT Pipelines



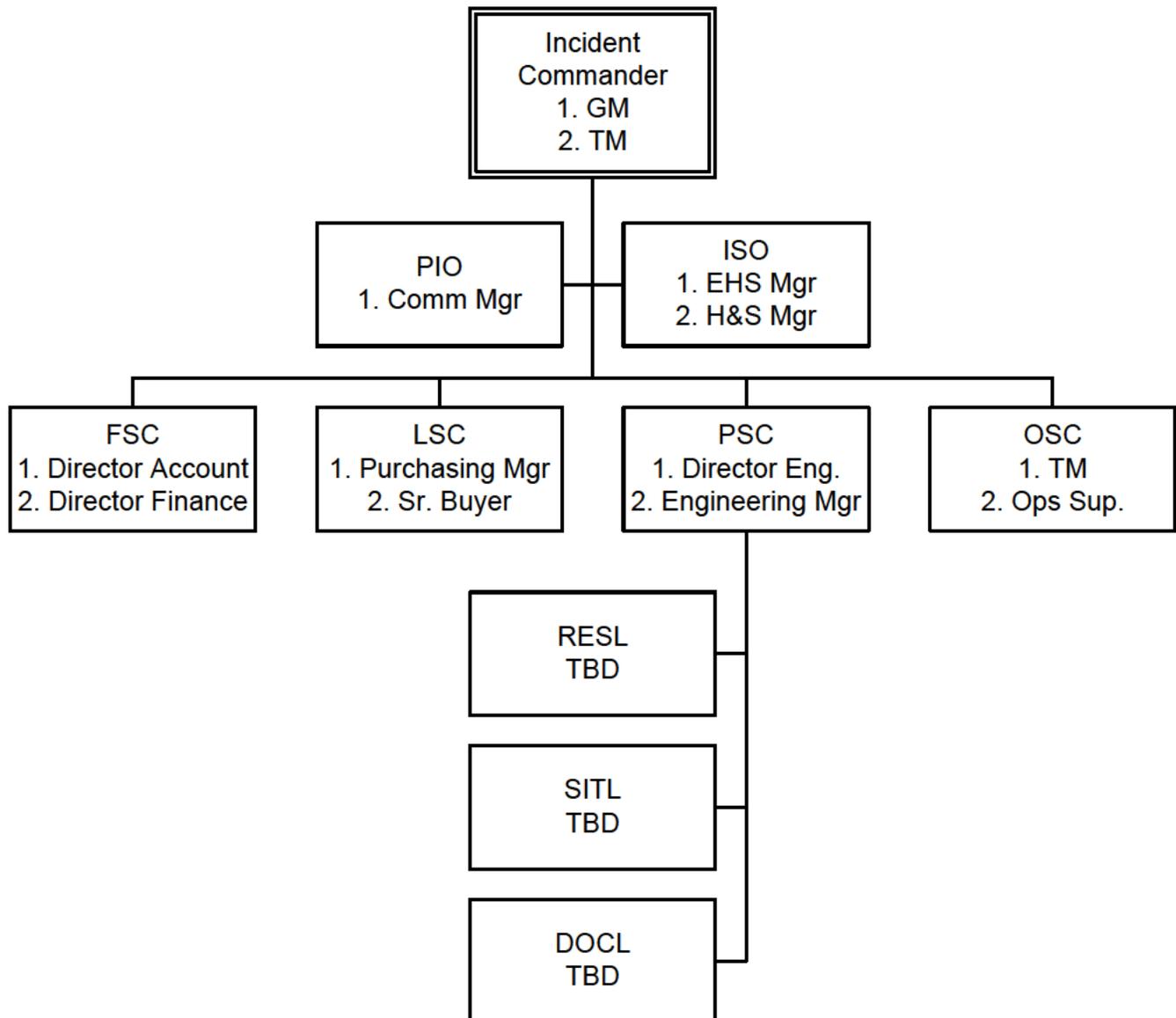
### NOTES

- 49 CFR 195.52(a)(4) requires immediate telephonic reporting to the NRC for any spill to water that "resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines."
- Accidents are defined as: a) explosion or fire not intentionally set by the operator; b) loss of 50 bbls or more of hazardous liquid or carbon dioxide, c) escape, to the atmosphere, of more than 5 bbls of highly volatile liquids\*, d) death or any person, e) bodily harm\*\* to any person, or f) estimated property damage exceeding \$50,000.00.
- SRC's are defined as: a) general corrosion that has reduced the wall thickness to less than that required for MOP, b) localized pitting to a degree where leakage might result, c) environmental causes, such as earthquakes, landslides, or floods that impairs the pipeline's serviceability, d) any material defect or physical damage that impairs serviceability of the pipeline that constitutes and emergency, or g) any SRC that could lead to an imminent hazard.
- A report is not required for an SRC that exists on a pipeline that is more than 220 yards from any building intended for human occupancy or outdoor place of assembly, except within the right-of-way of an active railroad, street, or highway, or where a body of water could be reasonably suspected to be polluted during a release.

\* Highly volatile liquid: a hazardous liquid which will form a vapor cloud when released to the atmosphere and has a vapor pressure exceeding 40 psia at 100 degrees F.

\*\* Bodily harm: loss of consciousness, necessity to carry a person from the scene, or the necessity for medical treatment.

## B.1-2 Organization Chart



**B.1-3 Agency Notification Form****NOTE: Initial notification must not be delayed pending collection of all information.**

INFORMATION ON DISCHARGE	
<b>INVOLVED PARTIES</b>	
<b>(A) Reporting Party</b>	<b>(B) Suspected Responsible Party</b>
Name:	Name:
Phone(s):	Phone(s):
Facility: KM Liquids Terminals LLC	Facility:
Address:	Address:
City:	City:
State: Texas	State:
Zip:	Zip:
Were Materials Released (Y/N)	Calling for Responsible Party
<b>INCIDENT DESCRIPTION</b>	
<b>Source and/or Cause of Incident</b>	
<b>Incident Discovered</b>	
Date: _____ Time: _____	<b>EHS Notified:</b>
	Date: _____ Time: _____
<b>Incident Address/Location</b>	
Distance from City:	TNRC Waste # _____; Air # _____; EPA ID # _____
Storage Tank Container Type Above Ground (Y?N)? Below Ground (Y/N)? Unknown	Tank Capacity: Facility Capacity:
Latitude Degrees:	Mile Post or River Mile
Longitude Degrees:	
<b>Materials</b>	
Released Quantity/Unit of Measure: Quantity in Water:	Released Material RQ per _____ : Y/N
<b>WEATHER CONDITIONS:</b>	
<b>REMEDIAL ACTION:</b>	
Actions Taken to Correct or Mitigate the Incident	
<b>IMPACT</b>	
Number of Injuries	Number of Facilities
Were there evacuations (Y/N)	
Was there any damage (Y/N)?	Damage in Dollars: _____ NOTE: _____
<b>CALLER NOTIFICATIONS</b>	
<b>Footnote:</b> 1. Initial Notifications should be made within 15 minutes to NRC, SERC, USCG, & ERL	
2. Notification within 24 hours to TCEQ & HCPHES 3. Only if it affects the community	
4. Incidents involving DOT Pipelines (Determine reporting requirement using DOT Flow Chart) Notifications within 2 hrs.	
Agency: NRC SERC USCG LEPC HCPHES ERL	
Phone #: 800-424-8802 800-832-8824 713-671-5100 713-674-5311 713-920-2831	
Case #: _____	
Contact: _____	
Time: _____	
Agency: DOT TXRCC	
Phone #: 800-424-8802 512-463-6788	
Case #: _____	
Contact: _____	
Time: _____	

**B.1-4 Internal Notification Phone List**

<b>Qualified Individual</b>	
<b>Name</b>	<b>Contact Number (24 Hours/Day)</b>
<b>Primary</b>	
David Nevada	281-635-4751
<b>Alternate</b>	
Jeff Hersperger	713-202-9183

<b>Management</b>	
<b>Name</b>	<b>Contact Number (24 Hours/Day)</b>
William (Pat) Brown	281-687-8422
TC Pyron	713-708-1000
Dave Nevada	281-635-4751
Jeff Hersperger	713-202-9183
Bruce Tylock	713-806-6849
Patrick Rhoden	281-753-9641
Larry Pierce	281-330-2981

**B.1-4 Internal Notification Phone List (Cont'd)**

<b>Spill Management Team</b>				
Response Team Positions	Primary Name	Work/Emergency Contact	Alternate Name	Work/Emergency Contact
<b>INCIDENT COMMAND</b>	Jeff Herperger	713-202-9183	Dave Nevada	281-635-4751
<b>COMMAND STAFF</b>				
Safety Officer				
Public Information Officer	Larry Pierce	281-3302981		
ISO	Bruce Tylock	713-806-6849	Patrick Rhoden	281-753-9641
<b>GENERAL STAFF</b>				
Operations Chief	Dave Nevada	281-635-4751	TC Pyron	713-252-7398
Planning Chief	Gary Tredup	713-248-3078	Allen Rhodes	713-201-8762
Documentation Unit Leader	Lynette Cleburn	713-898-5209		
Situation Unit Leader	Ian Baierlipp	817-751-2622		
Resource Unit Leader	Patrick Rhoden	281-753-9641		
Finance Chief	Andy Wu	281-620-8735	Brad Miller	281-384-2698
Logistics Chief	Brian Lucania	201-705-3162	Randy Burton	281-704-3331

In addition to the personnel listed above as the Spill Management Team, the facility has an active Emergency Response Team (ERT) that can be reached via cell/pager/text in the event of an emergency. The ERT is utilized during fire and spill response emergencies. All ERT members have a response time of 5 minutes and have received appropriate training as discussed in the Section 3 of the Core Plan. The Terminal Manager is responsible for maintaining a current roster of the ERT.

**B.1-5 Oil Spill Removal Organizations (OSROs)**

<b>Oil Spill Removal Organizations</b>		
Name	Contact Number (24 Hours/Day)	Response Time
Garner Environmental	800-424-1786 713-920-1300	.5 to 1 Hr.
OMIES	800-645-6671	.5 to 1 Hr.
T&T Marine	409-744-1222	.5 to 1 Hr.
<b>FIRE RESPONSE</b>		
CIMA	281-473-9191 281-837-9191	
Williams Fire & Hazard Control	281-999-0276	

**B.1-6 Community Notification Phone List**

<b>Community Notifications</b>		
<b>Service</b>	<b>Organization</b>	<b>Phone Number</b>
<b>MEDICAL</b>		
Ambulance Service	Galena Park Fire Department	911 674-5311
Ambulance Service	Jacinto City Fire Department	911 673-1771
Ambulance Service	North Channel	281-458-2422
Emergency, Medical	Houston Fire Department	911
Physician	Occupational Health Center	281-973-7943
Primary Hospital	East Houston Medical Center	713-393-2000
Secondary Hospital	Bayshore Medical	281-944-6666
Life Flight		713-797-4357
Air Monitoring	Garner Environmental	1-800-424-1786
<b>FIRE</b>		
Primary Fire Department	CIMA – Central Dispatch CIMA – Pasadena CIMA – Baytown	Zone 1 281-473-9191 281-837-9191
Secondary Fire Response	Galena Park Fire Department	911 281-874-2122
Extended Fire Response	Williams Fire & Hazard Control	281-999-0276
<b>LAW ENFORCEMENT</b>		
Galena Park Police Department		713-675-3471
Harris County Sheriff's Dept.		713-221-6000
US Coast Guard (Houston)		713-671-5100
<b>TV/RADIO</b>		
KHOU -TV Ch 11 CBS		713-521-4384
KHTV-TV Ch 39		713-781-6396
KPRC-TV Ch 2 NBC		713-771-9194
KRIV-TV Ch 26 FOX		713-622-7157
KTMD-TV Ch 48 (Spanish)		713-783-5863
KTRK-TV Ch 13 ABC		713-666-8711
KXLN-TV Ch 45 (Spanish)		713-662-8333
KIKK 95.7 FM / 650 AM		713-780-0937
KILT 100.3 FM/ 610 AM		713-961-5632
KLTR 93.7 FM CBS		713-771-2951
KPRC 950 AM NBC		713-780-0937
KQUE 102.9 FM / KNUZ 1230		713-961-5632
KTRH 740 AM		713-771-2951
KWWJ 1360 AM Baytown		281-424-5531
<b>OTHER</b>		
Shell Lubricants (24 hr)		713-277-7000
Burbank		713-675-0941
VOPAK		713-675-9171 (day) 713-675-9621 (night)
HL&P (Pasadena Plant)		713-945-8666 (24 hour)

**B.1-7 Federal and State Notifications**

<b>Agency Notification List</b>	
Service	Organization
<b>STATE</b>	
State Emergency Response Center (SERC) - GLO & TCEQ Notifications	1-800-832-8224
Texas Commission on Environmental Quality(TCEQ) Region 12	713-767-3500
Texas Commission on Environmental Quality (TCEQ) –Austin	1-512-463-7727
Texas Railroad Commission (TRRC)	713-460-0631 or 1-512-463-6788
U.S. Fish & Wildlife	281-480-7418 (24 hr)
Texas Parks & Wildlife	512-389-4848 (24 hr)
Wildlife Rehab & Education	281-332-8319 (24 hr)
<b>LOCAL</b>	
Local Emergency Planning (LEPC)	713-674-5311
Harris County Pollution Control (HCPC)	713-920-2831
<b>FEDERAL</b>	
National Response Center (NRC)	1-800-424-8802
Department of Transportation (DOT)	1-800-424-8802
US Coast Guard (Houston)	281-464-4840/4855 (24 hr) 281-256-3258 (Pollution Response Department)
Environmental Protection Agency (EPA)	(281) 983-2100

## B.2 OIL SPILL REMOVAL ORGANIZATIONS (OSROs)



### T & T Marine Salvage, Inc.

Phone: (409) 744-1222 or (409) 744-6068 - Houston (281) 488-5757 - FAX (409) 744-5218  
9723 TEICHMAN RD. - GALVESTON, TEXAS 77554

January 22, 2013

Kinder Morgan  
Attn: Lance Wiley  
530 N. Witter  
Pasadena, Texas 77506

Mr. Wiley,

This document acknowledges that it is understood by both Kinder Morgan (Responsible Party), and T & T Marine Salvage, Inc., that T & T intends to commit available resources, upon request, to the Responsible Party in the event of an oil spill.

It is also understood that T & T will respond with available resources and personnel within two hours after notification by the Responsible Party.

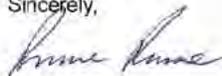
T & T owns all the equipment and employs trained personnel to respond to a spill or salvage job. T & T routinely performs this type of work, involved in year round training and drills and has deployed equipment, including spill boom, in the past year.

All T & T personnel are properly trained, qualified and competent to perform this type of work. T & T training records are kept on file at its corporate office. All required personnel are 40/24 hr OSHA trained as prescribed in 29 CFR 1910.120.

T & T Marine Salvage OSRO Number: 115  
T & T Marine Salvage DCO Number: 540

If you have any questions, please contact me at (409) 744-1222.

Sincerely,



Ronnie Rouse  
T & T Marine Salvage, Inc.

131 Keating Drive  
Belle Chasse, LA 70037

Phone: (504) 394-6110  
Fax: (504) 392-8977



December 13, 2011

Kinder Morgan  
Attn: Mrs. Lance Wiley  
530 N. Witter  
Pasadena, TX 77506

RE: Letter of Intent – Agreement for Emergency Spill Response

Dear Mr. Wiley,

Thank you for the opportunity to be of service to **Kinder Morgan**. **OMI Environmental Solutions (Oil Mop)** can provide emergency response services to your facilities on a 24 hour basis. All of our response resources are listed within our United States Coast Guard (“USCG”) Oil Spill Removal Organization (“OSRO”) Classification. Our resources are maintained and exercised annually in accordance with the USCG PREP and OPA 90 readiness guidelines **Oil Mop** is listed as an MM through W3 Company with the USCG. Per 33 CFR 154.1045 paragraph (e)(1) and (e)(2), all time and equipment requirements will be met for the worst-case discharge.

All of **Oil Mop’s** response resources, maintenance and training records are available for inspection by Customer upon request. **Oil Mop** will provide response services to Customer on an immediate basis. In the event **Oil Mop** is unable to provide immediate response services for any reason whatsoever, **Oil Mop** will subcontract and/or assign the work to be performed hereunder. Response times will vary due to facility/vessel location.

The response agreement covers a three-year period, starting in **December 2011** through **December 2014**.

**24-Hour Emergency Response Hotline**

**1-800-645-6671**

This Letter of Intent will provide proof of our intention to respond with all available resources; however, it is highly recommended that a Master Service Agreement be executed between OMI Environmental Solutions and Kinder Morgan prior to responding to any incident.

Again thank you for the opportunity to be of service to Kinder Morgan. If we can be of any further assistance please feel free to call at any time.

Sincerely,

*Roxann Baudean*

Roxann Baudean  
Contract Administrator



GARNER ENVIRONMENTAL SERVICES, INC.

CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716

February 4, 2013

Kinder Morgan  
Mr. Lance Wiley  
530 N. Witter  
Pasadena, Texas 77506  
Ph: 713.724.4912 Fax: 713.724.7660

Re: Letter of Intent to Respond

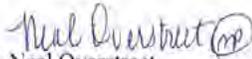
Dear Mr. Wiley:

Thank you for your recent inquiry concerning Garner Environmental Services, Inc. emergency response capabilities. Per your request, Garner Environmental Services is pleased to provide our response services to respond in the event of an accidental release on an as needed, first come first served basis, from our nearest Texas facility, as a first responder for the facility(ies) listed in Attachment 1. Per 33 CFR §154.1045(c)(1) and (c)(2) and 33 CFR §155, Appendix B, Para. 2.2.6, all time and equipment requirements will be met for AMPD coverage. Response time to this facility is based on a 35 mph rate of travel over land routes and 5 kph over water routes. Refer to Attachment 1 for Response Tier and Time Levels.

**24 - HOUR EMERGENCY RESPONSE TELEPHONE NUMBERS****281-930-1200 • 800-424-1716 • 800-4GARNER**

Attached are Garner Environmental Services, Inc.'s U.S. Coast Guard OSRO classification letter and the Texas General Land Office DCO certificate for incorporation in your facility plan.

Sincerely,



Neal Overstreet  
Executive Vice President

NO/mp

Enclosure

**OFFICES**

DEER PARK, TX  
(OPERATIONS & TRAINING)  
281-930-1200

PORT ARTHUR, TX  
(OPERATIONS)  
409-983-5646

PORT ARTHUR, TX  
(TRAINING)  
409-984-9836

LA MARQUE, TX  
(OPERATIONS)  
409-935-0308

WILKINSON, ND  
(OPERATIONS)  
701-577-1200



GARNER ENVIRONMENTAL SERVICES, INC.

CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716

## Attachment 1

## Tier Response Level and Response Time

Garner Response Facility  
Contact / Telephone Nr.  
Geographic Area

Mileage

Tier Level

Response Time

Deer Park, Texas  
Clyde McKissack/ (281) 930-1200 or (800) 424-1716

Response Location: 7 1 30 Minutes  
530 N. Witter Pasadena, Texas 77506

## OFFICES

DEER PARK, TX  
(OPERATIONS & TRAINING)  
281-930-1200

PORT ARTHUR, TX  
(OPERATIONS)  
409-983-5646

PORT ARTHUR, TX  
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409-984-9835

LA MARQUE, TX  
(OPERATIONS)  
409-935-0308

WILLISTON, ND  
(OPERATIONS)  
701-577-1200



GARNER ENVIRONMENTAL SERVICES, INC.

CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 \*281-930-1200 \*800-424-1716

February 4, 2013

VIA EMAIL: lance\_wiley@kindermorgan.com

Kinder Morgan  
Mr. Lance Wiley  
530 N. Witter  
Pasadena, Texas 77506  
Ph: 713.724.4912 Fax: 713.724.7660

Re: Request for Information

Dear Mr. Wiley:

Pursuant to your request, please find enclosed on copy of the following document(s):

- IRS Form W-9
- Letter of Intent to Respond
- PREP Report
- Response Rate Schedule, Rev. 06/11
- Response Equipment List, Rev. 06/11
- Master Certificate of Insurance
- US Coast Guard OSRO Classification Listing
- Texas General Land Office DCO Certificate
- Texas Sales Tax Resale Certificate
- Other

Thank you for allowing us to be of service to you. If you have any questions or require additional information, please do not hesitate to contact me at (281) 930-4445.

Sincerely,



Maria Parras  
Assistant to the General Counsel

/mp  
Enclosures

## OFFICES

DEER PARK, TX  
(OPERATIONS & TRAINING)  
281-930-1200

PORT ARTHUR, TX  
(OPERATIONS)  
409-983-5646

PORT ARTHUR, TX  
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409-984-9836

LA MARQUE, TX  
(OPERATIONS)  
409-935-0308

WILLISTON, ND  
(OPERATIONS)  
701-577-1200

## **Annex C – Table of Contents**

**C.1 Protection Priorities**

**C.2 Wildlife Preservation and Rehabilitation**

## C.1 PROTECTION PRIORITIES

### C.1-1 Vulnerability Analysis

The Galena Park Terminal is located in Harris County on the Houston Ship Channel (Buffalo Bayou). This is a low impact area containing fine-grained sand, and seawalls, jetties, bulkheads, and revetments.

### C.1-2 Primary Objective

Primary objective will be to corral as much of the oil as possible into natural collections areas, until shallow water skimmers can be deployed to collect oil in the open water. Boom the sensitive inlets and tributaries in the local areas. Additional shallow water skimmers are available from the Navy Supervisor of Salvage (SUPSALV), if support is requested. The clean-up contractor can obtain other equipment, such as towboats and barges for waterborne recovery, as well as location of disposal resources.

### C.1-3 Ecological Considerations

The extent of the clean-up work in various coastal areas should be carefully balanced with the possible ecological damage, which may result from a very thorough clean-up activity. Also, purely cosmetic operations should be avoided. In some areas, the ecologically most desirable course of actions may be to allow the bleached oil to degrade by natural processes. Expert advice should be sought before a decision is made on the means to be used and the extent of the planned clean-up operation. It is critically important, during the early stages of the clean-up activity that the clean-up teams fully understand and agree with these objectives.

### C.1-4 Shoreline Impact

In most cases, it will not be possible to prevent contamination of the shoreline. Upon mobilization, immediately boom the areas identified as sensitive, and initiate beach clean up of the areas impacted by oil where appropriate.

### **C-1.5 Protecting Sensitive Environments**

Every effort should be made to protect sensitive areas. There are many tributaries that would require booming to prevent catastrophic damage to salt marshes. The matter is further complicated by inaccessibility to tributaries. Most of them are accessible only by shallow draft boats, which cannot carry large amount of boom.

Absorbent booming of tributaries would be labor intensive and time consuming, making approximately three to five days for initial deployment and an equivalent time to perform maintenance cycles.

### **C.1-6 Equipment Limitations**

The shallow water depths of bays and estuaries make it extremely difficult to deploy small boats and conduct open-water skimming operations. Accessibility of vacuum trucks or other oil recovery equipment is also inhibited due to limited number of access points and miles of salt marsh. Small boats with boom, skimmers, temporary storage tanks/barges, and absorbents will be needed for protective booming and recovery of oil. The extent of potential impact will be determined by effectiveness of open water skimming operations and the evaporation/weathering process. Temporary storage and ultimate disposal for recovered product are important considerations in the clean-up effort. Provisions must also be made to transfer oil from the collections points to storage or disposal areas.

### **C.1-7 Port Closure**

Severe economic impact will be a result of closure of the waterways. Closure of the port areas to shipping activity will occur due to:

- The physical presence of damaged vessels in narrow channels;
- The presence of spilled petroleum or chemical products; and
- The effects of traffic on the cleanup operations.

A collision and sinking of a vessel could have potential for prolonged port closure. Any closure for a long period of time would cause significant problems, as closure in Galveston also closes Texas City and Houston. Closure of the Gulf Intracoastal Waterway will affect the ports of Corpus Christi, Freeport, Port Arthur and Lake Charles, Vessels in port will have to remain, and those enroute will have to be rerouted, anchor or wait offshore. Inability to receive needed materials will severely disrupt the shipping interests in all of the ports in the area, and economic impact will be extensive.

## C.1-8 Natural Collection Areas and Boom Sites

### Houston Ship Channel

#### Staging Areas:

1. Bayland Park Public Boat Ramp
2. Public boat ramp located on East side of San Jacinto at Interstate 10.

#### Access Roads:

1. Bayland Park Boat Ramp: East on Hwy. 225 from Houston to Hwy 146. Turn right on Hwy. 146 and proceed south to the Bayland Park exit. Turn right into the park and proceed west to the public boat ramp. Located approximately one and a half miles north of the Baytown Tunnel.
2. San Jacinto River Boat Ramp: East from Houston on Interstate 10 to the San Jacinto River Bridge. Cross-river to east side of bridge. Exit on FM 2100 and turn right to boat ramp entrance.

#### Description:

North of Exxon Baytown to the Turning Basin: Deploy deflection boom downstream of the spill to guide oil to selected collection sites. Deploy boom to protect the bird rookeries on Hog Island. Deploy boom to protect marsh areas on east side of Atkinson Island. Notify Houston Lighting & Power to boom off water intake in the Good Creek area.

#### Natural Collection Area:

Due to the heavy industrialization of the Houston Ship Channel, collection areas tend to be fabricated. Utilize available boat slips and dock areas for accessible collection areas.

#### Bayport:

##### Staging Area:

1. Sylvan Beach Park
2. Bayport Docks

##### Access Roads:

1. Sylvan Beach Park: From Houston, east I-10 to Hwy. 146 South. Exit Hwy. 146 at Fairmont Pkwy. East on Fairmont Pkwy. to end. Left on Park Drive to Park entrance.
2. Bayport Docks: East on Hwy. 225 from Houston to Hwy. 146. Turn right on Hwy. 146 and proceed to the Bayport exit. Exit and turn left, and then proceed east to the Bayport docks.

