

APPENDIX I

Spill Prevention Control and Countermeasure Plan and Emergency Response Plan

This Appendix includes the following documents:

- Spill Prevention Control and Countermeasure Plan
- Emergency Response Plan Redaction Summary
- Emergency Response Plan (ERP)

Note: The Emergency Response Plan has been made available for review by the general public. Accordingly, security sensitive, business confidential, personal, and otherwise confidential information has been removed. A summary of the redacted information is included.

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Keystone XL Pipeline Project
Spill Prevention, Control and Countermeasure Plan

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Subject to Change

Note: This document is a template for the Project's Spill Prevention, Control and Countermeasure Plans and will be finalized by each contractor based on all required site-specific information.

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- Attachment A SPCC Cross Reference Table**
- Attachment B Contractor Yard or Fueling Station Facility Diagram**
- Attachment C Hazardous Materials Inventory and Reportable Quantities**
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- Attachment E Emergency Response Contacts**
- Attachment F Contractor’s Emergency Response Procedures**
- Attachment G Contractor’s Commitments**
- Attachment H Professional Engineer’s Certification**
- Attachment I State Requirements**
- Attachment J Contractor’s Material Safety Data Sheets (MSDS)**
- Attachment K Typical Layouts; Fuel Transfer Stations**
- Attachment L Spill Report Form**
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1 Introduction

The purpose of this Spill Prevention, Control and Countermeasure (SPCC) Plan is to establish procedures to prevent the discharge of hazardous or regulated materials during construction of the Keystone XL Pipeline Project (Project), particularly into or upon Waters of the U.S. The SPCC Plan is designed to reduce the likelihood of a spill, provide for prompt identification and proper removal of contaminated materials if a spill does occur, comply with applicable state and federal laws (e.g., Title 40 Code of Federal Regulations [CFR] Parts 112 and 122) and Project permits, and to protect human health and the environment. The SPCC Plan is designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards and pollution rules, in order to minimize the potential for unauthorized releases of hazardous materials, fuels and lubricants.

TransCanada Keystone Pipeline, L.P. (Keystone) anticipates that the Project Pipeline construction contractor (Contractor) will store or handle more than the threshold quantities of oil products and will therefore be subject to federal SPCC preparation requirements. In conformance with federal regulations, a cross-reference table is provided in **Attachment A** that lists the relevant sections in Title 40 CFR 112.7 and the equivalent sections in this SPCC Plan.

Amendments to the SPCC Plan will be made as necessary during construction to account for increases in the volumes of materials stored or other changes associated with the handling or storage of hazardous materials.

1.1 Scope

This SPCC Plan applies to all construction and reclamation activities on the Project, but does not cover pipeline or pump station operations or maintenance. The Keystone XL Project Emergency Response Plan will contain the SPCC requirements for operation and maintenance of the pipeline and pump stations.

This plan outlines the procedures for prevention, containment, and control of potential spills during Project construction and reclamation. The SPCC Plan applies to the use of hazardous materials on the right-of-way and all ancillary facilities. This includes the refueling or servicing of all equipment with diesel fuel, gasoline, lubricating oils, grease, hydraulic and other fluids during normal upland work and for special applications located within 100 feet of streams and wetlands. In addition, site-specific information to be provided by the Contractor is identified and will be attached to the document.

This document is not a complete summary of all requirements. The Contractor is responsible for thoroughly researching, understanding, and complying with all applicable federal, state, and local requirements related to all aspects of work on the Project, including polluting, toxic, and hazardous materials handling, storage, transportation, spill prevention, clean-up and disposal, documentation, notification, hazardous waste, and training.

2 Contractor Supplied Site-Specific Information

This document is a template for the Project's SPCC Plans and will be finalized by each contractor based on all required site-specific information.

The following information must be supplied by the Contractor for review and approval by Keystone at least 30 days prior to construction activities.