**C.1-9 Endangered and Threatened Species for Harris County**

Taxon	Common Name	Scientific Name	Federal Status	State Status
Amphibians	Houston toad	Anaxyrus houstonensis	LE	E
Birds	Henslow's Sparrow	Ammodramus henslowii		
Birds	Sprague's Pipit	Anthus spragueii	C	
Birds	White-tailed Hawk	Buteo albicaudatus		T
Birds	Snowy Plover	Charadrius alexandrinus		
Birds	Southeastern Snowy Plover	Charadrius alexandrinus tenuirostris		
Birds	Mountain Plover	Charadrius montanus		
Birds	Peregrine Falcon	Falco peregrinus	DL	T
Birds	American Peregrine Falcon	Falco peregrinus anatum	DL	T
Birds	Arctic Peregrine Falcon	Falco peregrinus tundrius	DL	
Birds	Whooping Crane	Grus americana	LE	E
Birds	Bald Eagle	Haliaeetus leucocephalus	DL	T
Birds	Black Rail	Laterallus jamaicensis		
Birds	Wood Stork	Mycteria americana		T
Birds	Brown Pelican	Pelecanus occidentalis	DL	
Birds	Red-cockaded Woodpecker	Picoides borealis	LE	E
Birds	White-faced Ibis	Plegadis chihi		T
Fishes	American eel	Anguilla rostrata		
Fishes	Creek chubsucker	Erimyzon oblongus		T
Fishes	Smalltooth sawfish	Pristis pectinata	LE	E
Mammals	Red wolf	Canis rufus	LE	E
Mammals	Rafinesque's big-eared bat	Corynorhinus rafinesquii		T
Mammals	Southeastern myotis bat	Myotis austroriparius		
Mammals	Plains spotted skunk	Spilogale putorius interrupta		
Mammals	Louisiana black bear	Ursus americanus luteolus	LT	T
Mollusks	Texas pigtoe	Fusconaia askewi		T
Mollusks	Wabash pigtoe	Fusconaia flava		
Mollusks	Sandbank pocketbook	Lampsilis satura		T
Mollusks	Louisiana pigtoe	Pleurobema riddellii		T
Mollusks	Little spectaclecase	Villosa lienosa		
Plants	Panicled indigobush	Amorpha paniculata		
Plants	Texas windmill-grass	Chloris texensis		
Plants	Giant sharpstem umbrella-sedge	Cyperus cephalanthus		

**C.1-9 Endangered and Threatened Species for Harris County (Cont'd)**

Taxon	Common Name	Scientific Name	Federal Status	State Status
Plants	Neglected coneflower	Echinacea paradoxa var. neglecta		
Plants	Texas prairie dawn	Hymenoxys texana	LE	E
Plants	Coastal gay-feather	Liatris bracteata		
Plants	Houston daisy	Rayjacksonia aurea		
Plants	Texas ladies'-tresses	Spiranthes brevilabris var. brevilabris		
Plants	Florida ladies'-tresses	Spiranthes brevilabris var. floridana		
Plants	Texas meadow-rue	Thalictrum texanum		
Plants	Threeflower broomweed	Thurovia triflora		
Reptiles	Loggerhead sea turtle	Caretta caretta	LT	T
Reptiles	Green sea turtle	Chelonia mydas	LT	T
Reptiles	Timber/Canebrake rattlesnake	Crotalus horridus		T
Reptiles	Leatherback sea turtle	Dermochelys coriacea	LE	E
Reptiles	Kemp's Ridley sea turtle	Lepidochelys kempii	LE	E
Reptiles	Smooth green snake	Liochlorophis vernalis		T
Reptiles	Alligator snapping turtle	Macrochelys temminckii		T
Reptiles	Gulf Saltmarsh snake	Nerodia clarkii		
Reptiles	Texas horned lizard	Phrynosoma cornutum		T

## Status Key:

LE, LT - Federally Listed Endangered/Threatened  
 PE, PT - Federally Proposed Endangered/Threatened  
 SAE, SAT - Federally Listed Endangered/Threatened by Similarity of Appearance  
 C - Federal Candidate for Listing; formerly Category 1 Candidate  
 DL, PDL - Federally Delisted/Proposed for Delisting  
 NL - Not Federally Listed  
 E, T - State Listed Endangered/Threatened  
 NT - Not tracked or no longer tracked by the State  
 "blank" - Rare, but with no regulatory listing status

## Source:

Texas Parks and Wildlife Department, Wildlife Division, Diversity and Habitat Assessment Programs.  
 County Lists of Texas' Special Species.

Harris County, February 2014

<http://www.tpwd.state.tx.us/gis/ris/es/SpeciesList.aspx?parm=Harris>



**C.1-10 Environmental Mapping**

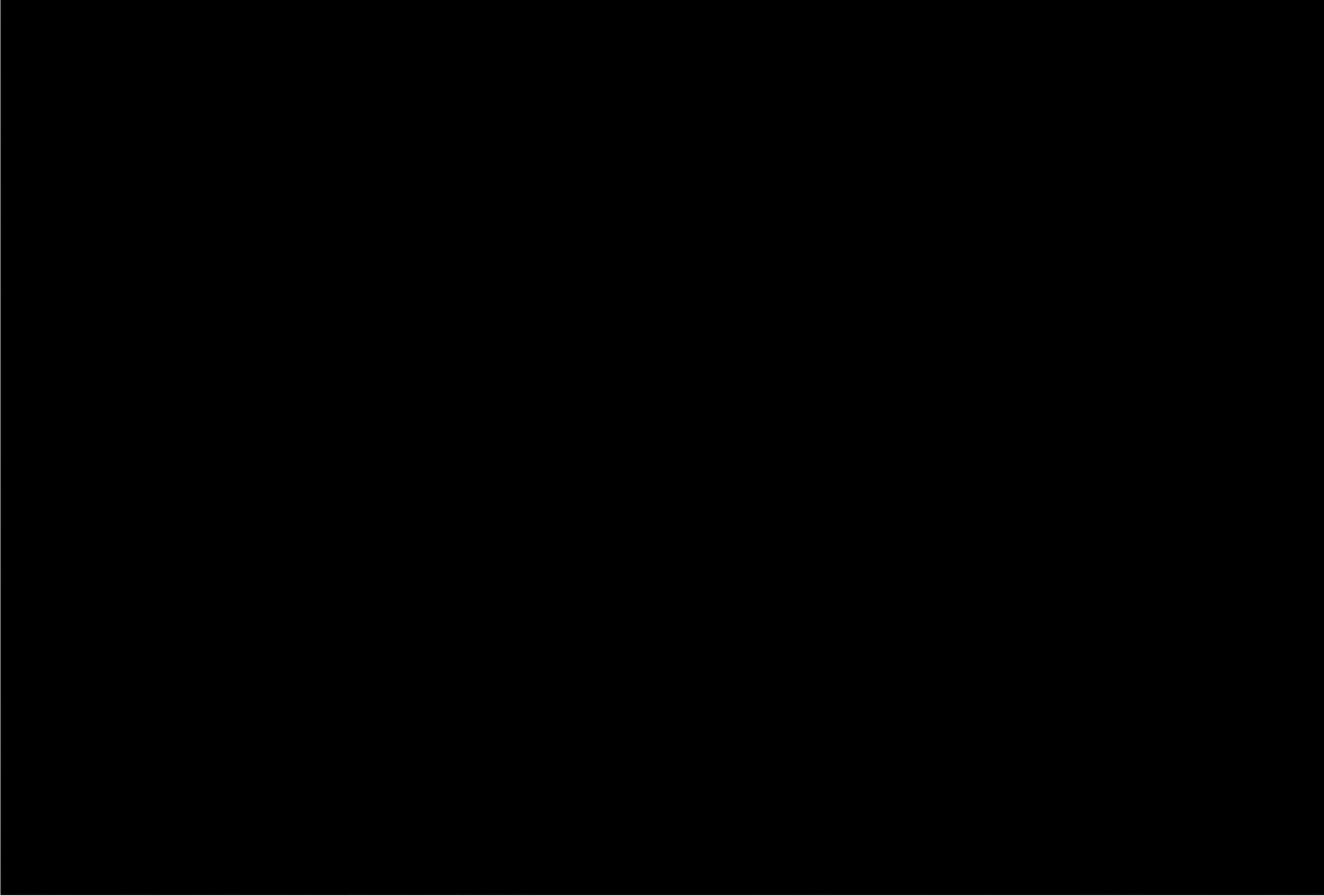


# *Kinder Morgan Galena Park Terminal Environmental Sensitivity Area Map Integrated Contingency Plan*



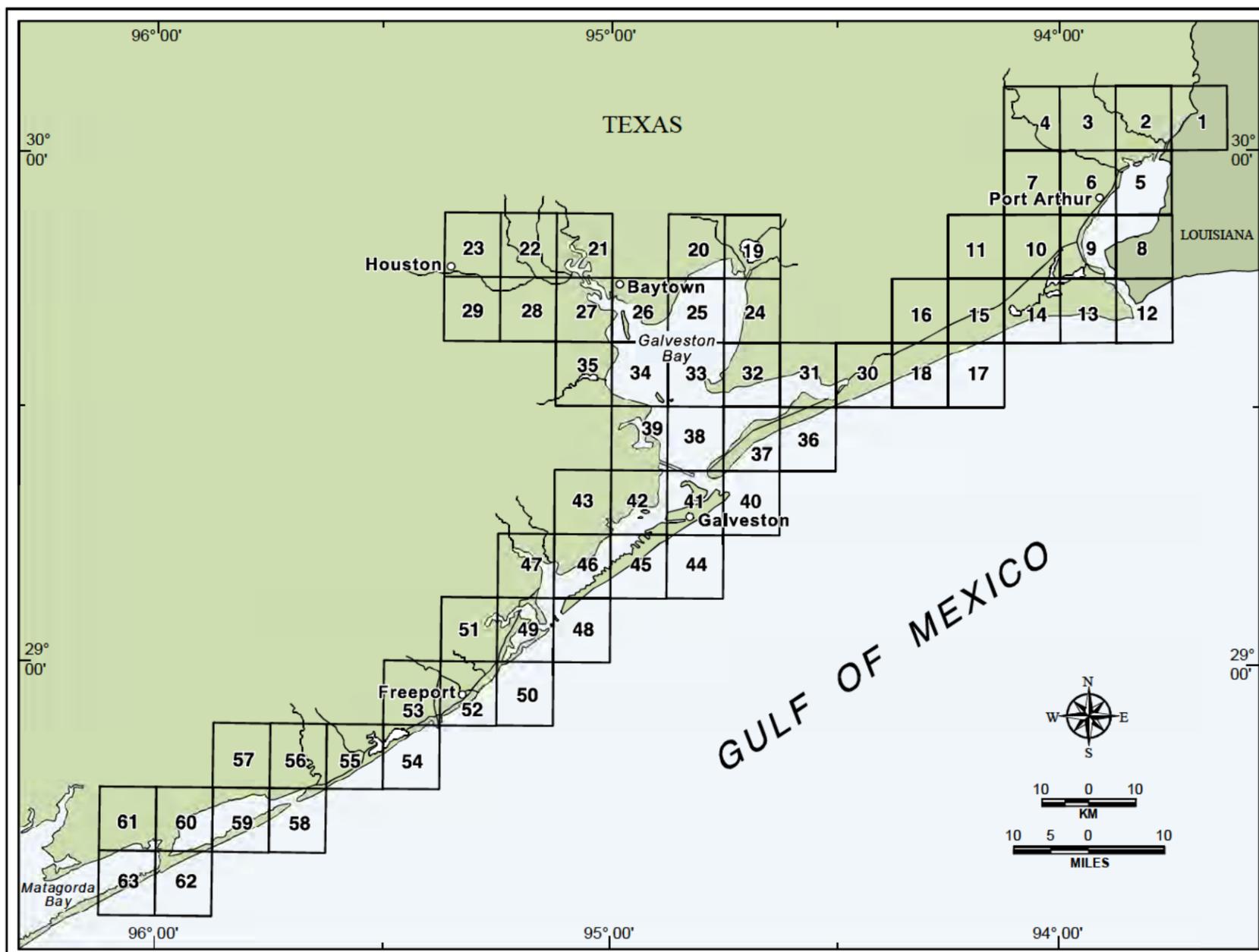
Scale: 1:28,254

(b) (7)(F), (b) (3)



# Sensitivity of Coastal Environments and Wildlife to Spilled Oil

## UPPER COAST OF TEXAS



*Supported by:*



**National Oceanic and Atmospheric Administration**  
National Ocean Service  
Office of Response and Restoration  
Emergency Response Division  
Seattle, Washington



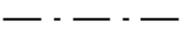
**Texas General Land Office**  
Oil Spill Prevention and Response  
Austin, Texas

# UPPER COAST OF TEXAS

## SHORELINE HABITAT RANKINGS

	1B)	EXPOSED, SOLID MAN-MADE STRUCTURES
	2A)	EXPOSED WAVE-CUT PLATFORMS IN CLAY
	2B)	EXPOSED SCARPS AND STEEP SLOPES IN CLAY
	3A)	FINE- TO MEDIUM-GRAINED SAND BEACHES
	5)	MIXED SAND AND GRAVEL (SHELL) BEACHES
	6A)	GRAVEL BEACHES
	6B)	RIPRAP
	7)	EXPOSED TIDAL FLATS
	8A)	SHELTERED SCARPS IN CLAY OR BEDROCK
	8B)	SHELTERED, SOLID MAN-MADE STRUCTURES
	8C)	SHELTERED RIPRAP
	9A)	SHELTERED TIDAL FLATS
	10A)	SALT- AND BRACKISH-WATER MARSHES
	10B)	FRESHWATER MARSHES
	10C)	SWAMPS
	10D)	SCRUB-SHRUB WETLANDS

## HUMAN-USE FEATURES

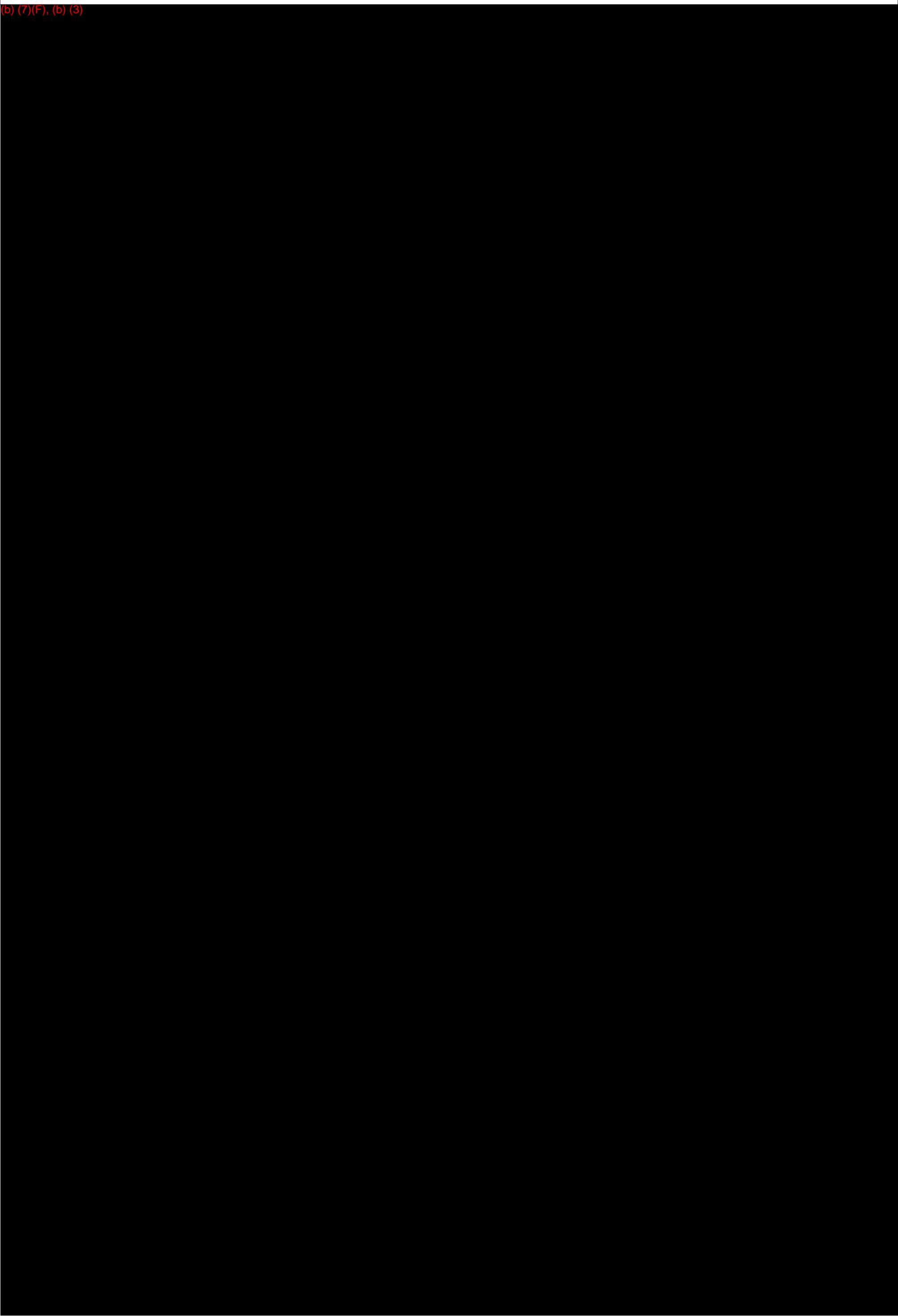
	ACCESS		CRITICAL HABITAT		PARK
	AIRPORT / HELIPORT		HISTORICAL SITE		WATER INTAKE
	AQUACULTURE SITE		LOCK / DAM		WILDLIFE REFUGE
	ARTIFICIAL REEF		MANAGEMENT AREA		HUMAN-USE NUMBER
	BOAT RAMP		MARINA		MANAGEMENT AREA BOUNDARY
	COAST GUARD		NATURE CONSERVANCY		STATE BOUNDARY

## SENSITIVE BIOLOGICAL RESOURCES

	BIRD		TERRESTRIAL MAMMAL		FISH
	DIVING BIRD		SMALL MAMMAL		FISH
	GULL / TERN		REPTILE / AMPHIBIAN		BENTHIC MARINE HABITAT
	PASSERINE BIRD / LANDFOWL		TURTLE		SEAGRASS (PATCHY)
	PELAGIC BIRD		OTHER REPTILE / AMPHIBIAN		SEAGRASS (CONTINUOUS)
	RAPTOR		INVERTEBRATE		REEF
	SHOREBIRD		BIVALVE		HABITAT
	WADING BIRD		CEPHALOPOD		PLANT
	WATERFOWL		CRAB		RAR NUMBER
	NESTING SITE		GASTROPOD		MULTI-GROUP
	MARINE MAMMAL		SHRIMP		THREATENED / ENDANGERED / SPECIES OF SPECIAL CONCERN
	DOLPHIN				
	MANATEE				

# ENVIRONMENTAL SENSITIVITY INDEX MAP

(b) (7)(F), (b) (3)



## Upper Texas Coast: ESIMAP 21

## BIOLOGICAL RESOURCES:

## BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
16	Bald eagle	T	X	X	X	X	X	X	X	X	X	X	X	X	OCT-JUL	-	-
21	Osprey		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
22	Pelicans		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Terns		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
34	Grebes		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Gulls		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Loons		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Marsh birds		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Terns		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	-	-	-	
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	-	-	-	

## FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
266	Tarpon	RARE			X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
270	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Longnose gar		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
271	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
286	Alligator gar	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Bay anchovy	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-NOV	JAN-DEC
	Bay whiff	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-SEP	JAN-DEC
	Black drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Blue catfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Crevalle jack	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	SEP-NOV
	Gafftopsail catfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	APR-NOV	APR-NOV
	Gizzard shad	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Gulf killifish	RARE	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf menhaden	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Hardhead catfish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	MAY-SEP	MAY-SEP	JUL-SEP	JAN-DEC
	Pinfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-AUG	-
	Red drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-NOV	JAN-DEC	JAN-DEC
	Sand seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Sheepshead	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JUL-SEP	JAN-DEC
																		NOV-APR	
	Silver perch	RARE	X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	NOV-NOV	JAN-DEC
	Silversides	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	JAN-DEC	JAN-DEC
	Smallmouth buffalo	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Southern flounder	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Southern kingfish	RARE							X	X	X				-	-	-	AUG-OCT	-
	Spanish mackerel	RARE							X	X	X				-	-	-	SEP-NOV	SEP-NOV
	Spot	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-NOV	JAN-DEC
	Spotfin mojarra	RARE							X	X					-	-	-	-	-
	Spotted gar	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	APR-MAY	-	JAN-DEC	JAN-DEC
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-OCT	APR-OCT	APR-OCT	SEP-NOV	JAN-DEC
	Striped mullet	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	White mullet	COMMON							X	X	X	X	X	X	-	-	-	JUN-NOV	-

## INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
286	Atlantic rangia	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	-	MAR-OCT	JAN-DEC	JAN-DEC
	Blue crab	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC
	Brown shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	FEB-APR	APR-NOV	-
	Grass shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-OCT	-
	White shrimp	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	APR-OCT	APR-DEC	JAN-DEC

## MARINE MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
339	West Indian manatee	E E VERY RARE						X	X	X					-	-	-	-

## REPTILE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Internesting	Juveniles	Adults
331	Kemp's ridley sea turtle	E E COMMON						X	X	X	X	X	X	X	-	-	-	APR-NOV	-

## HUMAN USE RESOURCES:

## BOAT RAMP:

HUN#	Name	Contact	Phone
24	BANANA BEND PARK		
34	BAYTOWN NATURE CENTER		
101	RIVER TERRACE PARK		
102	RIVERSIDE INN MARINA		
108	SASSY LADY TUGBOAT ANNIE'S		

## HELIPORT:

HUN#	Name	Contact	Phone
179	LPC		
198	RED BARN		

## MANAGEMENT AREA:

HUN#	Name	Contact	Phone
243	SAN JACINTO BATTLEGROUND SHS	TPWD	

## PARK:

HUN#	Name	Contact	Phone
304	SAN JACINTO MONUMENT SP	TPWD	

## WATER INTAKE:

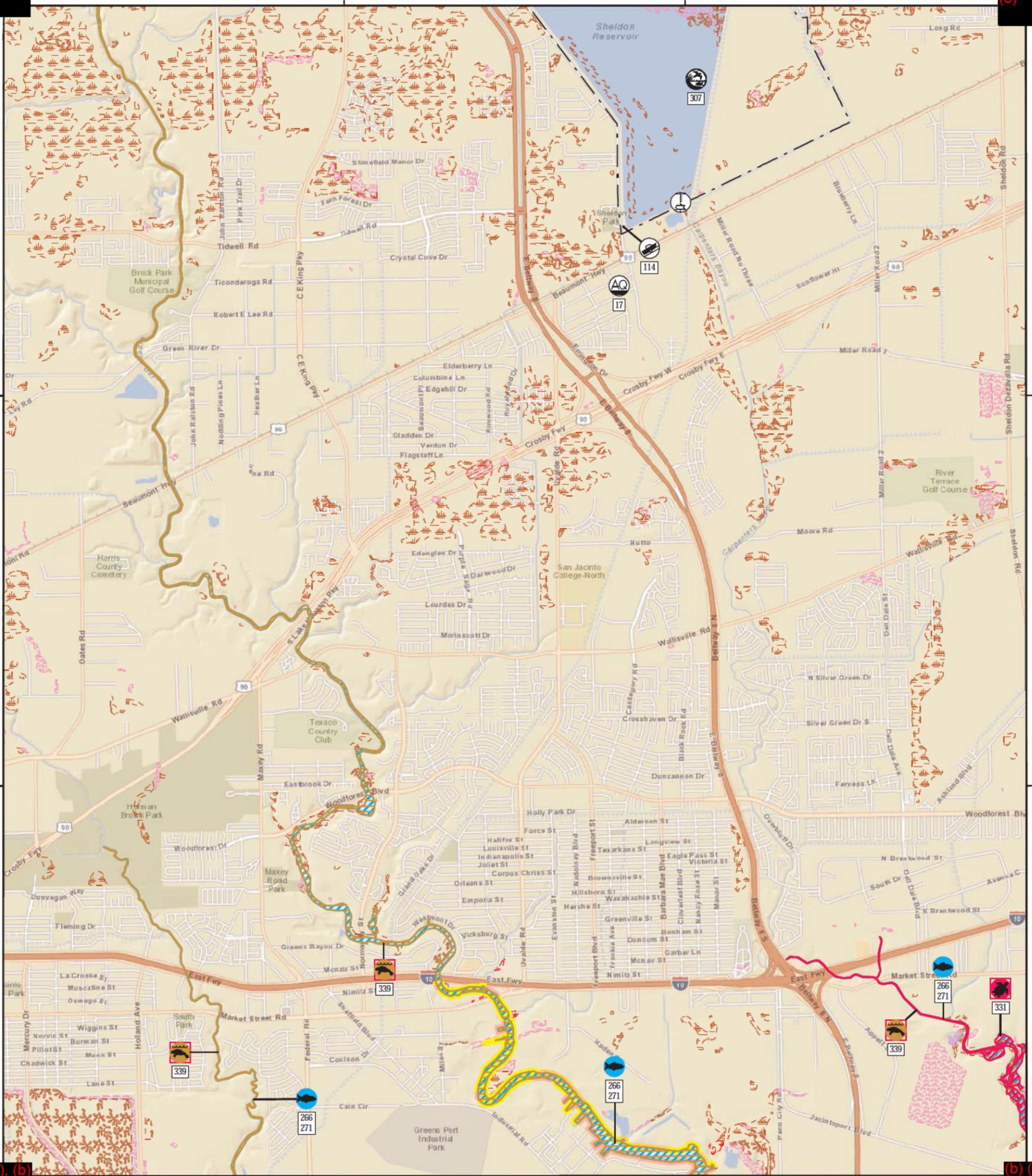
HUN#	Name	Contact	Phone
	(b) (7)(F), (b) (3)		

Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

# ENVIRONMENTAL SENSITIVITY INDEX MAP

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)



(b) (7)(F), (b) (3)

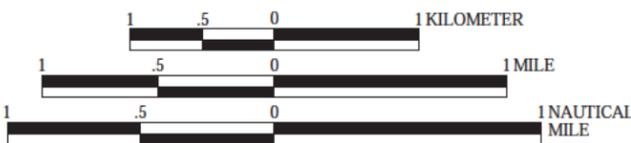
(b) (7)(F), (b) (3)

### SHORELINE HABITATS (ESI)

- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT PLATFORMS IN CLAY
- 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 3B SCARPS AND STEEP SLOPES IN SAND
- 5 MIXED SAND AND GRAVEL (SHELL) BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED SCARPS IN CLAY OR BEDROCK
- 8B SHELTERED, SOLID MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 9A SHELTERED TIDAL FLATS
- 10A SALT- AND BRACKISH-WATER MARSHES
- 10B FRESHWATER MARSHES
- 10C SWAMPS
- 10D SCRUB-SHRUB WETLANDS

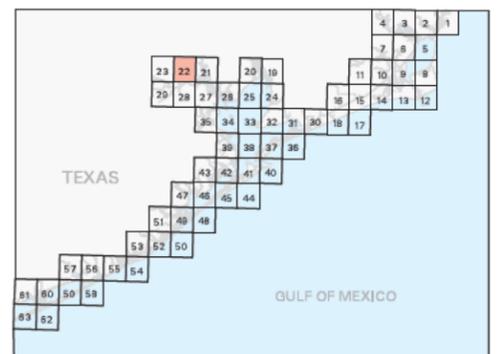


SCALE 1:50000



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Published: June 2013

Published at Seattle, Washington  
National Oceanic and Atmospheric Administration  
National Ocean Service  
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Emergency Response Division