- Contractor yard or fueling station facility diagram (**Attachment B**) showing at a minimum the following:
 - storage tanks, including content and capacity;

- mobile portable containers that store 55 gallons or more (including contents and capacity);
 - oil-filled equipment, electrical transformers, circuit breakers, etc. that store 55 gallons or more;
 - any other oil-filled equipment (including content and capacity);
 - oil/fuel transfer area;
 - secondary containment structures;
 - storm drain inlets and surface waters that could be affected by a discharge;
 - direction of flow in the event of a discharge (topography) and potential receiving waters;
 - legend that indicates scale and identifies symbols used in the diagram;
 - location of response kits and firefighting equipment;
 - location of valves or drainage system control that could be used in the event of a discharge to contain materials on the site; and
 - compass direction.
- A complete inventory of all hazardous materials that will be used or stored on site, including reportable quantities in compliance with state and federal law (**Attachment C**);
 - Contractor's training program for fuel truck drivers and mechanics (See **Attachment D** and Section 3,1 Training section below for details);
 - Designation of the Contractor's Spill Response Coordinator (to be included in **Attachment E** Emergency Response Contacts);
 - Emergency response procedures (**Attachment F**), as described in the Construction Mitigation and Reclamation Plan. In addition, the Contractor will include a prediction of the direction, rate of flow, and total quantity of oil/fuel which has the reasonable potential to be discharged, based on experience. A form has been provided in **Attachment F**;
 - Contractor's Commitment to providing the necessary emergency response support for the Project (**Attachment G**);
 - Certification by a registered Professional Engineer (**Attachment H**);
 - A complete discussion of applicable state-specific requirements regarding oil product and hazardous materials handling that are stricter than the federal requirements (to be included in **Attachment I** State Requirements), if any. If none, then the Contractor will clearly state that in the discussion;
 - Material Safety Data Sheets (MSDS) as supplied by the Contractor (**Attachment J**); and
 - Any mutual aid agreements between the Contractor and other emergency response personnel.

The Contractor is encouraged to use the Environmental Protection Agency's (EPA) guidance document for preparing facility diagrams provided at the following website:

www.epa.gov/oilspill/pdfs/guidance/6_FacilityDiagrams.pdf.

Amendments to the Contractor-Supplied SPCC Plan will be made as necessary during construction to account for increases in the volumes of materials stored or other changes associated with the handling or storage of hazardous materials.

3 Prevention

Keystone's goal is to prevent spills or exposure to hazardous or dangerous substances during construction of the Project. The Contractor is required to follow the prevention measures outlined below and implement other measures as necessary and required to promote spill prevention.

3.1 Training

Personnel accountable for carrying out the procedures specified in this plan will be designated before construction and informed of their specific duties and responsibilities with respect to environmental compliance and hazardous materials. The Contractor will be required to provide

additional spill prevention, response and hazardous materials handling training to all of their staff who handle hazardous materials, fuels and lubricants on a regular basis. The Contractor will provide the details of this training to Keystone prior to the start of work (**Attachment D**). At a minimum, training will include:

- A review of this SPCC Plan;
- An overview of all regulatory requirements;
- Waste minimization practices;
- Proper storage and handling methods for hazardous materials, fuels, lubricants, gases, etc.;
- Spill prevention, clean-up, and reporting requirements;
- Proper disposal techniques for hazardous materials, fuels, lubricants, etc.;
- Proper procedures for transferring fuels and containing fluids while doing maintenance on vehicles;
- Special requirements for refueling within 100 feet of wetlands and waterbodies;
- The location of the MSDSs and the SPCC Plan;
- The proper use of personal protective equipment;
- Emergency and spill response material locations, proper use, and maintenance;
- Emergency contact information and notification procedures; and
- Procedures for documenting spills and standard spill information to be provided to Keystone for agency notification.

All personnel working on the Project, including all Contractor personnel, are required to attend a Project-sponsored training session prior to starting work. Keystone will conduct training to ensure all responsible Contractor employees know of and comply with all project-specific environmental and TransCanada environmental policy requirements. The environmental training program will address refueling restrictions, hazardous materials handling, spill prevention and cleanup requirements, as well as other Project environmental and safety topics.

3.2 Site Security

The Contractor's site-specific plan and documentation for the construction yard will address site security procedures. Bulk fuel storage areas (including valves and switches), fuel trucks, lubricants and hazardous materials will be secured to minimize tampering and accidental releases by unauthorized personnel. Site security will include the following, in compliance with 40 CFR 112.7(g):

- The oil/fuel storage site will be fully fenced with a locked or guarded entrance gate when facility is unattended;
- Container master flow and drain valves will be secured so that they will remain in the closed position when not in use;
- Fuel pump starter controls will be locked in the "off" position where only authorized personnel can access them when not in use; and
- Facility lighting at night that will assist leak detection and vandalism prevention.