**Upper Texas Coast: ESIMAP 22**

**BIOLOGICAL RESOURCES:**

**FISH:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
266	Tarpon	RARE			X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
271	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC

**MARINE MAMMAL:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
339	West Indian manatee	E E VERY RARE						X	X	X					-	-	-	-

**REPTILE:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Interesting	Juveniles	Adults
331	Kemp's ridley sea turtle	E E COMMON						X	X	X	X	X	X	X	-	-	-	APR-NOV	-

**HUMAN USE RESOURCES:**

**AQUACULTURE:**

HUN#	Name	Contact	Phone
17	HALBERT FISH FARM	JACK D HALBERT	713/458-8705

**BOAT RAMP:**

HUN#	Name	Contact	Phone
114	SHELDON RESERVOIR ACCESS		

**PARK:**

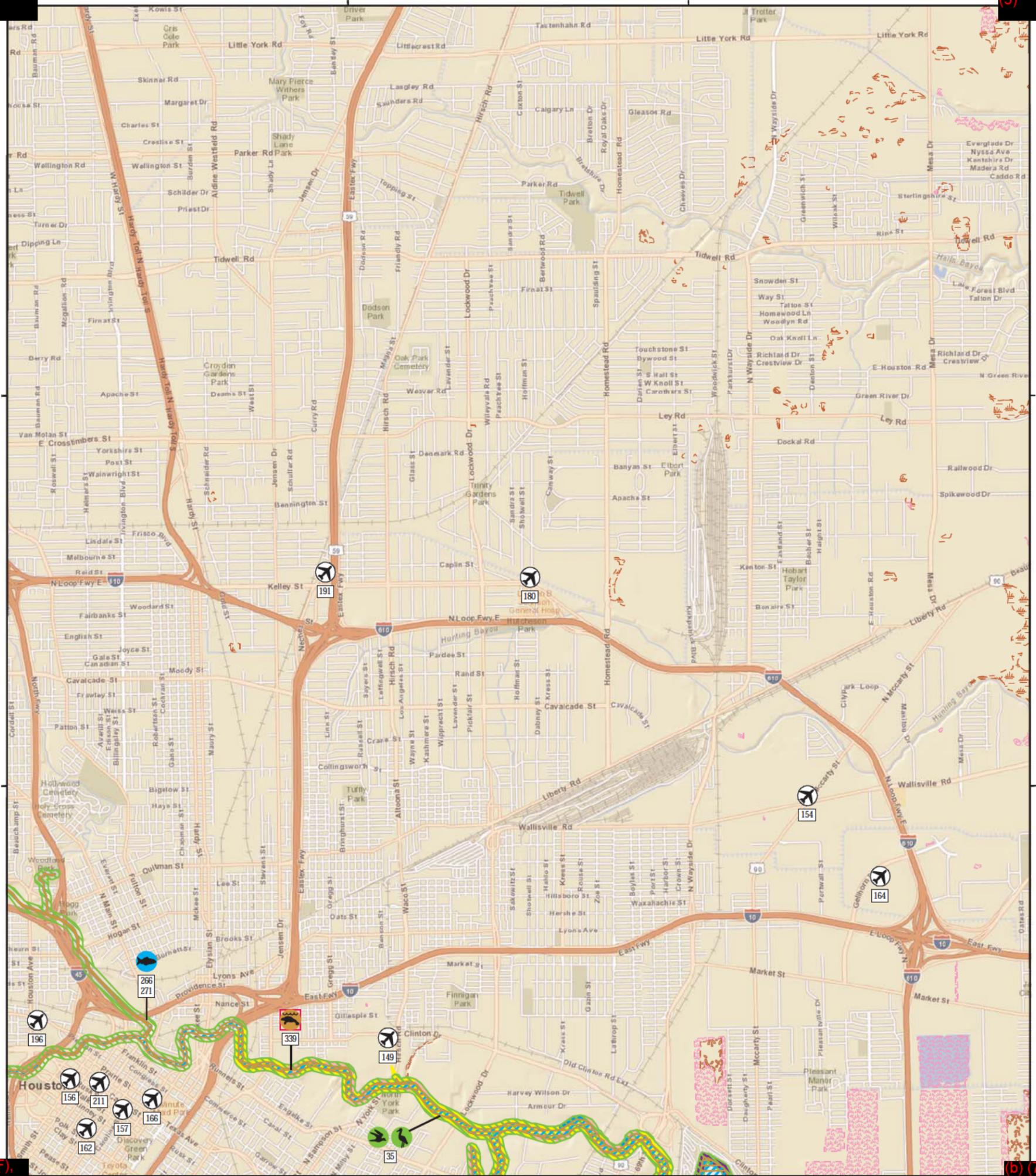
HUN#	Name	Contact	Phone
307	SHELDON LAKE SP	TPWD	

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# ENVIRONMENTAL SENSITIVITY INDEX MAP

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)



(b) (7)(F), (b) (3)

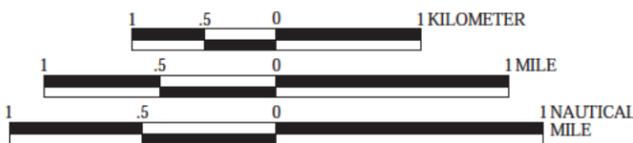
(b) (7)(F), (b) (3)

### SHORELINE HABITATS (ESI)

- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT SLOPES IN CLAY
- 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 3B SCARPS AND STEEP SLOPES IN SAND
- 5 MIXED SAND AND GRAVEL (SHELL) BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED SCARPS IN CLAY OR BEDROCK
- 8B SHELTERED, SOLID MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 9A SHELTERED TIDAL FLATS
- 10A SALT- AND BRACKISH-WATER MARSHES
- 10B FRESHWATER MARSHES
- 10C SWAMPS
- 10D SCRUB-SHRUB WETLANDS

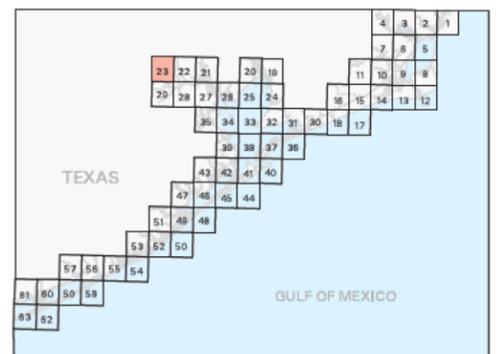


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Not For Navigation  
Published: June 2013

Published at Seattle, Washington  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of Response and Restoration  
Emergency Response Division



**Upper Texas Coast: ESIMAP 23**

**BIOLOGICAL RESOURCES:**

**BIRD:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
35	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-

**FISH:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
266	Tarpon	RARE				X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
271	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC

**MARINE MAMMAL:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
339	West Indian manatee	E E VERY RARE						X	X	X					-	-	-	-

**HUMAN USE RESOURCES:**

**HELIPORT:**

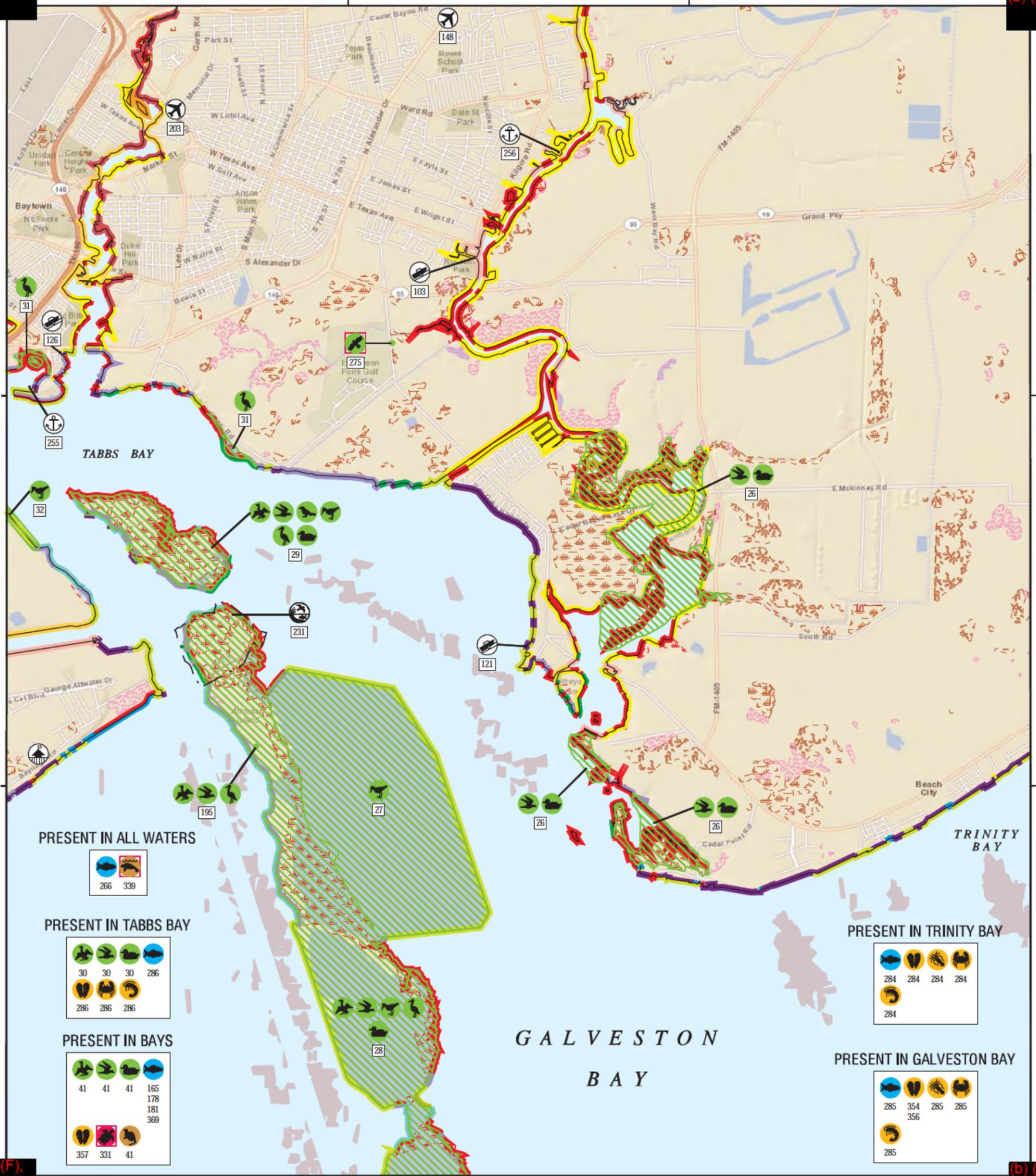
HUN#	Name	Contact	Phone
149	BROWN & ROOT-CLINTON		
154	DAILEY INC		
156	DRV DOWNTOWN HOUSTON AQUARIUM		
157	EMERGENCY-1 HOUSTON CENTER		
162	FIRST CITY FINANCIAL CENTER		
164	GELFHORN PAD		
166	GULF TOWER		
180	LYNDON B JOHNSON GENERAL HOSPITAL		
191	NE POLICE STATION NR 2		
196	POLICE HEADQUARTERS		
211	TEXAS COMMERCE BANK BUILDING		

Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

# ENVIRONMENTAL SENSITIVITY INDEX MAP

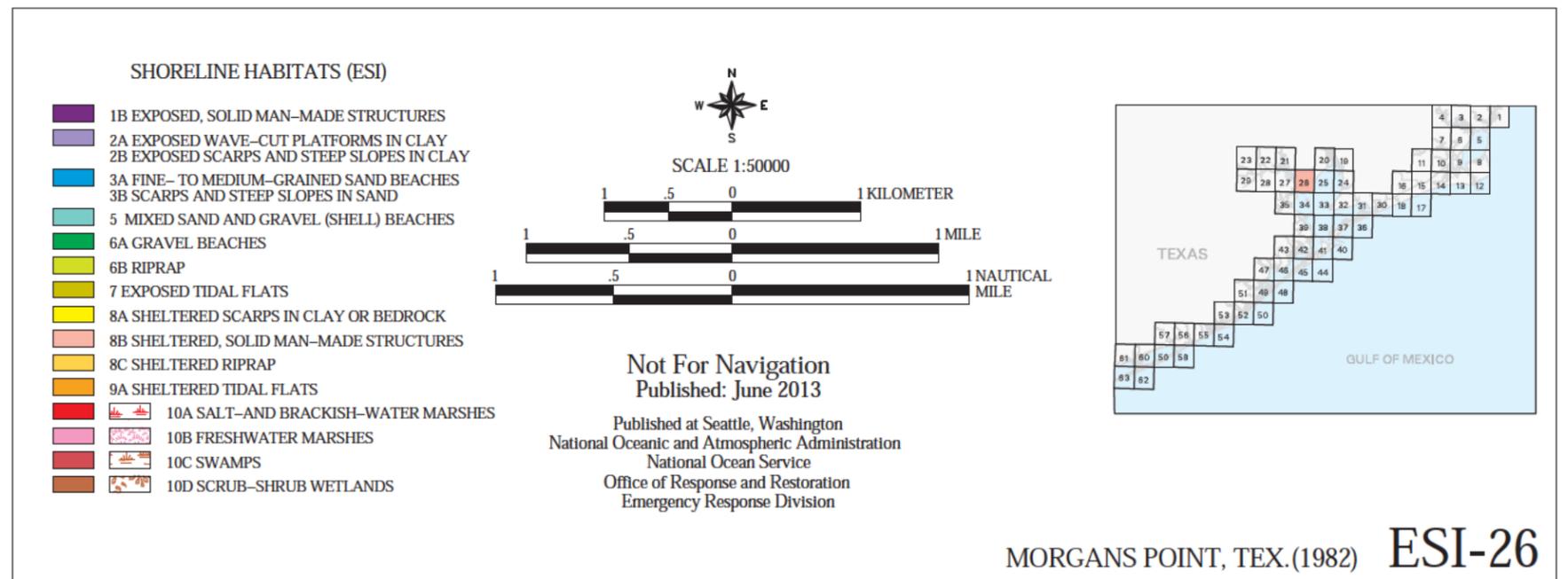
(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)



(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)



## Upper Texas Coast: ESIMAP 26

## BIOLOGICAL RESOURCES:

## BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
26	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
27	Shorebirds	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
28	Cormorants		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Pelicans		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
29	Cormorants		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Migratory songbirds					X	X								-	-	-
	Pelicans		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
30	Cormorants		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Grebes	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons	HIGH	X	X	X	X				X	X	X			-	-	-
	Pelicans		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Waterfowl	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
31	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
32	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
41	Black skimmer		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Cormorants		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Diving birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Diving ducks		X	X	X	X				X	X	X			-	-	-
	Grebes		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons		X	X	X	X				X	X	X			-	-	-
	Pelicans		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
195	American white pelican	210 INDIV	X	X	X						X	X	X		-	-	-
	Black skimmer	25-65 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Brown pelican	148 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Caspian tern	24 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Forster's tern	7-1526 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Great blue heron	4-8 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-
	Great egret	6 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-APR	-
	Gull-billed tern	8-66 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Laughing gull	27-51 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Least tern	15-114 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Roseate spoonbill	13-15 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Royal tern	24 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Sandwich tern	4 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Yellow-crowned night-heron	3 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
275	Bald eagle	T 1 NEST	X	X	X	X	X	X	X	X	X	X	X	X	OCT-JUL	-	-

## FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
165	Atlantic sharpnose shark					X	X	X	X	X	X	X	X	X	JUN-JUN	MAY-JUN	JUN-OCT	-	APR-OCT
178	Bull shark	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
181	Blacktip shark		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	MAY-JUN	MAY-NOV	MAR-NOV	MAY-JUN
266	Tarpon	RARE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
284	Alligator gar	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Atlantic bumper	RARE				X	X								-	-	-	-	AUG-SEP
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Bay anchovy	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	FEB-NOV	JAN-DEC
	Bay whiff	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAY-AUG	MAY-AUG
	Black drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Blue catfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Crevalle jack	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
	Gafftopsail catfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	APR-OCT	APR-OCT
	Gizzard shad	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Gulf butterfish	RARE	X	X											-	-	-	-	-
	Gulf killifish	RARE	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf menhaden	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	APR-DEC
	Hardhead catfish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	MAY-SEP	MAY-SEP	JUN-OCT	JAN-DEC
	Pinfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-SEP	-
	Red drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Sand seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Sheepshead	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JUN-JUN	JAN-DEC
																		SEP-MAR	
	Silver perch	RARE	X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	OCT-OCT	JAN-DEC
	Silversides	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	JAN-DEC	JAN-DEC
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Southern flounder	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Southern kingfish	COMMON				X	X	X	X						-	-	-	AUG-NOV	-
	Spanish mackerel	COMMON				X	X								-	-	-	SEP-OCT	SEP-OCT
	Spot	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	JAN-DEC
	Spotfin mojarra	RARE	X	X											-	-	-	-	-
	Spotted gar	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	APR-MAY	-	JAN-DEC	JAN-DEC
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAR-JUL	AUG-NOV	JAN-DEC
	Striped mullet	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	White mullet	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-OCT	-
285	Atlantic bumper	COMMON				X	X	X							-	-	-	-	AUG-OCT
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Atlantic spadefish	RARE				X	X								-	-	-	AUG-OCT	-
	Bay anchovy	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC	JAN-DEC
	Bay whiff	RARE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-APR	JAN-DEC
	Black drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Crevalle jack	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	SEP-NOV
	Gafftopsail catfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	APR-OCT	MAR-OCT
	Gizzard shad	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
	Gulf butterfish	RARE	X	X	X	X									-	-	-	-	-
	Gulf killifish	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC
	Gulf menhaden	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Hardhead catfish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	MAY-SEP	MAY-SEP	MAY-OCT	JAN-DEC
	Pinfish	RARE	X	X	X	X									-	-	-	APR-AUG	-
	Red drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-NOV	JAN-DEC	JAN-DEC
	Sand seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Sheepshead	COMMON																	

Upper Texas Coast: ESIMAP 26 (cont.)

BIOLOGICAL RESOURCES: (cont.)

FISH: (cont.)

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
285	Southern flounder	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Southern kingfish	COMMON						X	X	X	X	X	X	-	-	-	MAY-NOV	-	
	Spanish mackerel	COMMON						X	X	X	X	-	-	-	-	-	-	JUN-OCT	JUN-OCT
	Spot	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-SEP	JAN-DEC	
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	APR-OCT	APR-OCT	APR-OCT	AUG-NOV	JAN-DEC	
	Striped mullet	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	White mullet	COMMON						X	X	X	X	-	-	-	-	-	-	JUN-OCT	-
286	Alligator gar	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC	
	Bay anchovy	COMMON	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-NOV	JAN-DEC	
	Bay whiff	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-SEP	JAN-DEC	
	Black drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	Blue catfish	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	Crevalle jack	COMMON						X	X	X	X	X	X	-	-	-	MAR-NOV	SEP-NOV	
	Gafftopsail catfish	COMMON						X	X	X	X	X	X	APR-MAY	-	-	APR-NOV	APR-NOV	
	Gizzard shad	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC	
	Gulf killifish	RARE	X	X	X	X	X	X	X	X	X	X	X	MAR-SEP	MAR-SEP	MAR-OCT	JAN-DEC	JAN-DEC	
	Gulf menhaden	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	Hardhead catfish	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	MAY-SEP	MAY-SEP	JUL-SEP	JAN-DEC	
	Pinfish	COMMON						X	X	X	X	-	-	-	-	-	-	APR-AUG	-
	Red drum	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	SEP-NOV	JAN-DEC	JAN-DEC	
	Sand seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	Sheepshead	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JUL-SEP	JAN-DEC	
																	NOV-APR		
	Silver perch	RARE	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	NOV-NOV	JAN-DEC	
	Silversides	COMMON	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	MAR-AUG	MAR-AUG	JAN-DEC	JAN-DEC	
	Smallmouth buffalo	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC	
	Southern flounder	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	Southern kingfish	RARE						X	X	X	-	-	-	-	-	-	AUG-OCT	-	
	Spanish mackerel	RARE						X	X	X	-	-	-	-	-	-	SEP-NOV	SEP-NOV	
	Spot	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-NOV	JAN-DEC	
	Spotfin mojarra	RARE						X	X	-	-	-	-	-	-	-	-	-	
	Spotted gar	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	APR-MAY	-	JAN-DEC	JAN-DEC	
	Spotted seatrout	COMMON	X	X	X	X	X	X	X	X	X	X	X	APR-OCT	APR-OCT	APR-OCT	SEP-NOV	JAN-DEC	
	Striped mullet	COMMON	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC	
	White mullet	COMMON						X	X	X	X	X	X	-	-	-	JUN-NOV	-	
369	Spinner shark							X	X	X	X	X	X	MAY-JUN	MAY-JUN	MAY-JUL	MAY-OCT	MAY-OCT	

INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
284	Atlantic rangia	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	-	MAR-OCT	JAN-DEC	JAN-DEC
	Blue crab	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC
	Brief squid	RARE						X	X	X	X	X	X	JUN-NOV	JUN-NOV	JUN-NOV	JUN-NOV	JUN-NOV	
	Brown shrimp	COMMON						X	X	X	X	X	X	X	-	-	FEB-APR	APR-DEC	-
	Grass shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	White shrimp	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-OCT	MAY-DEC	JAN-DEC
285	Blue crab	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC
	Brief squid	COMMON						X	X	X	X	X	X	X	MAR-DEC	MAR-DEC	MAR-DEC	MAR-DEC	MAR-DEC
	Brown shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	FEB-APR	APR-JAN	-
	Grass shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON						X	X	X	X	X	X	-	-	-	JUL-OCT	SEP-DEC	
	White shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JUN-OCT	JUN-DEC	JAN-DEC
286	Atlantic rangia	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	-	MAR-OCT	JAN-DEC	JAN-DEC
	Blue crab	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-OCT	MAR-OCT	MAR-NOV	JAN-DEC	JAN-DEC
	Brown shrimp	ABUNDANT						X	X	X	X	X	X	X	-	-	FEB-APR	APR-NOV	-
	Grass shrimp	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC	JAN-DEC
	Lesser blue crab	COMMON						X	X	X	X	X	X	-	-	-	APR-OCT	-	
	White shrimp	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	APR-OCT	APR-DEC	JAN-DEC
354	Eastern oyster	LOW	X	X	X	X	X	X	X	X	X	X	X	X	MAR-DEC	MAR-DEC	-	-	JAN-DEC
356	Eastern oyster	UNCONSOLIDATED	X	X	X	X	X	X	X	X	X	X	X	X	MAR-DEC	MAR-DEC	-	-	JAN-DEC
357	Eastern oyster	REEF	X	X	X	X	X	X	X	X	X	X	X	X	MAR-DEC	MAR-DEC	-	-	JAN-DEC

MARINE MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
339	West Indian manatee	VERY RARE						X	X	X					-	-	-	-

REPTILE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Internesting	Juveniles	Adults
331	Kemp's ridley sea turtle	COMMON						X	X	X	X	X	X	X	-	-	-	APR-NOV	-

TERRESTRIAL MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D
41	Northern river otter		X	X	X	X	X	X	X	X	X	X	X	X

HUMAN USE RESOURCES:

BOAT RAMP:

HUN#	Name	Contact	Phone
103	ROSELAND PARK		
121	THOMPSON FISH CAMP		
126	VH MCBRIDE BOAT RAMP		

HELIPORT:

HUN#	Name	Contact	Phone
148	BAYCOAST MEDICAL CENTER		
203	SAN JACINTO METHODIST HOSPITAL		

MANAGEMENT AREA:

HUN#	Name	Contact	Phone
231	ATKINSON ISLAND WMA	TPWD	

MARINA:

HUN#	Name	Contact	Phone
255	BAYLAND PARK MARINA		281/422-8900
256	BAYTOWN MARINA		

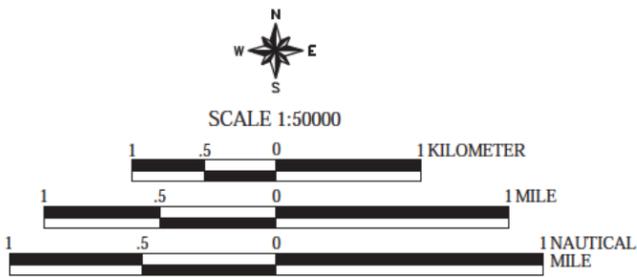
Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

# ENVIRONMENTAL SENSITIVITY INDEX MAP

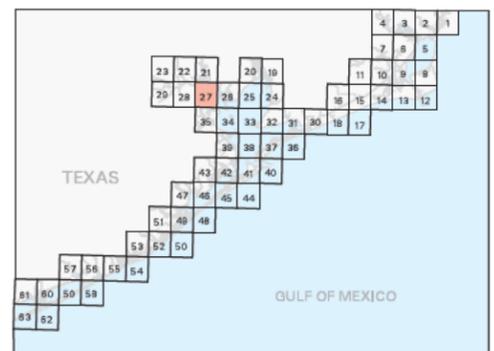
(b) (3), (b) (7)(F)

### SHORELINE HABITATS (ESI)

-  1B EXPOSED, SOLID MAN-MADE STRUCTURES
-  2A EXPOSED WAVE-CUT PLATFORMS IN CLAY  
2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
-  3A FINE- TO MEDIUM-GRAINED SAND BEACHES  
3B SCARPS AND STEEP SLOPES IN SAND
-  5 MIXED SAND AND GRAVEL (SHELL) BEACHES
-  6A GRAVEL BEACHES
-  6B RIPRAP
-  7 EXPOSED TIDAL FLATS
-  8A SHELTERED SCARPS IN CLAY OR BEDROCK
-  8B SHELTERED, SOLID MAN-MADE STRUCTURES
-  8C SHELTERED RIPRAP
-  9A SHELTERED TIDAL FLATS
-  10A SALT-AND BRACKISH-WATER MARSHES
-  10B FRESHWATER MARSHES
-  10C SWAMPS
-  10D SCRUB-SHRUB WETLANDS



Not For Navigation  
 Published: June 2013  
 Published at Seattle, Washington  
 National Oceanic and Atmospheric Administration  
 National Ocean Service  
 Office of Response and Restoration  
 Emergency Response Division



## Upper Texas Coast: ESIMAP 27

## BIOLOGICAL RESOURCES:

## BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
22	Pelicans		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
30	Cormorants		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Grebes	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons	HIGH	X	X	X	X					X	X	X		-	-	-
	Pelicans		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Waterfowl	HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
32	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
33	Cormorants		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
34	Grebes		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Loons		X	X	X	X					X	X	X		-	-	-
	Marsh birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Shorebirds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Waterfowl		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
35	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
190	Black-crowned night-heron	15 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-MAY	-
	Cattle egret	25-75 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Double-crested cormorant	8 INDIV	X	X	X	X					X	X	X		-	-	-
	Forster's tern	15 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Great blue heron	7-25 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-
	Great egret	1-24 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-APR	-
	Neotropic cormorant	13-140 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-OCT	-	-
	Roseate spoonbill	5-8 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Snowy egret	6-60 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
191	Black skimmer	5-180 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Forster's tern	31-875 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Gull-billed tern	10-122 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Laughing gull	135 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Least tern	18-157 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
192	American white pelican	4 INDIV	X	X	X						X	X	X		-	-	-
	Anhinga	1 PAIR	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-
	Black-crowned night-heron	1-40 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-MAY	-
	Cattle egret	18 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Great blue heron	2-9 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-
	Great egret	2-4 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-APR	-
	Least tern	6 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Little blue heron	2-5 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Neotropic cormorant	5 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-OCT	-	-
	Roseate spoonbill	2 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Snowy egret	1-3 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Tricolored heron	2 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	White ibis	7 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
193	Black skimmer	230-427 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Black-bellied whistling-duck	8 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAY-AUG	-	-
	Black-crowned night-heron	5-12 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-MAY	-
	Brown pelican	7-215 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Cattle egret	10-1050 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Forster's tern	75-84 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Great blue heron	1-3 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-
	Great egret	30-50 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-APR	-
	Gull-billed tern	18-29 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Laughing gull	391-10800 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Least tern	6-315 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Little blue heron	8-10 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Neotropic cormorant	158 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-OCT	-	-
	Roseate spoonbill	4-21 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Royal tern	420-840 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Sandwich tern	378-560 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Snowy egret	15-200 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Tricolored heron	2-25 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	White ibis	147-295 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
194	American white pelican	6-14 INDIV	X	X	X						X	X	X		-	-	-
	Black skimmer	6 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Black-crowned night-heron	2-7 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	APR-MAY	-
	Brown pelican	3 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Cattle egret	1-5 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Double-crested cormorant	68 INDIV	X	X	X	X					X	X	X		-	-	-
	Forster's tern	11 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-AUG	-	-
	Great blue heron	1-5 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-
	Great egret	4-29 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	MAR-APR	-
	Laughing gull	1-35 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Least tern	3 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-
	Little blue heron	4 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Neotropic cormorant	7-13 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-OCT	-	-
	Roseate spoonbill	13 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	Royal tern	16 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-AUG	-	-
	Snowy egret	41 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	APR-JUL	-	-
	Tricolored heron	1 PAIR	X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-
	White ibis	5 PAIRS	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUL	-	-
	Yellow-crowned night-heron	1 PAIR	X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-

## FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
165	Atlantic sharpnose shark				X	X	X	X	X	X	X	X	X	X	JUN-JUN	MAY-JUN	JUN-OCT	-	APR-OCT
178	Bull shark	ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	MAY-AUG	MAY-AUG	APR-NOV	JAN-DEC
181	Blacktip shark		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	MAY-JUN	MAY-NOV	MAR-NOV	MAY-JUN
266	Tarpon	RARE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
271	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC
285	Atlantic bumper	COMMON								X	X	X	X		-	-	-	-	AUG-OCT
	Atlantic croaker	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	-	-	JAN-JUN	JAN-DEC	JAN-DEC
	Atlantic spadefish	RARE								X	X	X	X		-	-	-	-	AUG-OCT
	Bay anchovy	HIGHLY ABUNDANT	X	X	X	X	X	X	X	X	X	X	X	X	MAR-NOV	MAR-NOV	MAR-NOV	JAN-DEC	JAN-DEC
	Bay whiff	RARE	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	APR-APR	JAN-DEC
	Black																		



**Upper Texas Coast: ESIMAP 27 (cont.)****HUMAN USE RESOURCES:****AIRPORT:**

HUN#	Name	Contact	Phone
9	LA PORTE MUNI		

**BOAT RAMP:**

HUN#	Name	Contact	Phone
118	SYLVAN BEACH BOAT RAMP		

**HELIPORT:**

HUN#	Name	Contact	Phone
177	LA PORTE PLANT		
199	RENTAL TOOLS		
202	SAN JACINTO COLLEGE CENTRAL CAMPUS		

**MANAGEMENT AREA:**

HUN#	Name	Contact	Phone
243	SAN JACINTO BATTLEGROUND SHS	TPWD	

**PARK:**

HUN#	Name	Contact	Phone
304	SAN JACINTO MONUMENT SP	TPWD	

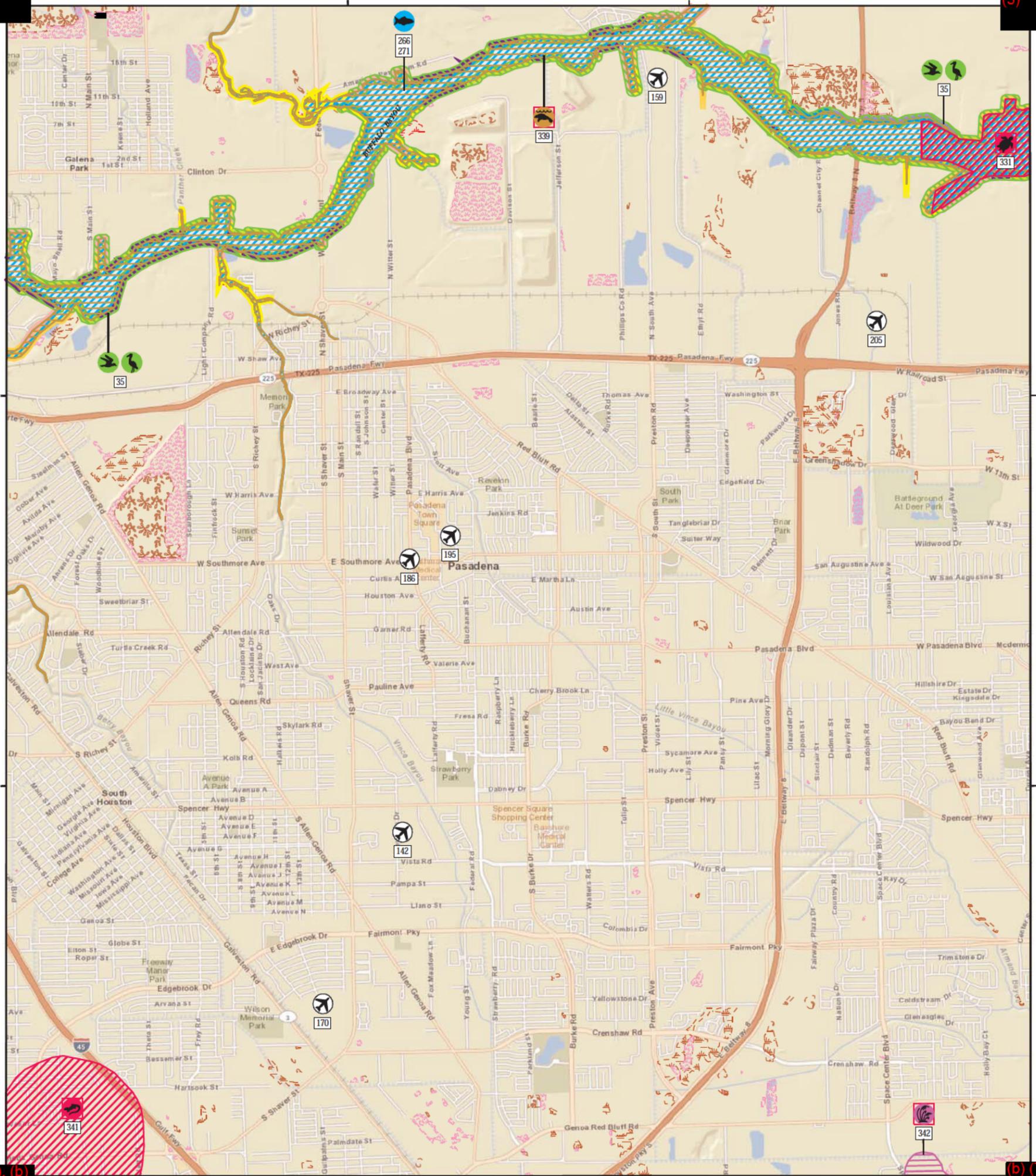
**WATER INTAKE:**

HUN#	Name	Contact	Phone
(b) (7)(F), (b) (3)			

# ENVIRONMENTAL SENSITIVITY INDEX MAP

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)



(b) (7)(F), (b) (3)

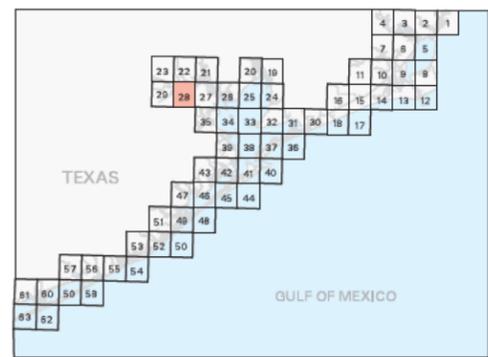
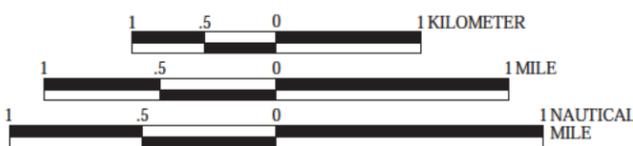
(b) (7)(F), (b) (3)

### SHORELINE HABITATS (ESI)

- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT SLOPES IN CLAY
- 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
- 3A FINE- TO MEDIUM-GRAINED SAND BEACHES
- 3B SCARPS AND STEEP SLOPES IN SAND
- 5 MIXED SAND AND GRAVEL (SHELL) BEACHES
- 6A GRAVEL BEACHES
- 6B RIPRAP
- 7 EXPOSED TIDAL FLATS
- 8A SHELTERED SCARPS IN CLAY OR BEDROCK
- 8B SHELTERED, SOLID MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 9A SHELTERED TIDAL FLATS
- 10A SALT- AND BRACKISH-WATER MARSHES
- 10B FRESHWATER MARSHES
- 10C SWAMPS
- 10D SCRUB-SHRUB WETLANDS



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National Ocean Service  
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Emergency Response Division

Upper Texas Coast: ESIMAP 28

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
35	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-

FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
266	Tarpon	RARE				X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
271	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC

HABITAT:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D
342	Texas prairie dawn	E E	X	X	X	X	X	X	X	X	X	X	X	X

MARINE MAMMAL:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
339	West Indian manatee	E E VERY RARE						X	X	X					-	-	-	-

REPTILE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Interesting	Juveniles	Adults
331	Kemp's ridley sea turtle	E E COMMON				X	X	X	X	X	X	X	X	X	-	-	-	APR-NOV	-
341	Houston toad	E E	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	FEB-JUN	-	JAN-DEC	JAN-DEC

HUMAN USE RESOURCES:

HELIPORT:

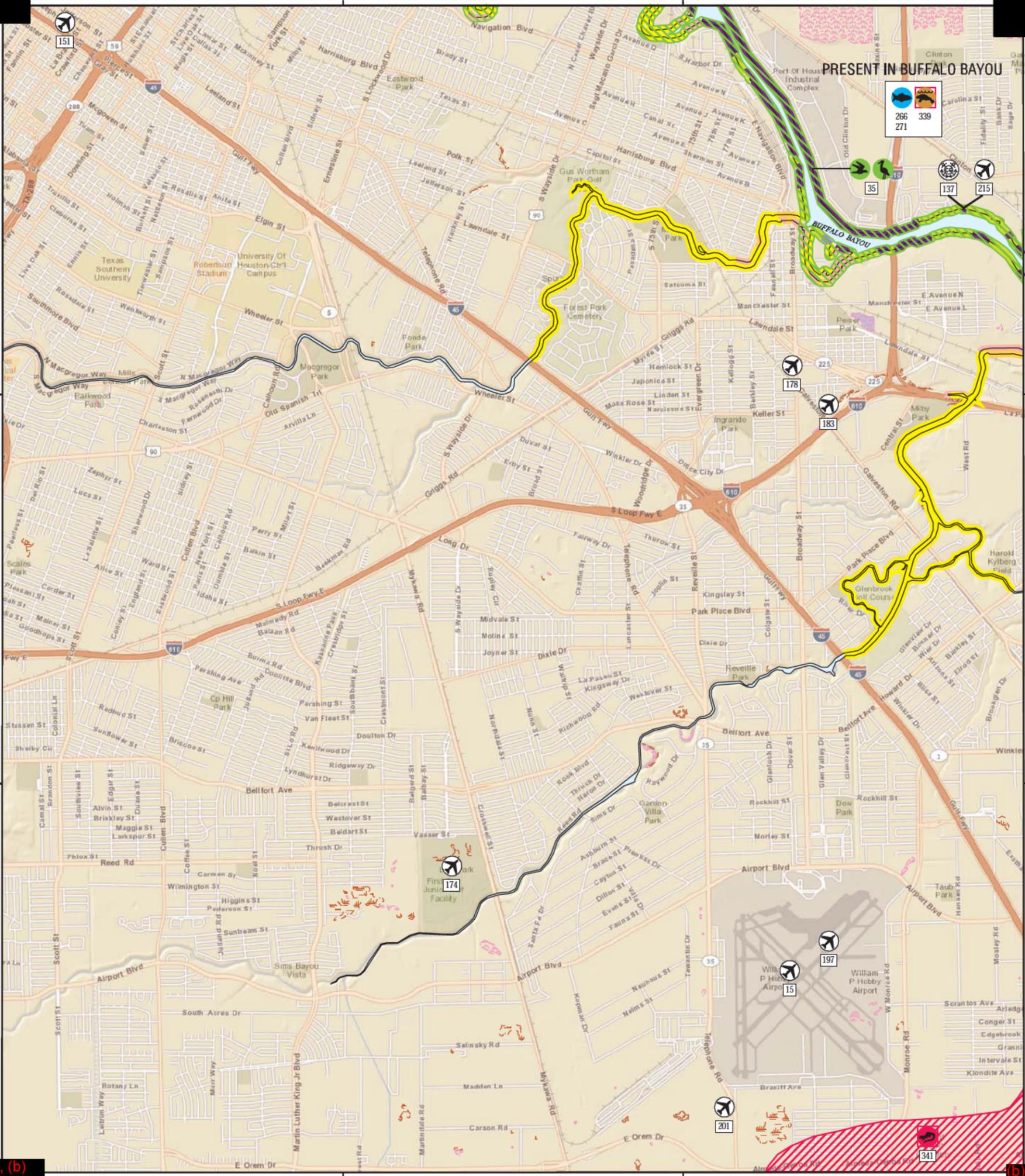
HUN#	Name	Contact	Phone
142	3321 WESTSIDE		
159	ETHYL CORP		
170	HL&P SOUTH HOUSTON HELISTOP		
186	MEMORIAL HOSPITAL		
195	POLICE		
205	SHELL DEER PARK REFINERY		

Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

# ENVIRONMENTAL SENSITIVITY INDEX MAP

(b) (7)(F), (b) (3)

(b) (7)(F), (b) (3)



(b) (7)(F), (b) (3)

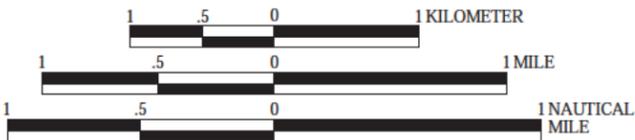
(b) (7)(F), (b) (3)

### SHORELINE HABITATS (ESI)

- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
- 2A EXPOSED WAVE-CUT PLATFORMS IN CLAY
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- 8B SHELTERED, SOLID MAN-MADE STRUCTURES
- 8C SHELTERED RIPRAP
- 9A SHELTERED TIDAL FLATS
- 10A SALT- AND BRACKISH-WATER MARSHES
- 10B FRESHWATER MARSHES
- 10C SWAMPS
- 10D SCRUB-SHRUB WETLANDS

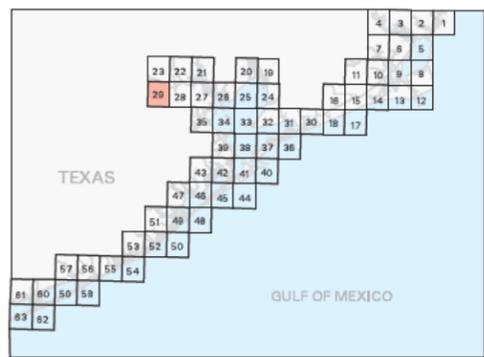


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Not For Navigation  
Published: June 2013

Published at Seattle, Washington  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of Response and Restoration  
Emergency Response Division



**Upper Texas Coast: ESIMAP 29**

**BIOLOGICAL RESOURCES:**

**BIRD:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
35	Gulls		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Terns		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Wading birds		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-

**FISH:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
266	Tarpon	RARE				X	X	X	X	X	X	X	X	X	-	-	-	MAR-NOV	-
271	Blue catfish		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	-	JAN-DEC
	Rainwater killifish		X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	-	-
	Sailfin molly		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	-
	Smallmouth buffalo		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	JAN-DEC

**MARINE MAMMAL:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Mating	Calving	Pupping	Molting
339	West Indian manatee	E E VERY RARE						X	X	X					-	-	-	-

**REPTILE:**

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Hatching	Interesting	Juveniles	Adults
341	Houston toad	E E	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	FEB-JUN	-	JAN-DEC	JAN-DEC

**HUMAN USE RESOURCES:**

**AIRPORT:**

HUN#	Name	Contact	Phone
15	WILLIAM P HOBBY		

**COAST GUARD:**

HUN#	Name	Contact	Phone
137	SECTOR HOUSTON/GALVESTON		832/256-2966

**HELIPORT:**

HUN#	Name	Contact	Phone
151	CHRISTUS ST JOSEPH HOSPITAL		
174	HOUSTON POLICE COMMAND STATION		
178	LEWIS ELECTRIC APPARATUS REPAIR INC		
183	MARINE CONSULTANTS INC		
197	POLICE HELICOPTER PATROL		
201	ROWAN		
215	USCG PORT SAFETY STATION		

Biological information shown on the maps represents known concentration areas or occurrences, but does not necessarily represent the full distribution or range of each species. This is particularly important to recognize when considering potential impacts to protected species.

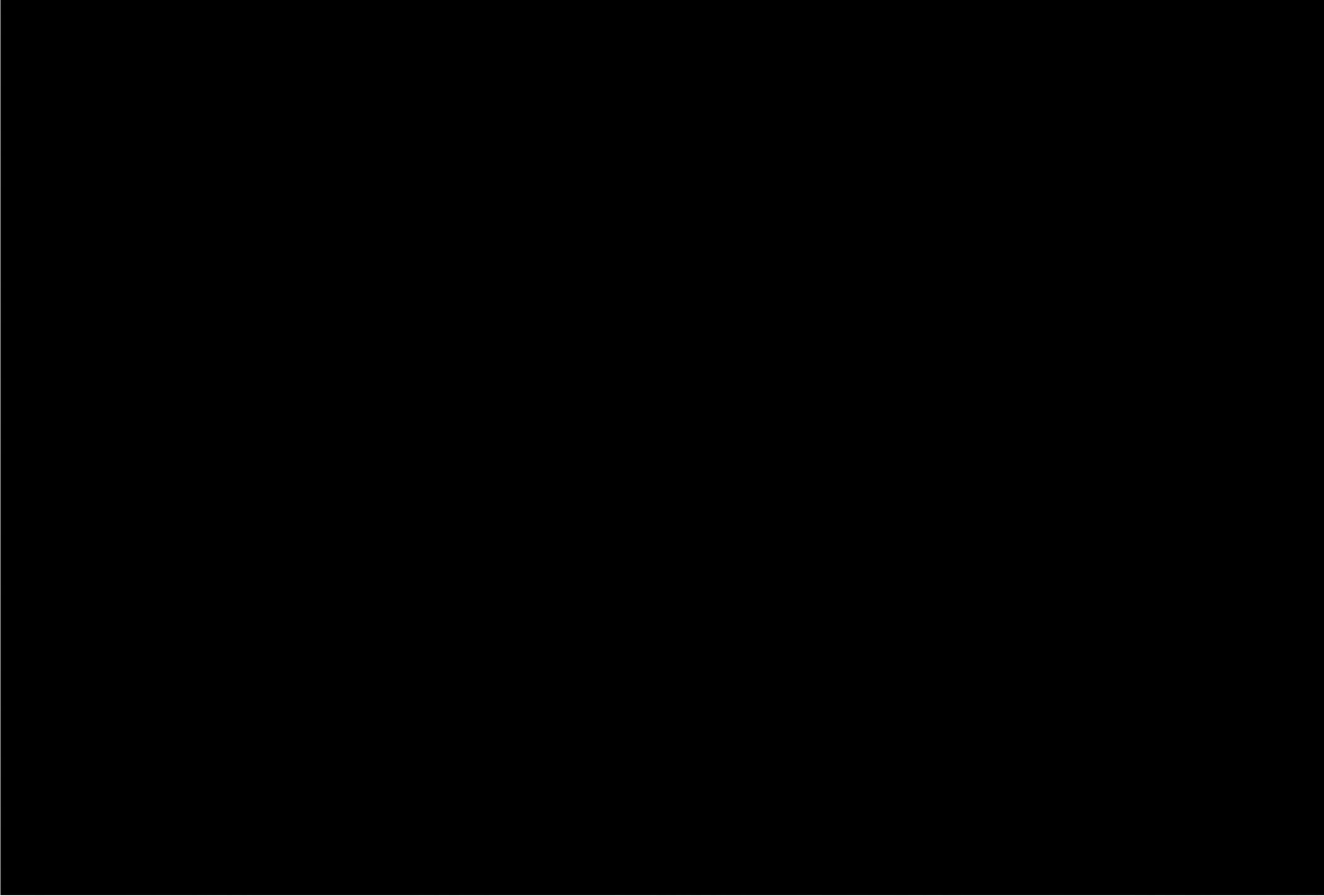


# Kinder Morgan Galena Park Terminal Distance Reference Map Intergrated Contingency Plan



Scale: 1:18,641

(b) (7)(F), (b) (3)



### C.1-11 Protection Strategies/Response Actions

Tactical protection strategies for the identified environmental and socio-economic areas identified in Section C.1-10 are available through the Central Texas Area Committee's Geographic Response Plans (GRPs). These plans are available on the Texas General Land Office's online Oil Spill Tool Kit found here:

[http://gisweb.glo.texas.gov/atlas/atlas/acp/houston/ctcac\\_grp\\_index\\_map.pdf](http://gisweb.glo.texas.gov/atlas/atlas/acp/houston/ctcac_grp_index_map.pdf)

The following quads correspond to the Environmental Sensitivity Indexes presented in this plan. They are:

- Highlands
- Jacinto City
- Setegast
- Morgan's Point
- La Porte
- Pasadena
- Park Place

Areas for protection identified in the GRPs are hyperlinked to ICS-204s identifying site specific information and protection strategies.

## C.2 WILDLIFE PRESERVATION AND REHABILITATION

Only trained personnel from the U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department, or rehabilitators permitted by these agencies are allowed to capture and rehabilitate oiled wildlife (TAC 19.20i). During a spill incident personnel from these two agencies within the Incident Command Structure will determine when and if wildlife will be rescued rehabilitated. These agencies will notify a group of properly trained and certified members of Wildlife Rehab & Education (WR&E) to capture and rehabilitate any oiled wildlife. These members also maintain 8 hrs of OSHA hazardous awareness training.