If the above procedures will not be followed, the Contractor will provide a detailed explanation of why the site cannot be secured as described above and the equivalent method the Contractor will use to secure the site.

All storage containers will be closed when not in use and the storage areas will be secured (gated, locked and/or guarded) at night and/or during non-construction periods.

3.3 Equipment Inspection and Maintenance

The Contractor will ensure that all equipment is free of leaks prior to use on the Project, and prior to entering or working in or near waterbodies or wetlands. Throughout construction, the

Contractor will conduct regular maintenance and inspections of the equipment to reduce the potential for spills or leaks.

Contractor mechanics will assess the general condition of equipment valves, lines and hoses and all deteriorated parts will be promptly repaired or replaced. Vehicles and equipment that develop leaks during construction activities will cease work, move to a location at least 100 feet from streams or wetlands, and buckets or absorbent materials will be placed under the equipment until the leak can be repaired. Soils contaminated by the leaking material will be collected and removed from the right-of-way for proper disposal. Equipment that requires extensive repairs will be removed from the right-of-way until the repairs are completed or a protection plan will be developed by the Keystone Environmental Inspector if the equipment can not be moved.

All equipment maintenance and repairs will be performed in upland locations at least 100 feet from waterbodies and wetlands. Mechanics will take precautionary measures when performing equipment maintenance or repair activities by placing absorbent pads (or equivalent materials) on the ground beneath the equipment when changing crankcase oil, repairing hydraulic lines, or adding coolant to construction equipment and when appropriate for other repair activities.

All equipment parked overnight shall be at least 100 feet from a watercourse or wetland, if possible. Equipment shall not be washed in streams or wetlands.

3.4 Materials Storage and Handling

The Contractor shall ensure that all oil products, fuels, gases, hazardous and potentially hazardous materials are transported, stored and handled in accordance with all applicable legislation.

Staging areas (including contractor yards and pipe yards) will be set up for each construction spread. Contractors conducting work in each of these areas will establish bulk fuel storage tanks within the staging area, or they will fill their fuel trucks at existing bulk fuel dealerships. In addition, a variety of lubricants and materials will be stockpiled at the staging area for use during construction of the Project. Bulk fuel storage tanks, fuel trucks and stockpiles of lubricants or hazardous materials will be stored only in the designated staging areas and equipment storage yards, and at least 100 feet from all streams and wetlands. No hazardous materials will be stored in areas subject to flooding or inundation.

Spent oils, lubricants, filters, etc. shall be collected and disposed of or recycled at an approved location in accordance with state and federal regulations.

Keystone contractors will not keep on site or operate the following:

- Completely or partially buried storage tanks
- Buried piping
- Internal steam heat coils
- Large, field-erected storage tanks

The following sections detail Project requirements associated with storage of bulk fuels and lubricants, as well as temporary storage of hazardous materials at staging areas.

3.4.1 Tanks

Keystone contractors will maintain commonly used fuels such as gasoline and diesel in bulk storage tanks in the pipeline contractor yards. All storage tanks or trailers, rigid steel piping, valves and fittings and fuel transfer or dispensing pumps will be contained within a secondary containment structure providing 110 percent containment volume of the largest storage tank or trailer within the containment structure. This containment structure will consist of sandbag or earth berms lined with a chemical resistant membrane liner or a concrete structure. The

Contractor will remove any collected precipitation from the containment structure to maintain 110 percent capacity. The Contractor will inspect accumulated precipitation first for evidence of oil or contamination and then collect the material for proper disposal off-site.

The attached drawings are typical layouts for diesel and gasoline fuel transfer stations. Self-supporting tanks will be constructed of carbon steel or other materials compatible with contents of each tank, and all tanks will be elevated above grade and inspected weekly and when the tank is refilled. To prevent overfill, all tanks will have visual level gauges and actual tank levels will be checked against the gauge reading during inspections. Inspection records shall be maintained by the Contractor.

For receiving and offloading fuels from a fuel distributor into the bulk storage tanks, the distributor will connect a petroleum rated hose from the delivery tanker to the fuel transfer stations fill line at the fill truck connection. The fill truck connection and fill line will consist of a cam-loc connection followed by a block valve, rigid steel piping, tank block valve(s) and check valve(s) just upstream of the connection to the tank. Off-loading of fuel is normally accomplished by a transfer pump powered by the delivery vehicle's power take off. Proper grounding of equipment shall be undertaken during fuel transfer operations. Fuel trucks from fuel distributors will be inspected closely prior to leaving the contractor yard to ensure that all valves are tightly closed and no leaks occur during transit.