Contact one of the following in the event of a spill incident involving oiled wildlife:

Texas Parks and Wildlife Department  
24-hr phone number: (281)534-0138

U.S. Fish and Wildlife Service  
24-hr phone number: (281) 286-8282

Wildlife Rehab & Education  
24-hr phone number: (281) 731 8826



## **Annex D – Table of Contents**

### **D.1 Regulatory Cross-Reference**

- ✓ **USCG 33 CFR 154**
- ✓ **EPA 40 CFR 112**
- ✓ **DOT 49 CFR 194**
- ✓ **OSHA 29 CFR 1910.120**

## D.1 REGULATORY CROSS-REFERENCE– 33 CFR 154.1030 (e)

### USCG 33 CFR 154

#### Part 154 Subpart F – Facility Specific Response Plan

§ 154.1030	Brief Description	Location
(a)	The plan must be written in English.	--
(b)	A response plan must be divided into the sections listed in this paragraph and formatted in the order specified herein unless noted otherwise. It must also have some easily found marker identifying each section listed below. The following are the sections and subsections of a facility response plan:	--
(b)(1)	Introduction and plan contents.	Section I
(b)(2)	Emergency Response Action Plan.	Annex F
(b)(2)(i)	Notification procedures.	Section II-4, Annex B.1
(b)(2)(ii)	Facility spill mitigation procedures.	Sections II-3 & II-6
(b)(2)(iii)	Facility's response activities.	Section II-12
(b)(2)(iv)	Fish and wildlife and sensitive environments.	Annex C
(b)(2)(v)	Disposal Plan.	Section II-15.3
(b)(3)	Training and exercise.	Section III
(b)(3)(i)	Training procedures.	Sections III-2 & III-3
(b)(3)(ii)	Exercise procedures.	Sections III-4
(b)(4)	Plan review and update procedures.	Section I-3.2
(b)(5)	Appendices.	--
(b)(5)(i)	Facility specific information.	Annex A.1
(b)(5)(ii)	List of contacts.	Annex B.1
(b)(5)(iii)	Equipment lists and records.	Annex A.15
(b)(5)(iv)	Communications plan.	Sections II-13, Annex F.4
(b)(5)(v)	Site specific safety and health plan.	Section II-10
(b)(5)(vi)	List of acronyms and definitions.	Section I-6
(b)(5)(vii)	A geographic specific appendix for each zone in which a mobile facility operates.	N/A
(c)	The required contents for each section and subsection of the plan are contained in §§ 154.1035, 154.1040 and 154.1041, as appropriate.	--
(d)	The sections and subsections of response plans submitted to the COTP must contain at a minimum all the information required in §§154.1035, 154.1040, and 154.1041, as appropriate. It may contain other appropriate sections, subsections, or information that is required by other Federal, State, and local agencies.	--

## USCG 33 CFR 154 (Continued)

**Part 154 Subpart F – Facility Specific Response Plan**

§ 154.1035	Brief Description	Location
(a)	<i>Introduction and plan content.</i> This section of the plan must include facility and plan information as follows:	Annex A
(a)(1)	The facility's name, street address, city, county, state, ZIP code, facility telephone number, and telefacsimile number, if so equipped. Include mailing address if different from street address.	Annex A.1-1
(a)(2)	The facility's location described in a manner that could aid both a reviewer and a responder in locating the specific facility covered by the plan, such as, river mile or location from a known landmark that would appear on a map or chart.	Annex A.1-1
(a)(3)	The name, address, and procedures for contacting the facility's owner or operator on a 24-hour basis.	Annex A.1-1
(a)(4)	A table of contents.	Master TOC Beginning of each section/annex
(a)(5)	During the period that the submitted plan does not have to conform to the format contained in this subpart, a cross index, if appropriate.	Annex D
(a)(6)	A record of change(s) to record information on plan updates.	Annex E.1
(b)(1)	<i>Notification procedures.</i>	Section II-4, Annex B.1
(b)(1)(i)	This subsection must contain a prioritized list identifying the person(s), including name, telephone number, and their role in the plan, to be notified of a discharge or substantial threat of a discharge of oil. The telephone number need not be provided if it is listed separately in the list of contacts required in the plan. This Notification Procedures listing must include:	Annex B.1-4
(b)(1)(i)(A)	Facility response personnel, the spill management team, oil spill removal organizations, and the qualified individual(s) and the designated alternate(s); and	Annex B.1-4 & B.1-5
(b)(1)(i)(B)	Federal, State, or local agencies, as required.	Section II-4.2, Annex B.1-6, & Annex B.1-7
(b)(1)(ii)	This subsection must include a form, such as that depicted in Figure 1, which contains information to be provided in the initial and follow-up notifications to Federal, State, and local agencies. The form shall include notification of the National Response Center as required in part 153 of this chapter. Copies of the form also must be placed at the location(s) from which notification may be made. The initial notification form must include space for the information contained in Figure 1. The form must contain a prominent statement that initial notification must not be delayed pending collection of all information	Section II-4.3, Section IV Annex F.8.1

## USCG 33 CFR 154 (Continued)

**Part 154 Subpart F – Facility Specific Response Plan**

§ 154.1035	Brief Description	Location
(b)(2)(i)	<i>Facility's spill mitigation procedures.</i> This subsection must describe the volume(s) and oil groups that would be involved in the—	Annex A.12
(b)(2)(i)(A)	Average most probable discharge from the MTR facility;	Annex A.11-1
(b)(2)(i)(B)	Maximum most probable discharge from the MTR facility;	Annex A.11-1
(b)(2)(i)(C)	Worst case discharge from the MTR facility; and	Annex A.12-1
(b)(2)(i)(D)	Where applicable, the worst case discharge from the non-transportation-related facility. This must be the same volume provided in the response plan for the non-transportation-related facility.	N/A
(b)(2)(ii)	This subsection must contain prioritized procedures for facility personnel to mitigate or prevent any discharge or substantial threat of a discharge of oil resulting from operational activities associated with internal or external facility transfers including specific procedures to shut down affected operations. Facility personnel responsible for performing specified procedures to mitigate or prevent any discharge or potential discharge shall be identified by job title. A copy of these procedures shall be maintained at the facility operations center. These procedures must address actions to be taken by facility personnel in the event of a discharge, potential discharge, or emergency involving the following equipment and scenarios:	Sections II-3, & II-6
(b)(2)(ii)(A)	Failure of manifold, mechanical loading arm, other transfer equipment, or hoses, as appropriate;	Section II-6.11
(b)(2)(ii)(B)	Tank overflow;	Section II-6.12
(b)(2)(ii)(C)	Tank failure;	Section II-6.13
(b)(2)(ii)(D)	Piping rupture;	Section II-6.14
(b)(2)(ii)(E)	Piping leak, both under pressure and not under pressure, if applicable;	Section II-6.8
(b)(2)(ii)(F)	Explosion or fire; and	Section II-6.2
(b)(2)(ii)(G)	Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers.)	Section II-6
(b)(2)(iii)	This subsection must contain a listing of equipment and the responsibilities of facility personnel to mitigate an average most probable discharge.	Sections II-3 & II-6, Annex A.15.1 & B.2
(b)(3)	<i>Facility's response activities</i>	--
(b)(3)(i)	This subsection must contain a description of the facility personnel's responsibilities to initiate a response and supervise response resources pending the arrival of the qualified individual.	Section II-3.1

**USCG 33 CFR 154 (Continued)****Part 154 Subpart F – Facility Specific Response Plan**

<b>§ 154.1035</b>	<b>Brief Description</b>	<b>Location</b>
(b)(3)(ii)	This subsection must contain a description of the responsibilities and authority of the qualified individual and alternate as required in § 154.1026.	Section II-5
(b)(3)(iii)	This subsection must describe the organizational structure that will be used to manage the response actions. This structure must include the following functional areas as required by (b)(3)(iii)(A-H)	Annex B.1-2 and Section II-8
(b)(3)(iv)	This subsection must identify the oil spill removal organizations and the spill management team that will be capable of providing the following resources:	--
(b)(3)(iv)(A)	Equipment & supplies to meet the requirements of §§ 154.1045, 154.1047, or subparts H or I of this part, as appropriate.	Annex A.15-2 and Annex B.2
(b)(3)(iv)(B)	Trained personnel necessary to continue operation of the equipment and staff of the oil spill removal organization and spill management team for the first 7 days of the response.	Annex A.15-2, Annex B.2
(b)(3)(v)	This section must include job descriptions for each spill management team member within the organizational structure described in paragraph (b)(3)(iii) of this section. These job descriptions must include the responsibilities and duties of each spill management team member in a response action.	Section II-8
(b)(3)(vi)	For facilities that handle, store, or transport group II through group IV petroleum oils, and that operate in waters where dispersant use is pre-authorized, this subsection of the plan must also separately list the resource providers and specific resources, including appropriately trained dispersant-application personnel, necessary to provide the dispersant capabilities required in this subpart. All resource providers and resources must be available by contract or other approved means as described in §154.1028(a). The dispersant resources to be listed within this section must include requirements outlined in (b)(3)(vi)(A-D).	N/A
(b)(3)(vii)	This subsection of the plan must also separately list the resource providers and specific resources necessary to provide aerial oil tracking capabilities required in this subpart. The oil tracking resources to be listed within this section as required by (b)(3)(vii)(A) and (b)(3)(vii)(B).	N/A

**USCG 33 CFR 154 (Continued)****Part 154 Subpart F– Facility Specific Response Plan**

<b>§ 154.1035</b>	<b>Brief Description</b>	<b>Location</b>
(b)(3)(viii)	For mobile facilities that operate in more than one COTP zone, the plan must identify the oil spill removal organization and the spill management team in the applicable geographic-specific appendix. The oil spill removal organization(s) and the spill management team discussed in paragraph (b)(3)(iv) of this section must be included for each COTP zone in which the facility will handle, store, or transport oil in bulk.	N/A
(b)(3)(ix)	For mobile facilities that operate in more than one COTP zone, the plan must identify the oil spill removal organization and the spill management team in the applicable geographic-specific appendix. The oil spill removal organization(s) and the spill management team discussed in paragraph (b)(3)(iv)(A) of this section must be included for each COTP zone in which the facility will handle, store, or transport oil in bulk	N/A
(b)(4)	<i>Fish and wildlife and sensitive environments.</i>	Annex C
(b)(4)(i)	This section of the plan must identify areas of economic importance and environmental sensitivity, as identified in the ACP, which are potentially impacted by a worst case discharge. ACPs are required under section 311(j)(4) of the FWPCA to identify fish and wildlife and sensitive environments. The applicable ACP shall be used to designate fish and wildlife and sensitive environments in the plan. Changes to the ACP regarding fish and wildlife and sensitive environments shall be included in the annual update of the response plan, when available	Annex C.1-10
(b)(4)(ii)	For a worst case discharge from the facility, this section of the plan must—	--
(b)(4)(ii)(A)	List all fish and wildlife and sensitive environments identified in the ACP which are potentially impacted by a discharge of persistent oils, non-persistent oils, or non-petroleum oils.	Annex C.1-8, C.1-9 & C.1-10
(b)(4)(ii)(B)	Describe all the response actions that the facility anticipates taking to protect these fish and wildlife and sensitive environments.	Section II-12.3 & Annex C.1-11

**USCG 33 CFR 154 (Continued)****Part 154 Subpart F– Facility Specific Response Plan**

<b>§ 154.1035</b>	<b>Brief Description</b>	<b>Location</b>
(b)(4)(ii)(C)	Contain a map or chart showing the location of those fish and wildlife and sensitive environments which are potentially impacted. The map or chart shall also depict each response action that the facility anticipates taking to protect these areas. A legend of activities must be included on the map page.	Annex C.1-10
(b)(4)(iii)	For a worst case discharge, this section must identify appropriate equipment and required personnel, available by contract or other approved means as described in § 154.1028, to protect fish and wildlife and sensitive environments which fall within the distances calculated using the methods outlined in this paragraph as follows:	Annex A.15-2
(b)(4)(iii)(A)	Identify the appropriate equipment and required personnel to protect all fish and wildlife and sensitive environments in the ACP for the distances, as calculated in paragraph (b)(4)(iii)(B) of this section, that the persistent oils, non-persistent oils, or non-petroleum oils are likely to travel in the noted geographic area(s) and number of days listed in Table 2 of appendix C of this part;	Annex A.14-1, A.15-2, Annex B.2, & Annex C.1-10
(b)(4)(iii)(B)	Calculate the distances required by paragraph (b)(4)(iii)(A) of this section by selecting one of the methods described in (b)(4)(iii)(B)(1)(i-iv).	Annex A.14-1
(b)(4)(iii)(B)(1)	Distances may be calculated as follows:	--
(b)(4)(iii)(B)(2)	A spill trajectory or model may be substituted for the distances calculated under paragraph (b)(4)(iii)(B)(1) of this section. The spill trajectory or model must be acceptable to the COTP	N/A
(b)(4)(iii)(B)(3)	The procedures contained in the Environmental Protection's Agency's regulations on oil pollution prevention for non-transportation-related onshore facilities at 40 CFR part 112, appendix C, Attachment C-III may be substituted for the distances listed in non-tidal and tidal waters; and	Annex A.14-1
(b)(4)(iii)(C)	Based on historical information or a spill trajectory or model, the COTP may require the additional fish and wildlife and sensitive environments also be protected	N/A

## USCG 33 CFR 154 (Continued)

**Part 154 Subpart F– Facility Specific Response Plan**

§ 154.1035	Brief Description	Location
(b)(5)	<i>Disposal Plan.</i> This subsection must describe any actions to be taken or procedures to be used to ensure that all recovered oil and oil contaminated debris produced as a result of any discharge are disposed according to Federal, state, or local requirements.	Section II-15
(c)	<i>Training and exercises.</i> This section must be divided into the following two subsections:	--
(c)(1)	<i>Training Procedures.</i> This subsection must describe the training procedures and programs of the facility owner or operator to meet the requirements in §154.1050	Section III-2, & III-3
(c)(2)	<i>Exercise procedures.</i> This subsection must describe the exercise program to be carried out by the facility owner or operator to meet the requirements in § 154.1055	Section III-4
(d)	<i>Plan review and update procedures.</i> This section must address the procedures to be followed by the facility owner or operator to meet the requirements of §154.1065 and the procedures to be followed for any post-discharge review of the plan to evaluate and validate its effectiveness.	Section I-3.2
(e)	<i>Appendices.</i> This section of the response plan must include the appendices described in this paragraph.	--
(e)(1)	<i>Facility-specific information.</i> This appendix must contain a description of the facility's principal characteristics.	Annex A.1-1
(e)(1)(i)	There must be a physical description of the facility including a plan of the facility showing the mooring areas, transfer locations, control stations, locations of safety equipment, and the location and capacities of all piping and storage tanks.	Annex A.7
(e)(1)(ii)	The appendix must identify the sizes, types, and number of vessels that the facility can transfer oil to or from simultaneously.	Annex A.3
(e)(1)(iii)	The appendix must identify the first valve(s) on facility piping separating the transportation-related portion of the facility from the non-transportation-related portion of the facility, if any. For piping leading to a manifold located on a dock serving tank vessels, this valve is the first valve inside the secondary containment required by 40 CFR part 112.	Annex A.7

**USCG 33 CFR 154 (Continued)****Part 154 Subpart F– Facility Specific Response Plan**

§ 154.1035	Brief Description	Location
(e)(1)(iv)	The appendix must contain information on the oil(s) and hazardous material handled, stored, or transported at the facility in bulk. A material safety data sheet meeting the requirements of 29 CFR 1910.1200, 33 CFR 154.310(a)(5) or an equivalent will meet this requirement. This information can be maintained separately providing it is readily available and the appendix identifies its location. This information must include (e)(1)(iv)(A-E)	Annex A.5-1
(e)(1)(v)	The appendix may contain any other information which the facility owner or operator determines to be pertinent to an oil spill response	Annex A.5-2
(e)(2)	List of contacts. This appendix must include information on 24-hour contact of key individuals and organizations. If more appropriate, this information may be specified in a geographic-specific appendix. The list must include—	Annex B.1
(e)(2)(i)	The primary and alternate qualified individual(s) for the facility;	Annex B.1-4
(e)(2)(ii)	The contact(s) identified under paragraph (b)(3)(iv) of this section for activation of the response resources; and	Annex B.2
(e)(2)(iii)	Appropriate Federal, State, and local officials.	Annex B.1-7
(e)(3)	Equipment list and records. This appendix must include the information specified in this paragraph.	Annex A.15
(e)(3)(i)	The appendix must contain a list of equipment and facility personnel required to respond to an average most probable discharge, as defined in §154.1020. The appendix must also list the location of the equipment.	Annex A.15 B.1-2, & B.1-4
(e)(3)(ii)	The appendix must contain a detailed listing of all the major equipment identified in the plan as belonging to an oil spill removal organization(s) that is available, by contract or other approved means as described in §154.1028(a), to respond to a maximum most probable or worst case discharge, as defined in §154.1020. The detailed listing of all major equipment may be located in a separate document referenced by the plan. Either the appendix or the separate document referenced in the plan must provide the location of the major response equipment.	Annex A.15-2, & Annex B.2

## USCG 33 CFR 154 (Continued)

**Part 154 Subpart F– Facility Specific Response Plan**

§ 154.1035	Brief Description	Location
(e)(3)(iii)	It is not necessary to list response equipment from oil spill removal organization(s) when the organization has been classified by the Coast Guard and their capacity has been determined to equal or exceed the response capability needed by the facility. For oil spill removal organization(s) classified by the Coast Guard, the classification must be noted in this section of the plan. When it is necessary for the appendix to contain a listing of response equipment, it shall include all of the following items that are identified in the response plan: Skimmers; booms; dispersant application, in-situ burning, bioremediation equipment and supplies, and other equipment used to apply other chemical agents on the NCP Product Schedule (if applicable); communications, firefighting, and beach cleaning equipment; boats and motors; disposal and storage equipment; and heavy equipment. The list must include for each piece of equipment requirements set forth in (e)(3)(iii)(A-H).	Annex A.15-2, & Annex B.2
(e)(4)	<i>Communications plan.</i> This appendix must describe the primary and alternate method of communication during discharges, including communications at the facility and at remote locations within the areas covered by the response plan. The appendix may refer to additional communications packages provided by the oil spill removal organization. This may reference another existing plan or document.	Sections II-4.3, Section IV, Annex F.8-1
(e)(5)	<i>Site-specific safety and health plan.</i> This appendix must describe the safety and health plan to be implemented for any response location(s). It must provide as much detailed information as is practicable in advance of an actual discharge. This appendix may reference another existing plan required under 29 CFR 1910.120.	Section II-10
(e)(6)	<i>List of acronyms and definitions.</i> This appendix must list all acronyms used in the response plan including any terms or acronyms used by Federal, State, or local governments and any operational terms commonly used at the facility. This appendix must include all definitions that are critical to understanding the response plan.	Section I-6

**EPA 40 CFR 112****Appendix F to Part 112 – Facility Specific Response Plan**

<b>Appendix F</b>	<b>Brief Description</b>	<b>Location</b>
<b>1.0</b>	<b>Model Facility-Specific Response Plan</b>	--
	<b>Emergency Response Action Plan</b>	--
	1. Qualified Individual Information	Annex F.5
	2. Emergency Notification Phone List	Annex F.5
	3. Spill Response Notification Form	Annex F.8
	4. Response Equipment List and Location	Annex F.6
	5. Response Equipment Testing and Deployment	Annex F.6
	6. Facility Response Team	Annex F.5
	7. Evacuation Plan	Annex F.7, F.2
	8. Immediate Actions	Annex F.3
	9. Facility Diagram	Annex F.2
<b>1.2</b>	<b>Facility Information</b>	--
1.2.1	Facility name and location	Annex F.1
1.2.2	Latitude and Longitude	Annex F.1
1.2.3	Wellhead Protection Area	Annex F.1
1.2.4	Owner/operator	Annex F.1
1.2.5	Qualified Individual	Annex F.1
1.2.6	Date of Oil Storage Start-up	Annex F.1
1.2.7	Current Operation	Annex F.1
1.2.8	Dates and Types of Substantial Expansion	Annex F.1
<b>1.3</b>	<b>Emergency Response Information</b>	--
1.3.1	Notification	Annex F.5
1.3.2	Response Equipment List / Location	Annex F.6
1.3.3	Response Equipment Testing/Deployment	Annex F
1.3.4	Personnel	Annex F
	<ul style="list-style-type: none"> <li>A description of response personnel capabilities, including:</li> </ul>	Section II-8
	<ul style="list-style-type: none"> <li>Duties of persons at the Facility during a response action</li> </ul>	Annex F.3
	<ul style="list-style-type: none"> <li>Response times and qualifications</li> </ul>	Annex F.5
	<ul style="list-style-type: none"> <li>Evidence of contractual arrangements</li> </ul>	Annex F.6
1.3.5	Evacuation Plans	Annex F.7, Annex A.17, Section II-19
	Plans for evacuation...and community evacuation plans, as appropriate	Section II-19

**EPA 40 CFR 112 (Continued)**

<b>Appendix F to Part 112 – Facility Specific Response Plan</b>		
<b>Appendix F</b>	<b>Brief Description</b>	<b>Location</b>
1.3.6	<b>Qualified Individual's Duties</b>	Section II-5
	A description of the duties of the qualified individual to include:	Section II-5
	Activate internal alarms and hazard communication systems to notify all facility personnel;	Section II-5
	Notify all response personnel, as needed;	Section II-5
	Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;	Section II-5
	Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;	Section II-5
	Assess the interaction of the spilled substance with water and/ or other substances stored at the facility and notify response personnel at the scene of that assessment;	Section II-5
	Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);	Section II-5
	Assess and implement prompt removal actions to contain and remove the substance released;	Section II-5
	Coordinate rescue and response actions as previously arranged with all response personnel;	Section II-5
	Use authority to immediately access company funding to initiate cleanup activities; and	Section II-5
Direct cleanup activities until properly relieved of this responsibility.	Section II-5	
<b>1.4</b>	<b>Hazard Evaluation</b>	Annex A.10
1.4.1	Hazard Identification	Annex A: 4, 5, 10, & 11
1.4.2	Vulnerability Analysis	Annex C.1
1.4.3	Analysis of the Potential for an Oil Spill	Annex A.16
1.4.4	Facility Reportable Oil Spill History	Annex A.9
<b>1.5</b>	<b>Discharge Scenarios</b>	Annex A.11
1.5.1	Small and Medium Discharges	Annex A.11
1.5.2	Worst Case Discharge	Annex A.12

**EPA 40 CFR 112 (Continued)**

<b>Appendix F to Part 112 – Facility Specific Response Plan</b>		
<b>Appendix F</b>	<b>Brief Description</b>	<b>Location</b>
<b>1.6</b>	<b>Discharge Detection Systems</b>	Section II-2
1.6.1	Discharge Detection by Personnel	Section II-2
1.6.2	Automated Discharge Detection	Section II-2
<b>1.7</b>	<b>Plan Implementation</b>	Section I-3
1.7.1	Response Resources for Small, Medium, and Worst Case Spills	Annex A.15, A.14, A.13, B.2
1.7.2	Disposal Plans	Section II-14
1.7.3	Containment and Drainage Planning	
<b>1.8</b>	<b>Self-Inspection, Drills/Exercises, and Response Training</b>	--
1.8.1	Facility Self-Inspection	Section II-1
	1.8.1.1 Tank Inspection	Section II-1
	1.8.1.2 Response Equipment Inspection	Section II-1, Section III-6 Forms
	1.8.1.3 Secondary Containment Inspection	Section II-1
1.8.2	Facility Drills/Exercises	Section III-4
	1.8.2.1 Qualified Individual Notification Drill Log	Section III-4
	1.8.2.2 Crisis Management Team Tabletop Exercise Log	Section III-4
1.8.3	Response Training	Section III-2
	1.8.3.1 Personnel Response Training Log	Section III-6
	1.8.3.2 Discharge Prevention Meeting Log	Section III-6
<b>1.9</b>	<b>Diagrams</b>	Annex A.7
	(1) Site Plan Diagram	Annex A.7
	(2) Site Drainage Plan Diagram	Annex A.7
	(3) Site Evacuation Plan Diagram	Annex A.7
<b>1.10</b>	<b>Security</b>	Section II-9
<b>2.0</b>	<b>Response Plan Cover Sheet</b>	--
2.1	General Information	Annex A.1
2.2	Applicability of Substantial Harm Criteria	Annex A.8
2.3	Certification	Section I-5
<b>3.0</b>	<b>Acronyms</b>	Section I-6

**DOT 49 CFR 194**

<b>DOT/PHMSA 49 CFR PART 194</b>		
<b>§ 194.103</b>	<b>Brief Description</b>	<b>Location</b>
(a)	Each operator shall submit a statement with its response plan, as required by §§194.107 and 194.113, identifying which line sections in a response zone can be expected to cause significant and substantial harm to the environment in the event of a discharge of oil into or on the navigable waters or adjoining shorelines.	Annex A.8
<b>§ 194.105</b>	<b>Brief Description</b>	<b>Location</b>
(a)	Each operator shall determine the worst case discharge for each of its response zones and provide the methodology, including calculations, used to arrive at the volume.	Annex A.12
(b)	The worst case discharge is the largest volume, in barrels, of the following (b)(1-4)	Annex A.12
<b>§ 194.107</b>	<b>Brief Description</b>	<b>Location</b>
(a)	Each response plan must plan for resources for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge.	Annex A.12, Annex A.15, Annex B.2, Annex F.6
(b)	An operator must certify in the response plan that it reviewed the NCP and each applicable ACP and that its response plan is consistent with the NCP and each applicable ACP as follows:	Section II-2
(b)(1)	As a minimum to be consistent with the NCP as a facility response plan must:	--
(b)(1)(i)	Demonstrate an operator's clear understanding of the function of the Federal response structure, including procedures to notify the National Response Center reflecting the relationship between the operator's response organization's role and the Federal On Scene Coordinator's role in pollution response;	Section II-4, Section II-5, Section II-8, Annex B.1, Annex F.5,
(b)(1)(ii)	Establish provisions to ensure the protection of safety at the response site; and	Section II-10
(b)(1)(iii)	Identify the procedures to obtain any required Federal and State permissions for using alternative response strategies such as in-situ burning and dispersants as provided for in the applicable ACPs; and	Section II-12
(b)(2)	At a minimum, to be consistent with the applicable ACP the plan must:	--
(b)(2)(i)	Address the removal of a worst case discharge and the mitigation or prevention of a substantial threat of a worst case discharge;	Sections II-3 & II-6, Annex A
(b)(2)(ii)	Identify environmentally and economically sensitive areas;	Annex C

**DOT 49 CFR 194 (Continued)**

<b>DOT/PHMSA 49 CFR PART 194</b>		
<b>§ 194.107</b>	<b>Brief Description</b>	<b>Location</b>
(b)(2)(iii)	Describe the responsibilities of the operator and of Federal, State and local agencies in removing a discharge and in mitigating or preventing a substantial threat of a discharge;	Section II-4
(b)(2)(iv)	Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals.	Section II-12
(c)	Each response plan must include:	--
(c)(1)	A core plan consisting of --	Section I-IV
(c)(1)(i)	An information summary as required in § 194.113,	Annex A.1
(c)(1)(ii)	Immediate notification procedures,	Annex B.1 Annex F.5
(c)(1)(iii)	Spill detection and mitigation procedures,	Sections II-3 & II-6, Annex A
(c)(1)(iv)	The name, address, and telephone number of the oil spill response organization, if appropriate,	Annexes: A.15, B.2, F.6
(c)(1)(v)	Response activities and response resources,	Annexes: A.15, B.2, F.6
(c)(1)(vi)	Names and telephone numbers of Federal, state, and local agencies which the operator expects to have pollution control responsibilities or support,	Annex B.1 Annex F.5
(c)(1)(vii)	Training procedures,	III-1 thru III-3
(c)(1)(viii)	Equipment testing,	III-4
(c)(1)(ix)	Drill program – an operator will satisfy the requirement for a drill program by following the National Preparedness for Response Exercise Program (PREP) guidelines. An operator choosing not to follow PREP guidelines must have a drill program that is equivalent to PREP. The operator must describe the drill program in the response plan and OPS will determine if the program is equivalent to PREP.	Sections III-4, III-6
(c)(1)(x)	Plan review and update procedures;	Section I-3
(c)(2)	An appendix for each response zone that includes the information required in paragraph (c)(1)(i)-(ix) of this section and the worst case discharge calculations that are specific to that response zone. An operator submitting a response plan for a single response zone does not need to have a core plan and a response zone appendix. The operator of a single response zone onshore pipeline shall have a single summary in the plan that contains the required information in § 194.113.7; and.	Annex A.1 Annex A.12
(c)(3)	A description of the operator's response management system including the functional areas of finance, logistics, operations, planning, and command. The plan must demonstrate that the operator's response management system uses common terminology and has a manageable span of control, a clearly defined chain of command, and sufficient trained personnel to fill each position.	II-8, B.1

**DOT 49 CFR 194 (Continued)**

<b>DOT/PHMSA 49 CFR PART 194</b>		
<b>§ 194.109</b>	<b>Brief Description</b>	<b>Location</b>
(a)	In lieu of submitting a response plane required by 194.103, an operator may submit a response plan that complies with a state law or regulation, if the state law or regulation requires a plan provides equivalent or greater spill protection than a plan required under this part.	--
<b>§ 194.111</b>	<b>Brief Description</b>	<b>Location</b>
(a)	Each operator shall maintain relevant portions of its response plan at the operator's headquarters and at other locations from which response activities may be conducted, for example, in field offices, supervisor's vehicles, or spill response trailers.	Section I-3 Annex E.2
(b)	Each operator shall provide a copy of its response plan to each qualified individual.	Section I-3 Annex E.2
<b>§ 194.113</b>	<b>Brief Description</b>	<b>Location</b>
(a)	The information summary for the core plan, required by § 194.107, must include:	--
(a)(1)	The name and address of the operator.	Cover Page
(a)(2)	For each response zone which contains one or more line sections that meet the criteria for determining significant and substantial harm as described in § 194.103, a listing and description of the response zones, including county(s) and state(s).	N/A Annex A.1
(b)	The information summary for the response zone appendix, required in § 194.107, must include:	--
(b)(1)	The information summary for the core plan.	Annex A.1
(b)(2)	The names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s);	Annex A.1-1 Annex B.1-4 Annex F.5-2
(b)(3)	The description of the response zone, including county(s) and state(s), for those zones in which a worst case discharge could cause substantial harm to the environment.	Annex A.1
(b)(4)	A list of line sections for each pipeline contained in the response zone, identified by milepost or survey station number, or other operator designation.	Annex A.1
(b)(5)	The basis for the operator's determination of significant and substantial harm.	Annex A.8
(b)(6)	The type of oil and volume of the worst case discharge.	Annex A.12