For transfer of fuels from the bulk storage tanks in the contractor yards to fuel distribution trucks, the truck will connect a petroleum rated hose between the truck's tank and the bulk storage tank's withdrawal connection. The withdrawal truck connection and withdrawal line will consist of rigid steel piping from the tank, through a block valve(s) to an electric explosion-proof fuel transfer pump. Downstream of the fuel transfer pump will be a cam-loc connection. The fuel transfer pump will be equipped with an emergency shut-off at the pump and a secondary emergency shut-off at least 100 feet away. Proper grounding of equipment shall be undertaken during fuel transfer operations. Fuel truck drivers will inspect the truck after each re-filling from the bulk fuel tanks in the contractor yard to ensure that all valves are tightly closed and no leaks occur during transport.

For dispensing gasoline and on-road diesel to equipment or vehicles, the transfer pump will be a dispensing pump with petroleum rated hoses with automatic shut-off nozzles. Refueling operations will be attended closely at all times by personnel familiar with the operation of the refueling equipment. Warning signs requiring drivers to set brakes and chock wheels shall be displayed at all fixed refueling points. Proper grounding of equipment shall be undertaken during fuel transfer operations.

3.4.2 Containers

All containers 55 gallons or greater shall be stored on pallets within a secondary temporary containment structure. Secondary containment structures may consist of temporary earthen berms with a chemical resistant liner or a portable containment system constructed of steel, PVC, or other suitable material. The secondary containment structure will be capable of containing 110 percent of the volume of material stored in these areas. The Contractor will inspect all container storage areas for leaks and deterioration at least weekly, and leaking or deteriorated containers will be replaced as soon as the condition is first detected. In the event of a leak or deterioration of the container or liner, cleanup measures would be implemented to remediate all contamination.

No incompatible materials will be stored in the same containment area and the containers must be suitable and compatible with the wastes or materials in them. If a container leaks or sustains damage, its contents must be transferred to a container in good condition. Waste and hazardous materials will be kept in separate containers for proper disposal.

Containers holding hazardous substances will be closed during transport and storage, except as necessary to add or remove the substance.

3.4.2.1 Container Labeling Requirements

The Contractor will comply with labeling requirements for any on-site containers, including tanks that store fuels, lubricants, accumulated hazardous wastes and other materials. Hazardous waste containers will be labeled, as required in Title 40 CFR Part 262, and will display at least the following:

- Chemical name (e.g., oil, diesel, etc.);
- When the container reaches 55 gallons in volume, the accumulation start date and/or the start date of the 90-day storage period; and
- The words “Hazardous Waste” and warning words specifying the relevant hazards, such as “flammable”, “corrosive”, or “reactive”.

3.4.3 Concrete Coating

Concrete coating and any washout necessary will be conducted at least 100 feet from wetlands or waterbodies boundaries whenever possible. In some circumstances, it may not be possible to maintain this buffer due to topography or the extent of the resource. If it is necessary to apply concrete coating less than 100 feet from a wetland or waterbody boundary, then sufficient containment (such as plastic sheeting and berms, etc.) will be provided by the Contractor to prevent any uncured concrete or concrete washout from reaching the ground. Excess concrete shall not be disposed of in wetlands or waterbodies. Concrete washout shall be contained within the work area and will not be allowed to enter wetlands, waterbodies, or storm drains.

3.4.4 Disposal of Solid and Hazardous Wastes

The Contractor will be responsible for ensuring that the regular collection and disposal of all solid and hazardous wastes generated during its operations is in compliance with all applicable laws. If state laws pertaining to waste disposal are more stringent than federal laws, state laws will take precedence. The Contractor will determine the details on the proper handling and disposal of hazardous waste, and will assign responsibility to specific individuals before construction.

All hazardous wastes being transported off-site shall be manifested. The manifest shall conform to requirements of the appropriate state agency. The transporter shall be licensed and certified to handle hazardous wastes on the public highways. The vehicles as well as the drivers must conform to all applicable vehicle codes for transporting hazardous wastes. The manifest shall conform to regulations of the Department of Transportation Title 49 CFR 172.101, 172.202, and 172.203.

Hazardous wastes will typically include contaminated soils, spent batteries, and other items. The Contractor will make every effort to minimize hazardous waste production during the Project, including, but not limited to:

- Minimizing the amount of hazardous materials needed for the Project;
- Using alternative non-hazardous substances when available; and
- Recycling usable materials, such as batteries, to the extent possible.

3.4.5 Equipment Refueling and Servicing

All equipment refueling will be performed in upland areas at least 100 feet from all wetlands and waterbodies, and at least 150 feet from private and public water wells, respectively. If site-specific constraints require refueling/servicing the equipment closer than 100 feet from the wetland or waterbody, special precautions may be implemented with the Environmental Inspector’s approval – as described below.

At all refueling locations along the right-of-way, the Contractor will ensure that absorbent materials are on hand at all times. Each refueling vehicle shall have a sufficient number of

shovels, brooms, 10-mil polyethylene sheeting, and fire protection equipment to contain a moderate spill.

During refueling, the Contractor will take appropriate measures to reduce the risk of a spill, including not overfilling fuel tanks and placing an absorbent pad under the fuel nozzle while fueling equipment. Contractor personnel will observe and control refueling at all times to prevent overfilling. Drivers of tank trucks are responsible for safety and spill prevention. Procedures for loading and unloading tank trucks shall meet the minimum requirements established by the Department of Transportation.

3.4.6 Spill Response Equipment

The Contractor will be required to have emergency response equipment available at all areas where hazardous materials are handled or stored. This equipment shall be readily available to respond to a hazardous material emergency. The Contractor is required to have the appropriate spill response materials on site to address spills of materials stored or handled at the location. Such equipment shall include, but not be limited to, the following:

- First aid kits and supplies, sized to meet the needs of the numbers of personnel anticipated;
- Telephone or communications radio;
- Personal protective equipment (Tyvek® or equivalent suits, gloves, goggles, hard hat, and other personal protective equipment appropriate to the materials to be handled);
- Fire extinguishers;
- Absorbent materials;
- Storage containers;
- Non-sparking bung wrench; and
- Shovels.

Hazardous material emergency containment and clean-up materials and equipment shall be carried in all fuel trucks, mechanic and supervisor (foremen) vehicles. This equipment shall include, at a minimum:

- 2 shovels;
- First aid kit and supplies;
- Telephone or communications radio;
- Phone numbers for emergency contacts;
- 2 sets of protective clothing (Tyvek® or equivalent suit, gloves, goggles, boots);
- 6 heavy duty plastic garbage bags (30 gallon);
- 5 absorbent socks;
- 10 spill pads;
- 20 lb. fire extinguisher;
- Barrier tape;
- 2 orange reflector cones; and
- 200 square feet 10-mil plastic sheeting.

Fuel and service trucks shall also carry a minimum of 20 pounds of suitable commercial sorbent material and a catch-pan for fluids.

Each construction crew, including clean-up crews shall have on hand sufficient tools and materials to stop leaks and supplies of absorbent and barrier materials to allow rapid containment and recovery of spilled materials.

The Contractor shall inspect emergency equipment weekly, and service and maintain equipment regularly, replenishing supplies as necessary. Records shall be kept of all inspections and service.

3.4.7 Activities in Environmentally Sensitive Areas

The Contractor will obtain approval from the Keystone Environmental Inspector prior to refueling or performing equipment repair (involving lubricants, fuels, oil products, or hazardous materials) within 100 feet of a wetland or waterbody boundary. The Contractor shall monitor the refueling and equipment operation at all times. The Contractor will take precautions to prevent spillage by not overfilling fuel tanks, placing an absorbent pad under the fuel nozzle while fueling, and wiping the nozzle when fueling is complete.

Stationary equipment will be placed within a secondary containment if it will be operated or require refueling within 100 feet of a wetland or waterbody boundary.

In order to respond quickly to a potential spill in a major waterbody, the Contractor shall have on hand during all river crossings at least 400 feet of sorbent boom/sock and provide in **Attachment F** a method for deployment and collection.

4 Spill Control and Countermeasures

It is Keystone's goal to promptly stop spills, however the safety and health of Project personnel and the public is the foremost priority. Personnel should only respond to a spill if they have adequate training to do so safely.