**DOT 49 CFR 194 (Continued)**

<b>DOT/PHMSA 49 CFR PART 194</b>		
<b>§ 194.115</b>	<b>Brief Description</b>	<b>Location</b>
(a)	Each operator shall identify and ensure, by contract or other approved means, the resources necessary to remove, to the maximum extent practicable, a worst case discharge and to mitigate or prevent a substantial threat of a worst case discharge.	Annex A.15, Annex B.2, Annex A.6
(b)	An operator shall identify in the response plan the response resources which are available to respond within the time specified, after discovery of a worst case discharge, or to mitigate the substantial threat of such a discharge.	Annex A.15, Annex B.2, Annex F.6
<b>§ 194.117</b>	<b>Brief Description</b>	
(a)	Each operator shall conduct training to ensure that:	--
(a)(1)	All personnel know --	Section III-3
(a)(1)(I)	Their responsibilities under the response plan.	Section III-3
(a)(1)(ii)	The name and address of, and the procedure for contacting, the operator on a 24-hour basis.	Section III-3
(a)(1)(iii)	The name of, and procedures for contacting, the qualified individual on a 24-hour basis.	Section III-3
(a)(2)	Reporting personnel know --	Section III-3
(a)(2)(I)	The content of the information summary of the response plan.	Section III-3
(a)(2)(ii)	The toll-free telephone number of the National Response Center.	Section III-3
(a)(2)(iii)	The notification process.	Section III-3
(a)(3)	Personnel engaged in response activities know --	Section III-3
(a)(3)(I)	The characteristics and hazards of the oil discharged.	Section III-3
(a)(3)(ii)	The conditions that are likely to worsen in emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.	Section III-3
(a)(3)(iii)	The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage.	Section III-3

**DOT 49 CFR 194 (Continued)**

<b>DOT/PHMSA 49 CFR PART 194</b>		
<b>§ 194.117</b>	<b>Brief Description</b>	<b>Location</b>
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus.	Annex F.6
(b)	Each operator shall maintain a training record for each individual that has been trained as required by this section. These records must be maintained in the following manner as long as the individual is assigned duties under the response plan according to (b)(1) and (b)(2).	Section III-1
(c)	Nothing in this section relieves an operator from the responsibility to ensure that all response personnel are trained to meet the OSHA standards for emergency response operations in 29 CFR 1910.120 ...	Sections III-2 & III-3
<b>§ 194.121</b>	<b>Brief Description</b>	<b>Location</b>
(a)	Each operator shall update its response plan to address new or different operating conditions or information. In addition, each operator shall review its response plan in full at least every 5 years from the date of the last submission or the last approval as required by (a)(1) and (a)(2).	Section I-3
(b)	If a new or different operating condition or information would substantially affect the implementation of a response plan, the operator must immediately modify its response plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA. Examples of changes in operating conditions that would cause a significant change to an operator's response plan as defined in (B)(1-8).	Section I-3

**OSHA 29 CFR 1910.120**

<b>Hazardous waste operations and emergency response</b>		
<b>§ 1910.120</b>	<b>Brief Description</b>	<b>Location</b>
(q)(1)	Emergency response plan	--
(q)(2)	Elements of an emergency response plan	--
(q)(2)(i)	Pre-emergency planning and coordination with outside parties	Section III-4
(q)(2)(ii)	Personnel roles, lines of authority and communication	Section II-8
(q)(2)(iii)	Emergency recognition and prevention	Section II-2
(q)(2)(iv)	Safe distances and places of refuge	Annex A.17 & A.7
(q)(2)(v)	Site security and control	Section II-9
(q)(2)(vi)	Evacuation routes and procedures	Annex A.18, Annex F.8
(q)(2)(vii)	Decontamination procedures	Section II-10
(q)(2)(viii)	Emergency medical treatment and first aid	Section II-10
(q)(2)(ix)	Emergency alerting and response procedures	Section II-2
(q)(2)(x)	Critique of response and follow-up	Section III-5
(q)(2)(xi)	PPE and emergency equipment	Section II-11
(q)(2)(xii)	Emergency response organization	Section II-8

**Annex E – Table of Contents****E.1 Record of Revisions****E.2 Distribution List**

## E.1 RECORD OF REVISIONS

Date	Revision Number	Revision Made By:	Revision
	1	The Response Group	Initial development of response plan.
May 2013	2	The Response Group	Incorporation of revisions requested by DOT PHMSA, formatting throughout
November 2013	3	The Response Group	Management and SMT Contacts updated, formatting and general administrative changes throughout.
March 2014	4	The Response Group	Formatting changed throughout the plan, addition of sub-sections.
March 2014	4	The Response Group	Section II-4.2- edits made to flow chart. Removed reference to obsolete figure and addition of OSRO information
March 2014	4	The Response Group	Section II-4.3- Agency Response Form edited to include required statement regarding not delaying notification pending information collection.
March 2014	4	The Response Group	II-13 Added Communication information to Core Plan. Other Sections numbering revised accordingly.
March 2014	4	The Response Group	Section VI- Agency Response Form edited to include required statement regarding not delaying notification pending information collection.
March 2014	4	The Response Group	Annex A.3- Added table with information regarding size and type of vessels that are handled at the facility's docks simultaneously.
March 2014	4	The Response Group	Annex A.11- Reference to drinking water intake and environmentally sensitive information changed from obsolete form to NOAA ESI maps and information contained in Annex C.1-10.
March 2014	4	The Response Group	A.12-1 Calculation revised to meet the requirements of 33 CFR 154.1029. Planning assumptions added for discovery and ESD shutoff.

## E.1 RECORD OF REVISIONS (CONT'D)

Date	Revision Number	Revision Made By:	Revision
March 2014	4	The Response Group	A.14.1- Verbiage added to explain the use of the EPA Planning Distance Equation.
March 2014	4	The Response Group	Annex B.1-7 Sector Houston contact information updated.
March 2014	4	The Response Group	Annex C-10- Plan Environmental Sensitivity Map replaced with six NOAA ESI Maps and corresponding documentation for a total of nineteen pages.
March 2014	4	The Response Group	Annex C.1-11 added.
March 2014	4	The Response Group	Annex D- USCG Cross Reference updated.
March 2014	4	The Response Group	Annex F.5- Agency Notification Form removed. Form was relocated to Annex F.8
March 2014	4	The Response Group	Annex F.5-5 Sector Houston contact information updated
March 2014	4	The Response Group	Annex F.8 Agency Response Form edited to include required statement regarding not delaying notification pending information collection.
May 2014	5	The Response Group	Updated QI Letter
May 2014	5	The Response Group	Annex A.12- Dock line (USCG) and Storage tank (EPA) WCDs separated appropriately.
May 2014	5	The Response Group	Annex B.1-7 and Annex F5.-5 USCG Sector Houston Pollution Response number updated.
May 2014	5	The Response Group	Section II.4-2 and Annex B.1 figure III.2.c.iii updated (Sector Houston phone number).
Mat 2014	5	The Response Group	Annex B.1-4 and F.5-2 internal notification table updated.



## E.2 DISTRIBUTION LIST

NO.		ASSIGNED TO	NO.		ASSIGNED TO
1		<u>EPA Region VI</u>	21		_____
2		<u>USCG Sector Houston</u>	22		_____
3		<u>Texas Commission of Environmental Quality</u>	23		_____
4		<u>La Porte LEPC</u>	24		_____
5		<u>City of LaPort Police Dept.</u>	25		_____
6		_____	26		_____
7		_____	27		_____
8		_____	28		_____
9		_____	29		_____
10		_____	30		_____
11		_____	31		_____
12		_____	32		_____
13		_____	33		_____
14		_____	34		_____
15		_____	35		_____
16		_____	36		_____
17		_____	37		_____
18		_____	38		_____
19		_____	39		_____
20		_____	40		_____

# EMERGENCY RESPONSE ACTION PLAN



**Kinder Morgan Galena Park Terminal**  
906 Clinton Drive  
Galena Park, Texas 77547

**EPA: TXD026481523**

**Owner/Operator:**

**KM Liquids Terminals LLC**  
500 Dallas St., Suite 1000  
Houston, TX 77002  
(713) 369-9000

**24-Hour Number:**

**(713) 455-4283**

**VOLUME 1 OF 1**

## Annex F – Table of Contents

<b>F.1</b>	<b>General Facility Information</b>
<b>F.2</b>	<b>Maps and Diagrams</b>
<b>F.3</b>	<b>Immediate Actions</b>
<b>F.4</b>	<b>Communication Equipment</b>
<b>F.5</b>	<b>Emergency Notification Contact List</b>
<b>F.6</b>	<b>Response Equipment</b>
<b>F.7</b>	<b>Evacuation</b>
<b>F.8</b>	<b>Initial Response Forms</b>

## F.1 GENERAL FACILITY INFORMATION

### F.1-1 General Facility Information

General Facility Information	
Facility Name:	KM Liquids Terminals LLC
Facility Address:	906 Clinton Galena Park, Texas 77547
Facility Main Phone	(713) 455-1231
Latitude and Longitude:	(b) (7)(F), (b) (3)
Owner of Facility:	KM Liquids Terminals LLC
Owner Address (if different from Terminal):	500 Dallas St., Suite 1000 Houston, TX 77002
Owner Phone:	(713) 369-9000
Owner County:	Harris
Operator of Terminal:	KM Liquids Terminals LLC
Largest Oil Storage Tank Capacity:	(b) (7)(F), (b) (3)
Worst Case Discharge Amount:	
Average Daily Throughput:	
Number of Aboveground Oil Storage Tanks:	147
Terminal Distance to Navigable Waters:	1/4 -1/2 mile
Description of Area	Industrialized waterfront surrounded by manufacturing facilities, marine service companies, and other petroleum terminals.
Products Handled:	Gas, fuel, ethanol, specialty chemicals (sodium sulfide, benzene)
Date of Oil Storage Startup:	1935
Wellhead Protection Area:	Not Applicable
Worst Case Discharge	USCG: (b) (7)(F), (b) (3)      DOT: (b) (7)(F), (b) (3)

Other Identifying Information:

SIC: 4226 Oil Storage

EPA ID#: TXD026481523

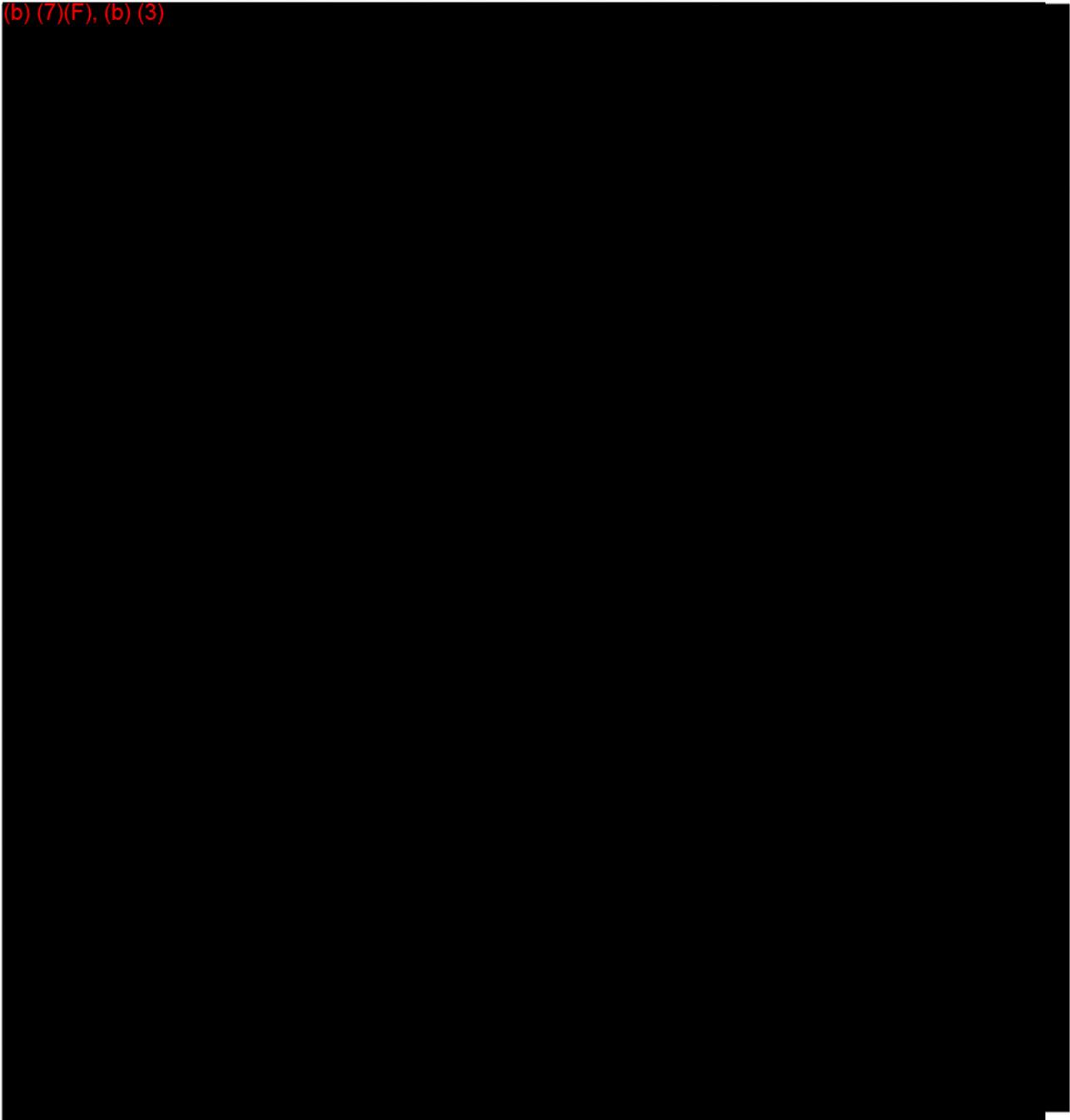
TCEQ Solid Waste #: 30573



## F.2 MAPS AND DIAGRAMS



(b) (7)(F), (b) (3)



LEGEND

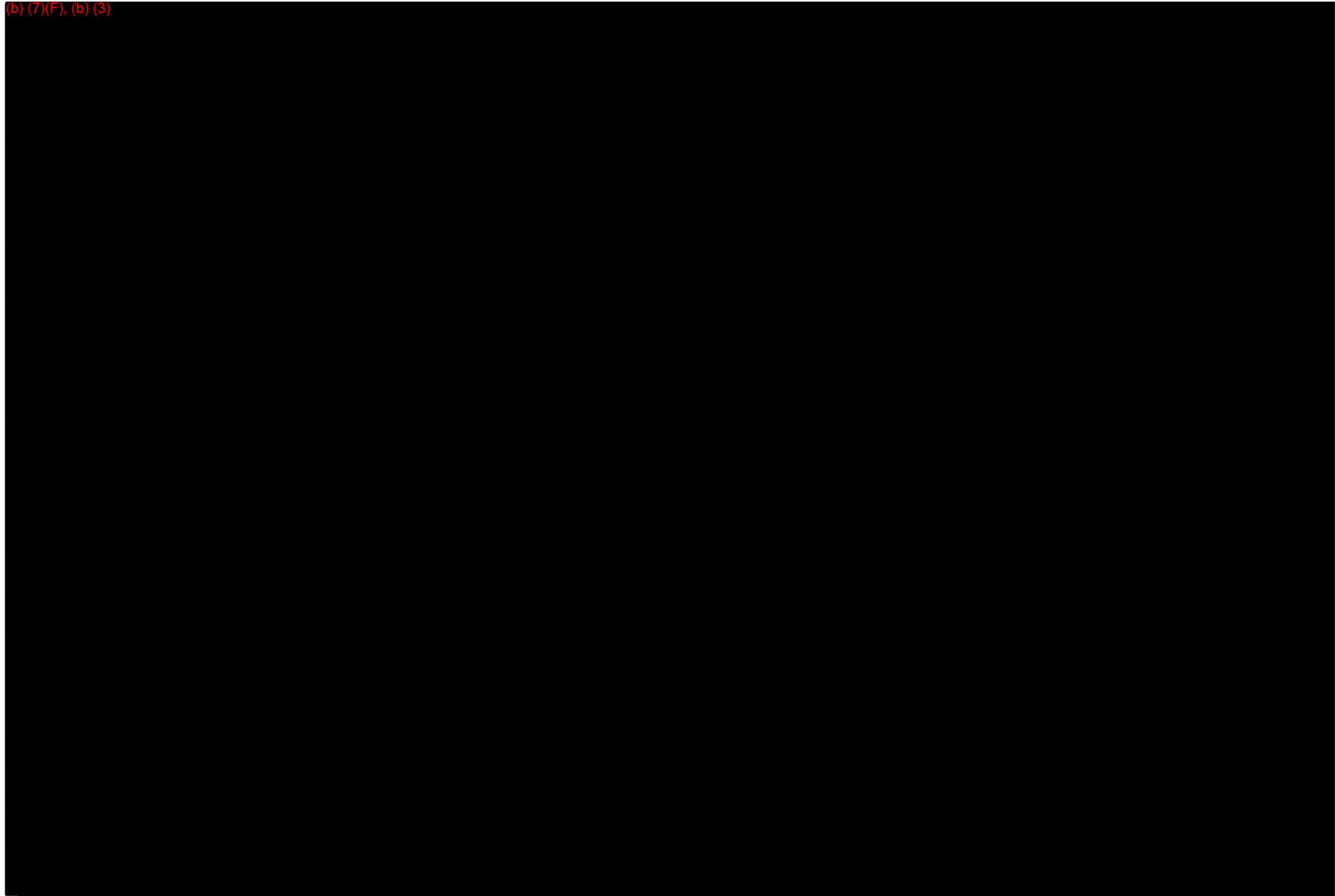
- Schools 
- Hospitals 
- Churches 

APPROXIMATE SCALE

0  0.5mi

*Galena Park Terminal*

(b) (7)(F), (b) (3)



KM LIQUIDS TERMINALS, LP  
GALENA PARK TERMINAL

16" MTBE  
T-4#: 05123  
Sys ID: 552309

APPROXIMATE SCALE  
1 inch = 0.25 miles



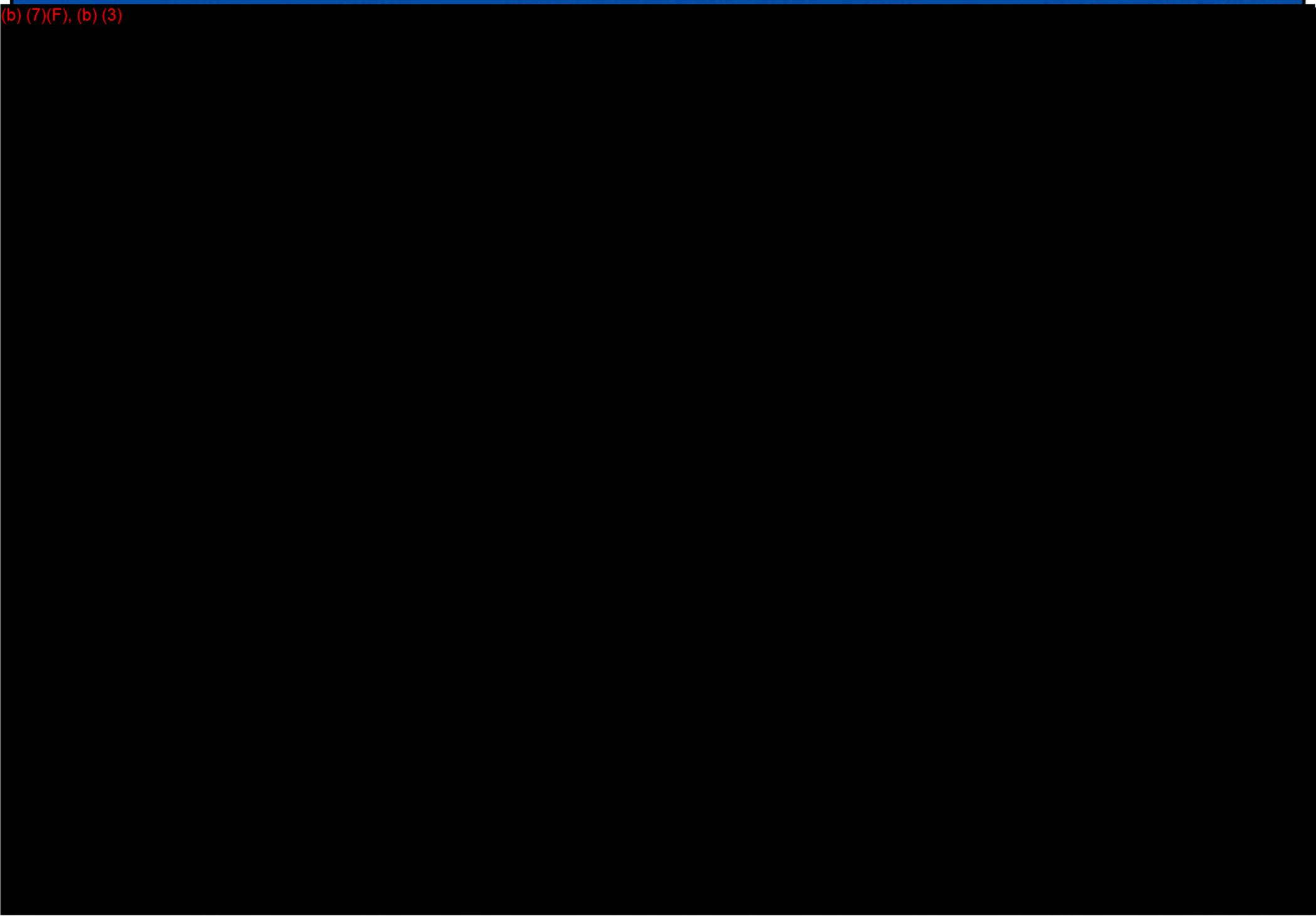


# Kinder Morgan Galena Park Terminal General Facility Overview Map Integrated Contingency Plan



Scale: 1:12,500

(b) (7)(F), (b) (3)



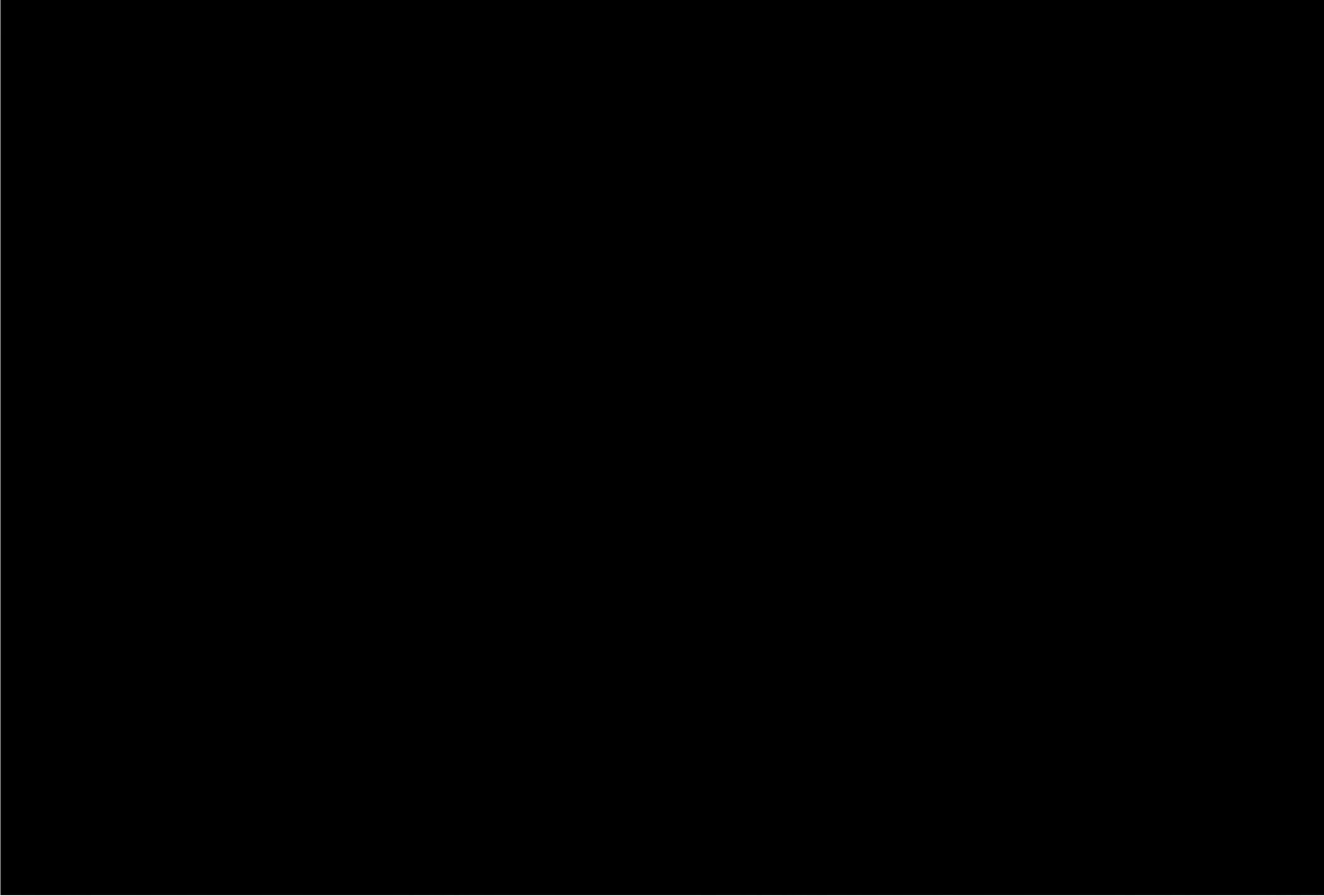


# *Kinder Morgan Galena Park Terminal General Facility Detailed Overview Map Integrated Contingency Plan*



Scale: 1:6,000

(b) (7)(F), (b) (3)



## F.3 IMMEDIATE ACTIONS

### Initial Discovery / Response Actions Checklist

**DISCOVERER**

Initiate Initial Response Procedures and Notifications. A list of contact numbers is located in Annex B of this plan.

#### INITIAL INCIDENT COMMANDER RESPONSE GUIDELINES

The appropriate response to a particular incident may vary depending on the nature and severity of the incident.

✓	Action	Definition
<input type="checkbox"/>	Secure the source.	Act quickly to shut-in source, close valves, etc. <b>(IF SAFE TO DO SO, PROPERLY TRAINED &amp; HAVE PROPER PPE).</b>
<input type="checkbox"/>	Consider safety of personnel / call for medical assistance if needed.	Pull an alarm, push an evacuation button, use radio or call 911. <b>EVACUATE IF NECESSARY.</b>
<input type="checkbox"/>	Shut off ignition sources.	Motors, open flames, electrical circuits.
<input type="checkbox"/>	Coordinate rescue and medical response actions.	Perform this task only if trained to do so (i.e., member of medical & rescue teams) Refer to hospital listings in the Contacts section.
<input type="checkbox"/>	Identify pollutant and assess possible hazards to human health and the environment.	Identify source and volume; characterize oxygen levels, explosive character, toxicity of air on scene, splash and ingestion hazards.
<input type="checkbox"/>	Initiate containment if necessary and safe to do so.	Contact OSROs as necessary.
<input type="checkbox"/>	Conduct air monitoring.	Monitor the air quality in the area near the release to ensure there are no organic vapors which may pose an inhalation or flammability hazard.
<input type="checkbox"/>	Report all incidents to the Qualified Individual.	Follow Notification Procedures in this Section of the ICP. Contact Numbers located in the Annex B.

Initial Incident  
Commander

Name:

**Incident Level**

- Level 0 – First Responder  
 Level 1 – First Responder – Controlled  
 Level 2 – EOC Activation – Uncontrolled, onsite  
 Level 3 – EOC Activation – Uncontrolled, offsite



## FIRE EVENT STRATEGIC / TACTICAL OBJECTIVE WORKSHEET

STATION PERSONNEL Only take on those priorities that can be safely addressed based on training, equipment, and conditions.		FIRE DEPARTMENT Only take on those priorities that can be safely addressed based on training, equipment, and conditions.		
<p style="text-align: center;"><b>GENERAL</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Report the fire to Emergency Services (911)</li> <li><input type="checkbox"/> Initiate Facility Evacuation via Alarm System</li> <li><input type="checkbox"/> Account for all personnel (Employees &amp; Contractors)</li> <li><input type="checkbox"/> Remove all non-essential personnel</li> <li><input type="checkbox"/> Assign someone to meet with Emergency Services upon arrival at gate or other designated location</li> <li><input type="checkbox"/> Secure all product movement or other operations</li> <li><input type="checkbox"/> When safe to do so, move exposed vehicles subject to radiant heat exposure or obstructing emergency response access</li> <li><input type="checkbox"/> Size up the incident:           <ul style="list-style-type: none"> <li>• Identify the tanks/pumps feeding the fire:</li> <li>• Identify the product on fire</li> <li>• Identify the equipment, tanks, piping, manifolds, and/or valves supplied by the failed pipe/equipment</li> <li>• Identify the equipment, tanks, piping, manifolds, and/or valves exposed to fire</li> </ul> </li> <li><input type="checkbox"/> Report findings of assessment to emergency services</li> <li><input type="checkbox"/> Coordinate all operations with Incident Command</li> </ul> <p style="text-align: center;"><b>INCIDENT SPECIFIC</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Reduce the fires intensity by:           <ul style="list-style-type: none"> <li>• Removing as much pressure from the failed line as possible</li> <li>• Shutdown and/or isolate pumps feeding the failed line/equipment</li> <li>• Isolate storage vessels providing head pressure</li> <li>• Isolate the failed line/equipment using the nearest block valve</li> </ul> </li> <li><input type="checkbox"/> If the leak cannot be safely isolated from the tank feeding it:           <ul style="list-style-type: none"> <li>• Prepare for pump-out operations</li> <li>• Align all valves from the involved tank to manifold. <b>Give MOV's priority over manual valves before power is lost.</b></li> <li>• Report valve alignment to Incident Command</li> <li>• Start pump-out when approved by Incident Command</li> <li>• Stop transfer once liquid level is low enough to reduce the intensity or eliminate fuel to fire. Block tank in once finished.</li> </ul> </li> </ul>	<p><b>DO NOT transfer product into cone roof (non-IFR) tanks within the same area as the incident due to potential vapor hazards.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Manage firefighting water</li> <li><input type="checkbox"/> Work with FD to recycle cooling water in containment areas if safe to do so</li> <li><input type="checkbox"/> Work with FD to operate containment drains and pump out containment areas as needed</li> <li><input type="checkbox"/> Manage fire water pump(s)</li> <li><input type="checkbox"/> Coordinate refueling as needed</li> <li><input type="checkbox"/> Observe water supply in Tank/Pond</li> <li><input type="checkbox"/> Manage oil-water separators</li> <li><input type="checkbox"/> Summon following trades to standby and assist Fire Department as needed:           <ul style="list-style-type: none"> <li>• Electrical/Power distribution</li> <li>• Pipe fitters &amp; Welders</li> <li>• Vacuum trucks/ Frac tanks/waste disposal</li> <li>• Environmental / spill response contractors</li> </ul> </li> </ul> <p style="text-align: center;"><b>SPILL RESPONSE</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Confirm identification of spilled materials and check the material safety data sheets (MSDS) emergency procedures</li> <li><input type="checkbox"/> Confirm that personnel have been assigned to stop the flow of spilling product and secure leaks if it can be done safely</li> <li><input type="checkbox"/> Assess the spill threat, site safety, and parameters such as spill volume, extent, and direction of movement</li> <li><input type="checkbox"/> Initiate actions to notify EHS On Call</li> <li><input type="checkbox"/> Establish Hot, Warm, and Cold Zones</li> <li><input type="checkbox"/> Initiate containment efforts</li> <li><input type="checkbox"/> Establish Decon prior to entering Hot Zone</li> </ul>	<p style="text-align: center;"><b>RESCUE &amp; LIFE SAFETY</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Obtain accountability report from facility representative</li> <li><input type="checkbox"/> <b>If terminal personnel cannot be located, immediately call Control Room at (713) 920-8450 to arrange for KM personnel response.</b></li> <li><input type="checkbox"/> Initiate search &amp; rescue operations (as required).</li> <li><input type="checkbox"/> Remove unnecessary persons from facility and secure against unauthorized entry</li> <li><input type="checkbox"/> Keep apparatus and personnel outside of the hot zone (foam blanket/runoff)</li> <li><input type="checkbox"/> Establish downwind atmospheric and runoff monitoring</li> <li><input type="checkbox"/> Utilize respiratory protection, as needed</li> <li><input type="checkbox"/> Shelter in place or evacuate downwind populations as appropriate</li> </ul> <p style="text-align: center;"><b>EXPOSURE PROTECTION</b></p> <p>General priorities for exposure protection</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Offsite populations &amp; properties</li> <li><input type="checkbox"/> Pressurized storage tanks</li> <li><input type="checkbox"/> Power &amp; Control infrastructure           <ul style="list-style-type: none"> <li>• Aerial wiring</li> <li>• Pole mounted transformers</li> <li>• MCC, Switch Gear, other electrical equipment buildings</li> </ul> </li> <li><input type="checkbox"/> Pumps           <ul style="list-style-type: none"> <li>• Booster, pipeline &amp; manifold pumps</li> </ul> </li> <li><input type="checkbox"/> Valve, manifolds &amp; pipeline meters</li> <li><input type="checkbox"/> Adjacent tanks           <ul style="list-style-type: none"> <li>• Cool cone roof tanks before IFR Tanks</li> <li>• Tanks downwind of the affected tank to be given top priority</li> </ul> </li> <li><input type="checkbox"/> Onsite equipment &amp; Structures</li> <li><input type="checkbox"/> Control cooling water usage to minimize accumulations in containment areas           <ul style="list-style-type: none"> <li>• Test to determine if cooling is needed. Apply a hose stream and look for steam. If no steam is present, no cooling is needed</li> <li>• Apply cooling water intermittently and only long enough for steam production to cease</li> <li>• Draft excess water from flooded containment areas and reuse for cooling water if hydrocarbons are controlled</li> </ul> </li> </ul>	<p style="text-align: center;"><b>FIRE CONTROL</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Extinguish secondary fires outside of equipment/containment areas (vegetation, vehicles, buildings)</li> <li><input type="checkbox"/> Control piping and dike area fires:           <ul style="list-style-type: none"> <li>• Extinguish pool/accumulated liquid fires</li> <li>• Apply hose streams to pressurized fires to reduce intensity until ready to extinguish</li> <li>• Coordinate shutdown of pumps and closure of block valves with facility personnel</li> <li>• Assist facility personnel by accessing and closing of block valves in locations' requiring Structural PPE and hose stream protection</li> </ul> </li> <li><input type="checkbox"/> If leak cannot be isolated from tank feeding it – Consider pump-out</li> <li><input type="checkbox"/> Protect exposures and control fire until it has burned out or is extinguished</li> </ul> <p style="text-align: center;"><b>FIRE EXTINGUISHMENT</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Assess adequacy of resources on site:           <ul style="list-style-type: none"> <li>• Qty. of industrial trained personnel / advisors</li> <li>• Qty. / type of foam concentrate</li> <li>• Available water supply (flow &amp; duration)</li> <li>• Water transfer resources/equipment</li> <li>• Foam proportioning equipment</li> <li>• Foam application equipment</li> </ul> </li> <li><input type="checkbox"/> Local resources adequate – attempt extinguishment</li> <li><input type="checkbox"/> Local resources inadequate – <b>DO NOT ATTEMPT EXTINGUISHMENT</b> <ul style="list-style-type: none"> <li>• Request the facility to activate their fire response contractors. Await fire response contractors personnel and equipment</li> </ul> </li> <li><input type="checkbox"/> Block in line suction to affect extinguishment of pressurized fires by fuel control, if possible.</li> </ul> <p><i>Extinguish pressurized fires with dry chemical. ONLY if leak is very small/limited and/or if lines can be blocked in immediately following extinguishment</i></p>	<p style="text-align: center;"><b>PREPARATION FOR FIRE ATTACK</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Determine type of fire attack:           <ul style="list-style-type: none"> <li>• Water</li> <li>• Foam</li> <li>• Dry Chemical</li> <li>• Combination</li> </ul> </li> <li><input type="checkbox"/> Establish water supply (<i>see water supply plan</i>)           <ul style="list-style-type: none"> <li>• Prepare plan to shutdown cooling water operations during fire attack, if necessary</li> </ul> </li> <li><input type="checkbox"/> Establish back up hose lines / teams</li> <li><input type="checkbox"/> Establish &amp; communicate emergency evacuation signals, procedures and routes</li> <li><input type="checkbox"/> Foam Attack:           <ul style="list-style-type: none"> <li>• Proportioning equipment set up</li> <li>• Foam supply adequate and co-located with proportioning equipment</li> <li>• Material handling equipment (forklifts, cranes, trucks, pumps, etc...) &amp; sufficient space available for moving foam containers.</li> <li>• Foam solution delivery equipment and hose lines set up</li> </ul> </li> <li><input type="checkbox"/> Dry chemical attack:           <ul style="list-style-type: none"> <li>• Sufficient type, size and qty. of extinguishers sufficient for extinguishment &amp; possible re-flash</li> <li>• Equipment positioned for use</li> </ul> </li> <li><input type="checkbox"/> Eliminate ignition sources to the best extent possible</li> <li><input type="checkbox"/> Test run attack system using water only to verify           <ul style="list-style-type: none"> <li>• Water supply ready</li> <li>• Back up lines ready</li> <li>• Foam proportioning &amp; application ready</li> <li>• Dry chemical ready</li> </ul> </li> <li><input type="checkbox"/> Initiate fire attack           <ul style="list-style-type: none"> <li>• Shutdown exposure control operations, as necessary</li> </ul> </li> <li><input type="checkbox"/> Post fire attack - <b>Successful</b> <ul style="list-style-type: none"> <li>• Maintain or establish foam blanket to prevent re-ignition</li> <li>• Further tighten/close block valves</li> <li>• Contain minor leaks</li> </ul> </li> <li><input type="checkbox"/> Post fire attack - <b>Unsuccessful</b> <ul style="list-style-type: none"> <li>• Resort to fire control until additional resources arrive or fire burns out.</li> </ul> </li> </ul>

**Large Spill & Releases – It is recommended that actions highlighted in YELLOW be reserved for industrial trained incident commanders, firefighters and fire contractors.**

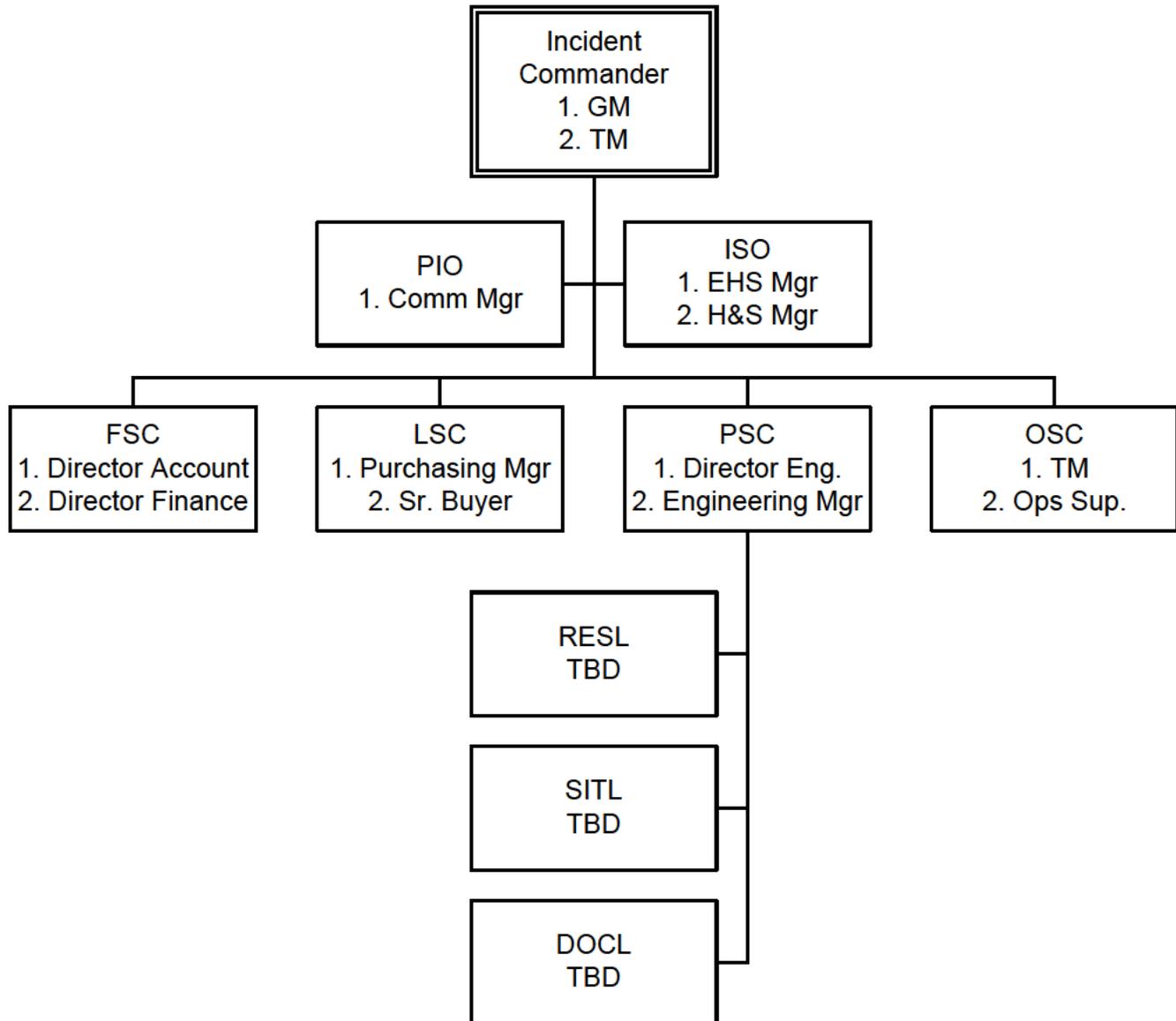
## F.4 COMMUNICATION EQUIPMENT

### Primary communications for response activities will consist of the following:

•	Emergency Response Team members contact information is located in Annex B of this Plan.
•	The primary means of communication by response personnel will be hand held radios.
•	Secondary means of communication for response activities may be mobile phones, hard line phones, faxes, internet, VHF-FM marine radios, VHF-AM aircraft radios, UHF oil spill radios, HF Single Sideband radios, satellite phones and/or paging systems. Secondary means will most likely be used to support of response operations.
•	If communication equipment necessary to conduct response operations is unavailable, the Company will ensure it is acquired using the incident's resource ordering processes.
•	The Company will also ensure that any required training for the use of communication equipment is also provided.
•	Additional communications devices may be supplied by contracted OSROs.
•	OSRO contact information are located in Annex B of this Plan.

## F.5 EMERGENCY NOTIFICATION CONTACTS

### F.5-1 Organization Chart



**F.5-2 Internal Notification Phone List**

<b>Qualified Individual</b>	
Name	Contact Number (24 Hours/Day)
<b>Primary</b>	
David Nevada	281-635-4751
<b>Alternate</b>	
Jeff Hersperger	713-202-9183

<b>Management</b>	
Name	Contact Number (24 Hours/Day)
William (Pat) Brown	281-687-8422
TC Pyron	713-708-1000
Dave Nevada	281-635-4751
Jeff Hersperger	713-202-9183
Bruce Tylock	713-806-6849
Patrick Rhoden	281-753-9641
Larry Pierce	281-330-2987

## F.5-2 Internal Notification Phone List (Cont'd)

<b>Spill Management Team</b>				
Response Team Positions	Primary Name	Work/Emergency Contact	Alternate Name	Work/Emergency Contact
<b>INCIDENT COMMAND</b>	Jeff Herperger	713-202-9183	Dave Nevada	281-635-4751
<b>COMMAND STAFF</b>				
Safety Officer				
Public Information Officer	Larry Pierce	281-330-2987		
ISO	Bruce Tylock	713-806-6849	Patrick Rhoden	281-753-9641
<b>GENERAL STAFF</b>				
Operations Chief	Dave Nevada	281-635-4751	TC Pyron	713-252-7398
Planning Chief	Gary Tredup	713-248-3078	Allen Rhodes	713-201-8762
Documentation Unit Leader	Lynette Cleburn	713-898-5209		
Situation Unit Leader	Ian Baierlipp	817-751-2622		
Resource Unit Leader	Patrick Rhoden	281-753-9641		
Finance Chief	Andy Wu	281-620-8735	Brad Miller	281-384-2698
Logistics Chief	Brian Lucania	201-705-3162	Randy Burton	281-704-3331

In addition to the personnel listed above as the Spill Management Team, the facility has an active Emergency Response Team (ERT) that can be reached via cell/pager/text in the event of an emergency. The ERT is utilized during fire and spill response emergencies. All ERT members have a response time of 5 minutes and have received appropriate training as discussed in the Section 3 of the Core Plan. The Terminal Manager is responsible for maintaining a current roster of the ERT.

**F.5-3 Oil Spill Removal Organizations (OSROs)**

<b>Oil Spill Removal Organizations</b>		
<b>Name</b>	<b>Contact Number (24 Hours/Day)</b>	<b>Response Time</b>
Garner Environmental	800-424-1786 713-920-1300	.5 to 1 Hr.
OMIES	800-645-6671	.5 to 1 Hr.
T&T Marine	409-744-1222	.5 to 1 Hr.
<b>FIRE RESPONSE</b>		
CIMA	281-473-9191 281-837-9191	
Williams Fire & Hazard Control	281-999-0276	

## F.5-4 Community Notification Phone List

<b>Community Notifications</b>		
Service	Organization	Phone Number
<b>MEDICAL</b>		
Ambulance Service	Galena Park Fire Department	911 674-5311
Ambulance Service	Jacinto City Fire Department	911 673-1771
Ambulance Service	North Channel	281-458-2422
Emergency, Medical	Houston Fire Department	911
Physician	Occupational Health Center	281-973-7943
Primary Hospital	East Houston Medical Center	713-393-2000
Secondary Hospital	Bayshore Medical	281-944-6666
Life Flight		713-797-4357
Air Monitoring	Garner Environmental	1-800-424-1786
<b>FIRE</b>		
Primary Fire Department	CIMA – Central Dispatch CIMA – Pasadena CIMA – Baytown	Zone 1 281-473-9191 281-837-9191
Secondary Fire Response	Galena Park Fire Department	911 281-874-2122
Extended Fire Response	Williams Fire & Hazard Control	281-999-0276
<b>LAW ENFORCEMENT</b>		
Galena Park Police Department		713-675-3471
Harris County Sheriff's Dept.		713-221-6000
US Coast Guard (Houston)		713-671-5100
<b>TV/RADIO</b>		
KHOU -TV Ch 11 CBS		713-521-4384
KHTV-TV Ch 39		713-781-6396
KPRC-TV Ch 2 NBC		713-771-9194
KRIV-TV Ch 26 FOX		713-622-7157
KTMD-TV Ch 48 (Spanish)		713-783-5863
KTRK-TV Ch 13 ABC		713-666-8711
KXLN-TV Ch 45 (Spanish)		713-662-8333
KIKK 95.7 FM / 650 AM		713-780-0937
KILT 100.3 FM/ 610 AM		713-961-5632
KLTR 93.7 FM CBS		713-771-2951
KPRC 950 AM NBC		713-780-0937
KQUE 102.9 FM / KNUZ 1230		713-961-5632
KTRH 740 AM		713-771-2951
KWWJ 1360 AM Baytown		281-424-5531
<b>OTHER</b>		
Shell Lubricants (24 hr)		713-277-7000
Burbank		713-675-0941
VOPAK		713-675-9171 (day) 713-675-9621 (night)
HL&P (Pasadena Plant)		713-945-8666 (24 hour)

**F.5-5 Federal and State Notifications**

<b>Agency Notification List</b>	
Service	Organization
<b>STATE</b>	
State Emergency Response Center (SERC) - GLO & TCEQ Notifications	1-800-832-8224
Texas Commission on Environmental Quality(TCEQ) Region 12	713-767-3500
Texas Commission on Environmental Quality (TCEQ) –Austin	1-512-463-7727
Texas Railroad Commission (TRRC)	713-460-0631 or 1-512-463-6788
U.S. Fish & Wildlife	281-480-7418 (24 hr)
Texas Parks & Wildlife	512-389-4848 (24 hr)
Wildlife Rehab & Education	281-332-8319 (24 hr)
<b>LOCAL</b>	
Local Emergency Planning (LEPC)	713-674-5311
Harris County Pollution Control (HCPC)	713-920-2831
<b>FEDERAL</b>	
National Response Center (NRC)	1-800-424-8802
Department of Transportation (DOT)	1-800-424-8802
US Coast Guard Sector Houston	281-464-4840/4855 (24 hr) 281-256-3258 (Pollution Response Department)
Environmental Protection Agency (EPA)	(281) 983-2100

## F.6 RESPONSE EQUIPMENT

### F.6-1 On-Site Response Equipment

On-site equipment that could be used by Kinder Morgan personnel in the case of a discharge listed on the subsequent pages is intended to satisfy the U.S. Coast Guard requirements found in 33 CFR 33 CFR 154.1035 (b)(4)(iii). Due to the proximity of the Pasadena Terminal and Galena Park Terminal, the equipment listed is intended to be a shared equipment list, meaning that no matter where the equipment may be stored, kept and/or maintained it can at any time be used in the case of a discharge by the opposite facility. Additionally, if equipment indicated on the following list is integrated by either facility in executing the Response Exercise Program in Section 3 of this plan, the opposite facility may take credit for any equipment deployment



CONTRACTOR BLOCK

NOTES

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
		A	GENERAL UPDATE	06-17-08	JLM	JS	JS

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DRAWN: S. MARTIN  
 CHECKED: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ PROJ. ENGR.

APPROVED: \_\_\_\_\_ REGIONAL ENGR.

GALENA PARK TERMINAL

PLOT PLAN

NORTH, EAST, CENTRAL, AND WEST PLANTS

EMERGENCY RESPONSE EQUIPMENT

DWG. NO. 88-MS-0016

SCALE: NONE    TERMINAL: 88    DATE: \_\_\_\_\_

## F.6-2 Oil Spill Removal Organizations (OSROs)

The oil spill removal organizations (OSROs) listed below, secured by contract or other means, are capable of responding to the maximum most probable and worst case discharge, and are able to supply the equipment and supplies to meet the guidelines of Section 11 and 11.4 of Enclosure (1) to NVIC 12- 92.

NOTE: At least 20% of the equipment for cleanup can be used close-to-shore.

Garner Environmental  
1717 W. 13th St.  
Deer Park, Texas 77536  
281-930-1200 (24 Hour Phone Number)  
(800) 424-1786 (24 Hour Phone Number)

Oil Mop, LLC  
450 Preston Ave  
Pasadena TX. 77503  
(800) 645-6671 (24 Hour Phone Number)

T & T Marine  
3110 E. Pasadena Freeway. Pasadena TX. 77503  
1-409- 744-1222 (24 Hour Phone Number)

The oil spill response organizations referenced above have the trained personnel necessary to continue spill response operations for the first seven (7) of the response. These contracted personnel would be employed to protect any threatened sensitive areas.

\*The listed primary OSRO has oil recovery devices with an effective daily rate of 2,861 barrels/day available from their Deer Park Facility. Kinder Morgan - Pasadena has on-site oil/water recovery devices with maximum capacity of 25,000 barrel (wastewater tank). Additionally, the primary OSRO listed liquid recovery storage equipment within 6 hours delivery time at 214,048 barrels capacity.

### F.6-3 Fire Fighting Equipment

The following firefighting equipment is available at the facility:

- 20 and 150 pound fire extinguishers capable of fighting type A, B, and C fires are located throughout the terminal.
- One 3,000 gpm National Foam truck with 1,000 gallons of foam, 1,000 feet of 5" hose, 700 feet of 3" hose, and 400 feet of 1 3/4" hose located in the Fire House.
- One 1,000 gpm National Foam truck with 1,500 gallons of foam, 1,000 feet of 5" hose, 600 feet of 2 1/2" hose, and 300 feet of 1 3/4" hose located in the Fire House.
- One portable trailer with 500 gallons of AFFF ATC foam stored at the Fire House.
- 12", 10", and 8" fire mains located throughout the plant with fire plugs located approximately every 150 feet and sectional block valves located so that any section of the terminal can be isolated to increase water volume. This system is supplied by three interconnected pumps located at #2 Ship Dock, #3 Ship Dock, and #3 Barge Dock which pump fire water from the Houston Ship Channel.
- Ship and barge docks, truck and tank car racks, and manifolds are protected by fire monitors with foam application.
- Other miscellaneous fire fighting equipment is located at the Fire House.
- The ERT has been issued bunker gear, boots, etc. for use in fighting fires.

### F.6-4 Decontamination Equipment

At a minimum, the following equipment will be maintained on-site for decontamination purposes:

- High pressure water
- Water soluble cleaning solution
- Sponges, brushes and mops for decontamination
- Plastic material for ground covering

### **F.6-5 First Aid Supplies**

The following first aid supplies are available for emergency response actions:

- Stretcher
- Burn pack
- Portable eye wash
- Emergency oxygen
- Emergency deluge shower and eyewash
- Emergency Trauma Kits
- Schedulers Truck
- Fire Truck
- Control House
- Emergency Response Truck (Hummer)
- Automated External Defibrillator (AED)
- First Aid stations located in the following areas:
  - Operations building
  - Maintenance warehouse
  - Lab

### **F.6-6 Health and Safety for Spill Cleanup Contractors**

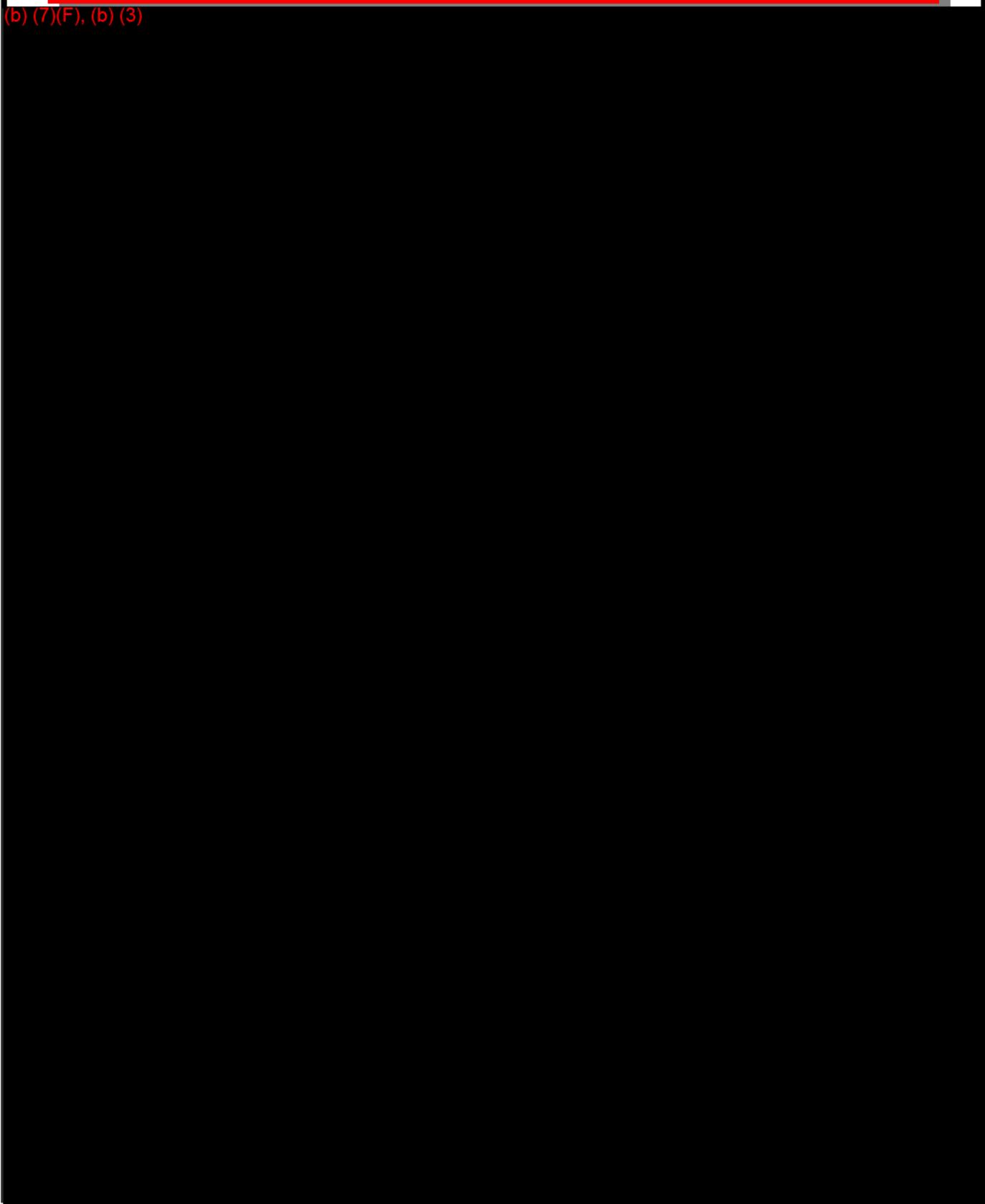
Contractors that have a service agreement with Kinder Morgan as well as to those that are brought on site for back up assistance at the time of issuance of the work authorization. A member of the Incident Command System will accompany contractors and will be supervised by designated employee(s).

The contractor will provide for health and safety protection for its employees. The contractor will generate a site (incident) specific health and safety plan to protect Kinder Morgan and contractor's employees for the incident cleanup/remediation activities.



## F.7 EVACUATION AND/OR SHELTERING-IN-PLACE

(b) (7)(F), (b) (3)

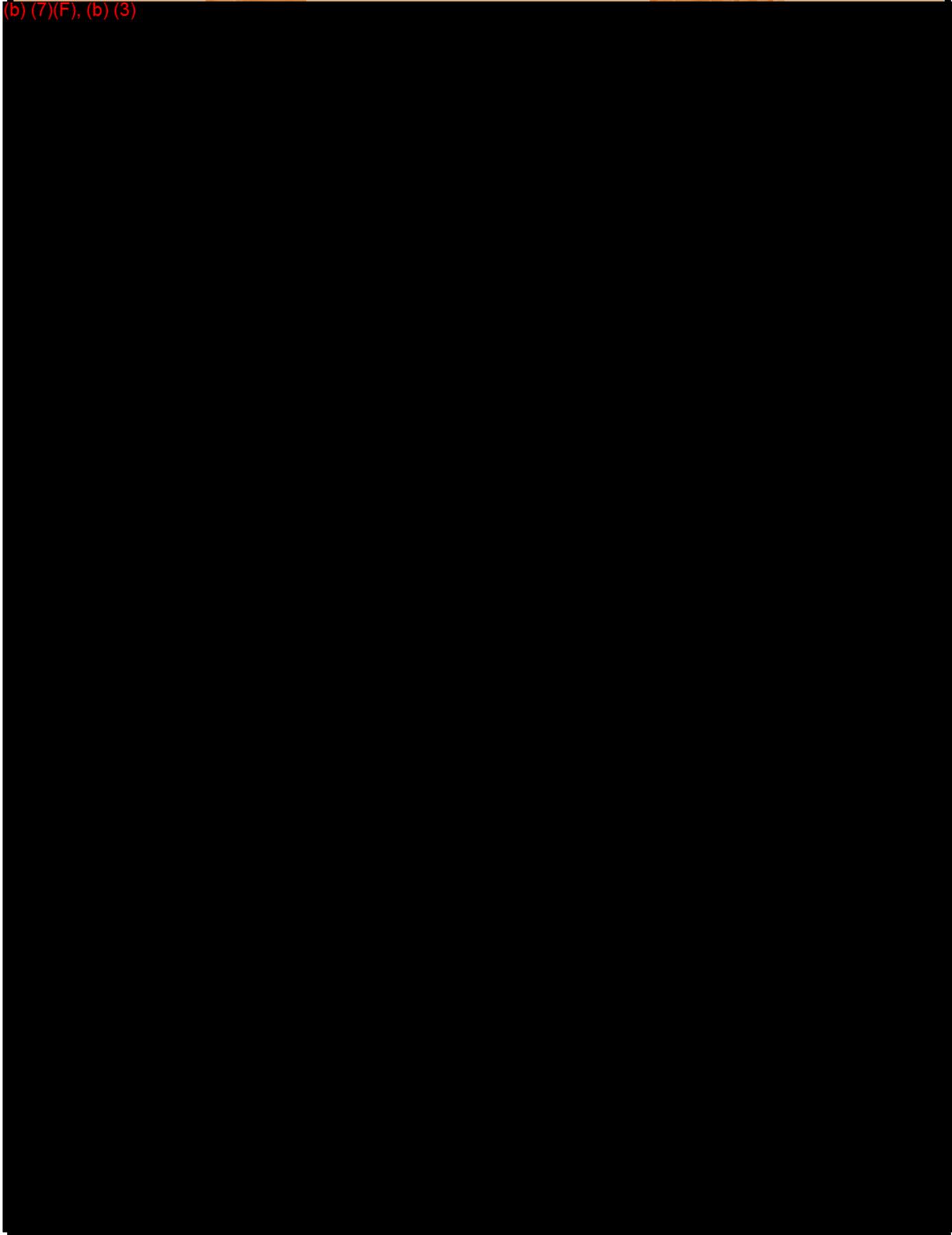


Integrated  
Contingency  
Plan



Annex F:  
ERAP

(b) (7)(F), (b) (3)





**F.7-5 Evacuation Map**

THIS DRAWING SUPERCEDES DWG. D-88-1-4302C



GALENA PARK TERMINAL  
 PLOT PLAN  
 MUSTER AREAS & EVACUATION ROUTES  
 NORTH, EAST, CENTRAL, AND WEST PLANTS

DRAWN J.L.NORRIS  
 CHECKED JS  
 APPROVED JA  
PROJ. ENGR.

APPROVED PA  
REGIONAL ENGR.  
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DWG. NO. **88-MS-0143**  
 SCALE NONE TERMINAL 88 DATE 09-01-2010

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
		A	ISSUED FOR REVIEW	09-01-10	J.L.M	JS	JS

## **F.8 INITIAL RESPONSE FORMS**

**Agency Notification and Documentation Form**

**Spill Trajectory Report Form**

**ICS 201-1 Incident Briefing Map**

**ICS 201-2 Incident Briefing – Summary of Current Actions**

**ICS 201-3 Incident Briefing – Current Organization**

**ICS 201-4 Incident Briefing – Resources Summary**

**ICS 201-5 Incident Briefing – Site Safety Plan (Short Form)**

**Weather Report**

**F.8-1 Agency Notification Form****NOTE: Initial notification must not be delayed pending collection of all information.**

INFORMATION ON DISCHARGE	
<b>INVOLVED PARTIES</b>	
<b>(A) Reporting Party</b>	<b>(B) Suspected Responsible Party</b>
Name:	Name:
Phone(s):	Phone(s):
Facility: KM Liquids Terminals LLC	Facility:
Address:	Address:
City:	City:
State: Texas	State:
Zip:	Zip:
Were Materials Released (Y/N)	Calling for Responsible Party
<b>INCIDENT DESCRIPTION</b>	
<b>Source and/or Cause of Incident</b>	
<b>Incident Discovered</b>	
Date: _____ Time: _____	<b>EHS Notified:</b>
	Date: _____ Time: _____
<b>Incident Address/Location</b>	
Distance from City:	TNRC Waste # _____; Air # _____; EPA ID # _____
Storage Tank Container Type Above Ground (Y?N)? Below Ground (Y/N)? Unknown	Tank Capacity: Facility Capacity:
Latitude Degrees:	Mile Post or River Mile
Longitude Degrees:	
<b>Materials</b>	
Released Quantity/Unit of Measure: Quantity in Water:	Released Material RQ per _____ : Y/N
<b>WEATHER CONDITIONS:</b>	
<b>REMEDIAL ACTION:</b>	
Actions Taken to Correct or Mitigate the Incident	
<b>IMPACT</b>	
Number of Injuries	Number of Facilities
Were there evacuations (Y/N)	
Was there any damage (Y/N)?	Damage in Dollars: _____ NOTE: _____
<b>CALLER NOTIFICATIONS</b>	
<b>Footnote:</b> 1. Initial Notifications should be made within 15 minutes to NRC, SERC, USCG, & ERL 2. Notification within 24 hours to TCEQ & HCPHES 3. Only if it affects the community 4. Incidents involving DOT Pipelines (Determine reporting requirement using DOT Flow Chart) Notifications within 2 hrs.	
Agency: NRC SERC USCG LEPC HCPHES ERL	
Phone #: 800-424-8802 800-832-8824 713-671-5100 713-674-5311 713-920-2831	
Case #: _____	
Contact: _____	
Time: _____	
Agency: DOT TXRCC	
Phone #: 800-424-8802 512-463-6788	
Case #: _____	
Contact: _____	
Time: _____	

## F.8-2 Spill Trajectory Form



## Spill Trajectory Request Form

**THE RESPONSE GROUP****OFFICE: (281) 880-5000****EFAX: (281) 596-6976****FAX: (281) 880-5005****EMAIL ADDRESS: trajectory@responsegroupinc.com**COMPANY  
INFORMATION

Company Name: \_\_\_\_\_

Company Contact Name: \_\_\_\_\_

Phone #: \_\_\_\_\_ Fax #: \_\_\_\_\_

Alternante # (i.e.: Mobile, Pager): \_\_\_\_\_

Email Address: \_\_\_\_\_

SPILL SITE  
INFORMATION

Source Type (Circle): Platform/Well Pipeline Vessel Facility

Source Name &amp; Location (Name/Area/Block): \_\_\_\_\_

Latitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Longitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "

Date &amp; Time of Incident (mm/dd/yy): \_\_\_\_ / \_\_\_\_ / \_\_\_\_ : \_\_\_\_ (Military)

Type of Product (i.e.: Medium Crude): \_\_\_\_\_ API Gravity: \_\_\_\_\_

Estimated Volume of Release: \_\_\_\_\_ Barrels or Gallons

Continues Release Rate: \_\_\_\_\_ bbls/hr How Long: \_\_\_\_\_ hrs.

WEATHER  
CONDITIONS

Wind Direction (From the): \_\_\_\_\_ Wind Speed: MPH or Knots

Current Direction (Toward): \_\_\_\_\_ Current Speed: MPH or Knots

Air Temperature: \_\_\_\_\_ ° Water Temperature: \_\_\_\_\_

High Tide: \_\_\_\_\_ : \_\_\_\_\_ (Military) Low Tide: \_\_\_\_\_ : \_\_\_\_\_ (Military)

Weather Forecast: \_\_\_\_\_

OVERFLIGHT  
INFORMATION

Date &amp; Time of Overflight (mm/dd/yy): \_\_\_\_ / \_\_\_\_ / \_\_\_\_ : \_\_\_\_ (Military)

Leading Edge Location: Latitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Longitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "

Trailing Edge Location: Latitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Longitude: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "

Length: \_\_\_\_\_ Feet / Yards / Miles Width: \_\_\_\_\_ Feet / Yards / Miles

Slick Appearance (Percent &amp; Estimated Length &amp; Width)

Barely Visible: \_\_\_\_\_ % L x W: \_\_\_\_\_ Silvery: \_\_\_\_\_ % L x W: \_\_\_\_\_

Slight Color: \_\_\_\_\_ % L x W: \_\_\_\_\_ Bright Color: \_\_\_\_\_ % L x W: \_\_\_\_\_

Dull: \_\_\_\_\_ % L x W: \_\_\_\_\_ Dark: \_\_\_\_\_ % L x W: \_\_\_\_\_

THE RESPONSE GROUP

13939 TELGE ROAD

CYPRESS, TX 77429

## F.8-3 ICS Forms

## ICS 201-1 Incident Briefing Map/Sketch

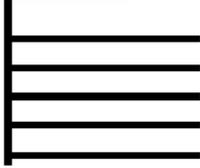
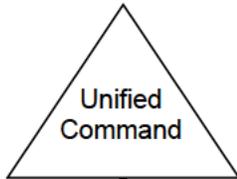
Incident:	Prepared By:          at
Period:	Version Name:

ICS 201-2 – Summary of Current Actions		
Incident:	Prepared By:	at:
Period: to	Version Name:	
Incident Information		
Initial Incident Objectives		
Summary of Current Actions		
Date/Time	Action/Note	
ICS 201-2 Summary of Current Actions		© 1997-2012 TRG/dbSoft, Inc.

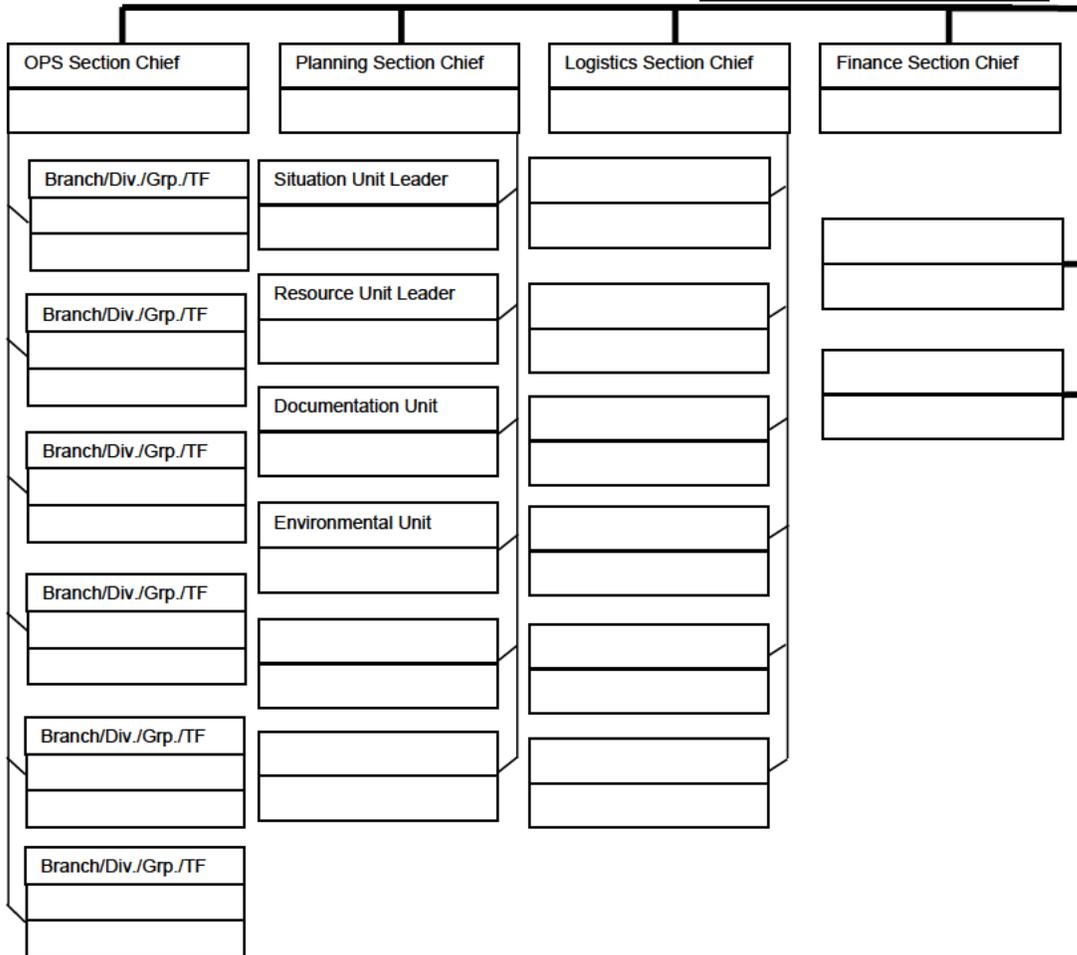


ICS 201-3 Current Organization

Incident:	Prepared By:	at:
Period:	Version Name:	



Federal	_____
State	_____
Incident Commander	_____
	_____
	_____
Safety Officer	_____
Liaison Officer	_____
Information Officer	_____
	_____
	_____





## ICS 201-5 Site Safety and Control Analysis

<b>Incident:</b>	<b>Prepared By:</b>	<b>at:</b>
<b>Period:</b>	<b>Version Name:</b>	
1. Is Site Control set up? <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Is there an on-scene command post? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, where?	
3. Have all personnel been accounted for? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	Injuries: Unaccounted:	Fatalities: Trapped:
4. Are observers involved, or rescue attempts planned? Observers: <input type="checkbox"/> Yes <input type="checkbox"/> No Rescuers:	5. Are decon areas setup? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, where?	
<b>Hazard identification, immediate signs of: (if yes, explain in Remarks)</b>		
1. Electrical line(s) down or overhead? <input type="checkbox"/> Yes <input type="checkbox"/> No	2. Unidentified liquid or solid products visible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
3. Wind direction across incident: <input type="checkbox"/> Towards your Wind Speed position <input type="checkbox"/> Away from	4. Is a safe approach possible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
5. Odors or smells? <input type="checkbox"/> Yes <input type="checkbox"/> No	6. Vapors visible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
7. Holes, ditches, fast water, cliffs, etc. nearby? <input type="checkbox"/> Yes <input type="checkbox"/> No	8. Fire, sparks, sources of ignition nearby? <input type="checkbox"/> Yes <input type="checkbox"/> No	
9. Is local traffic a potential problem? <input type="checkbox"/> Yes <input type="checkbox"/> No	10. Product placards, color codes visible? <input type="checkbox"/> Yes <input type="checkbox"/> No	
11. Other Hazards? <input type="checkbox"/> Yes <input type="checkbox"/> No	12. As you approach the scene from the upwind side, do you note a change in the status of any of the above? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Hazard Mitigation: have you determined the necessity for any of the following?</b>		
1. Entry Objectives:		
2. Warning sign(s), barriers, color codes in place? <input type="checkbox"/> Yes <input type="checkbox"/> No		
3. Hazardous material being monitored? <input type="checkbox"/> Yes <input type="checkbox"/> No 3a. Sampling Equipment: 3b. Sampling location(s): 3c. Sampling frequency: 3d. Personal exposure monitoring:		
4. Protective gear / level: 4b. Respirators: 4d. Boots:	4a. Gloves: 4c. Clothing: 4e. Chemical cartridge change frequency:	
5. Decon 5a. Instructions: 5b. Decon equipment and materials:		
6. Emergency escape route established? <input type="checkbox"/> Yes <input type="checkbox"/> No Route?		
7. Field responders briefed on hazards? <input type="checkbox"/> Yes <input type="checkbox"/> No		
8. Remarks:		
ICS 201-5 Site Safety and Control Analysis		© 1997-2012 TRG/dbSoft, Inc.

Weather Report			
Incident:		Prepared By: _____ at _____	
Period:		Version Name:	
Present Conditions			
Wind Speed:		Wave Height:	
Wind Direction From The:		Wave Direction:	
Air Temperature:		Swell Height:	
Barometric Pressure:		Swell Interval:	
Humidity:		Current Speed:	
Visibility:		Current Direction Toward:	
Ceiling:		Water Temperature:	
Next High Tide (Time):		Next Low Tide (Time):	
Next High Tide (Height):		Next Low Tide (Height):	
Sunrise:		Sunset:	
Notes:			
24 Hour Forecast			
Sunrise:		Sunset:	
High Tide (Time):		High Tide (Time):	
High Tide (Height):		High Tide (Height):	
Low Tide (Time):		Low Tide (Time):	
Low Tide (Height):		Low Tide (Height):	
Notes:			
48 Hour Forecast			
Sunrise:		Sunset:	
High Tide (Time):		High Tide (Time):	
High Tide (Height):		High Tide (Height):	
Low Tide (Time):		Low Tide (Time):	
Low Tide (Height):		Low Tide (Height):	
Notes:			
Weather Report		© 1997-2012 TRG/dbSoft, Inc.	

### A.1-3 Date(s) and Type(s) of Substantial Expansion(s)

1933—GATX purchased Central Plant property from Texaco (approximately 70 tanks)

1960—Dale Moore Annex (West Plant) was purchased; GATX has since built 78 tanks in the West Plant.

1982—North and East Plants were purchased for Texaco (13 Tanks)

1998—Constructed (4) 100,000 BBL tanks in East Plant for oil storage

2001-Kinder Morgan purchased GATX Terminals Corporation (domestic operations).

2002 – Demolished 3- 80,000 BBL and 2 118,000 BBL tanks. Constructed 2 – 90,000 BBL and 2-100,000 BBL tanks

2006 – Constructed 2- 100,000 BBL tanks, 8 tanks central plant

2007 – Constructed (2) 100,000 BBL tanks West Plant

2008 – Constructed (7) 100,000 BBL tanks East Plant, Constructed manifold # 33 and began first half of # 3400 manifold, Constructed # 4 ship dock

2009 – Constructed (7) 150,000 BBL tanks East Plant, Constructed manifold # 3500 and completed second half of # 3400 manifold, Constructed # 3 Barge dock, Construction begun on (1) 125,000 BBL tank West Plant

2010 – Completed construction of 125-1

2010 – Added # 3 Barge Dock fire pump

2010 – Demolished waste water tank 5-20

2011 – Constructed (1) 15,000 BBL tank 15-3

2012 – Demolished Tank 7, 80,000 BBL Tank.

2013 – Begin construction (5) – 150,000 BBL tanks

2014 – Installed five (5) 150,000 bbl tanks

NOTES

DRAWING NUMBER	REFERENCE DRAWING	REV. No.	DESCRIPTION	DATE	DRAWN	CHK'D	APP'D
		A	ISSUE FOR REVIEW	1/16/13	JL		

**KINDER MORGAN**

DRAWN J. LOFTIN      APPROVED \_\_\_\_\_ REGIONAL ENGR.  
 CHECKED \_\_\_\_\_  
 APPROVED \_\_\_\_\_ PROJ. ENGR.

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GALENA PARK TERMINAL

PLOT PLAN

WEST, CENTRAL AND EAST PLANT

881322 EAST PLANT TANK BUILDOUT

DWG. NO. EST-SK-881322-A

SCALE NONE      TERMINAL      DATE 1/16/13

**E.1 RECORD OF REVISIONS (CONT'D)**

Date	Revision Number	Revision Made By:	Revision
August 2014	6	The Response Group	A.1-1 – Updated Dates / Types of Substantial Expansion A.7 – added new Plot Plan

**From:** [Sharon Grau](#)  
**To:** [PHMSA.OPA90](#)  
**Cc:** [Rhoden, Patrick \(patrick\\_rhoden@kindermorgan.com\)](#); [Manchester, Timothy \(timothy\\_manchester@kindermorgan.com\)](#); [Murphy, Eddie \(PHMSA\)](#); [Abraham.Todd@dot.gov](#); [Danielle Wood](#)  
**Subject:** Kinder Morgan Galena Park and Pasadena Terminals - Updates  
**Date:** Tuesday, August 26, 2014 3:18:02 PM  
**Attachments:** [20140825 Galena Park Terminal - Changed Pages.pdf](#)  
[20140825 Pasadena Terminal - Changed Pages.pdf](#)  
**Importance:** High

---

Good afternoon,

Attached, please find changed pages to both the Galena Park ICP and Pasadena ICP for Kinder Morgan.

The changes to the Galena Park Terminal do not impact DOT, but in an effort to ensure you have the most recent version of the plan, we've included those changes.

Two new pipelines were put into service at the Pasadena Terminal. These new pipelines do not impact the Worst Case Discharge. The Response Zone Description was updated and new Substantial Harm Questionnaires were also added.

Please let me know if you have any questions or concerns. Thank you.

Very respectfully,  
Sharon Grau



"YOUR ABILITY TO RESPOND IS OUR SHARED RESPONSIBILITY"

**The Response Group**

13939 Telge Road  
Cypress, Texas 77429  
281-880-5000 - Office  
(b) (6) - Cell

[www.responsegroupinc.com](http://www.responsegroupinc.com)

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