All spills and leaks of hazardous materials and petroleum products will be cleaned up. Upon discovery of a spill, the Contractor will immediately:

1. Assess the area for safety: identify the material spilled, the cause, and any potential hazards. If it is an emergency threatening human health, dial 911. If telephone service is not available or 911 does not work in the area, immediately contact the spread office so emergency responders can be notified. Implement appropriate safety procedures, based on the nature of the hazard.
2. Extinguish or remove ignition sources, if the spilled material is flammable.
3. Shut off leaking equipment, if safe to do so.
4. Stop leaks, if possible.
5. Contain the spill using spill response materials and by creating a berm or dike, if necessary. Block culverts, storm sewers, and other points, if necessary to limit spill travel.
6. Notify supervisor of the spill, including material, quantity, time, and location. Supervisors are responsible for notifying Keystone of spills (see section below).

Personnel entry and travel on contaminated soils shall be minimized. The Contractor will commence spill clean-up immediately, if it is safe to do so. The Contractor is responsible for removing and disposing of contaminated material in accordance with applicable federal, state, and local laws. It is anticipated that most spills will be small and easily removed with a shovel, with contaminated soil deposited in plastic bags or similar containers for transport to the Contractor's yard. Larger spills may require the use of equipment or special services.

All efforts will be made to prevent a release to water resources; however, if the spilled material reaches water, sorbent booms, socks, and/or pads will be deployed to contain and remove the spilled material.

5 Documentation and Reporting

The Contractor shall notify Keystone immediately of any spill of a potentially hazardous substance that meets government reporting criteria as well as any existing soil contamination

discovered during construction. If pre-existing contamination is suspected, the Contractor shall stop work in the area and not resume work until authorized to do so by Keystone.

In the event of a spill that meets government reporting criteria, the Contractor shall notify the Keystone representative immediately, who, in turn, shall notify the appropriate regulatory agencies. Any material released into water that creates a sheen must be reported immediately to Keystone. The Contractor is required to notify Keystone immediately if there is any spill of oil, oil products, or hazardous materials that reaches a wetland or waterbody. Incidents on public highways shall be reported to Keystone and the appropriate agencies. A sample spill report form is provided in **Attachment L**.

The Contractor is responsible for documenting spills as required by federal, state, and local regulations.

As described on the EPA's website, facilities that spill more than 1,000 gallons of oil into navigable waters or onto adjoining shorelines in a single incident, or have two reportable oil spills of more than 42 gallons within any 12-month period, must submit a report to the appropriate EPA Regional Administrator within 60 days from the time the spill occurs. More details can be found at the EPA website. EPA will review the report and may require the facility owner or operator to amend the SPCC Plan if it does not meet the regulations or if an amendment is necessary to prevent and contain oil spills from the facility.

6 Inspection and Record Keeping

The Contractor will regularly inspect all storage facilities (not less than weekly) and record the condition of the facility in a weekly log. In addition to inspection items discussed in previous sections, inspections will include the outside of all containers for signs of deterioration, discharges, or accumulation of oil inside containment structures or dikes. Inspections will also include all aboveground valves, piping appurtenances and the general condition of items such as flange joints, expansion joints, valve glands and bodies, pipe supports, and metal surfaces.

In addition to the weekly log, the Contractor will maintain records for hazardous materials and hazardous wastes, as required by all applicable federal, state, and local regulations and permit conditions. Record-keeping requirements include, at a minimum:

- Hazardous materials/Waste inspection log,
- Transportation documents,
- Bills of lading,
- Manifests,
- Shipping papers,
- Training records,
- Release report forms, and
- Spill history and documentation of clean-up/handling.

The Environmental Inspector will monitor, inspect, document and report on the Contractor's compliance with hazardous materials and hazardous waste management practices. Inspection records will be kept with the SPCC Plan for at least three years.

7 Applicable State Requirements

The Contractor is required to include in submittals to Keystone a complete discussion of applicable state-specific requirements regarding oil product and hazardous materials handling that are stricter than the federal requirements, if any, to be included in **Attachment I**. If none, then the Contractor will clearly state that in the discussion.

8 Certification of Non-Substantial Harm

Keystone does not anticipate that this Project will satisfy the “substantial harm” criteria set forth in 40 CFR 112.20(e). The EPA requires that facilities that do not meet the criteria maintain a certification form to that affect with the SPCC Plan. This certification form is included in **Attachment M**.

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Attachment A
SPCC Cross Reference Table

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SPCC Rule	Description of Section	Page/Section
§ 112.7	General requirements for SPCC Plans for all facilities and all oil types.	1/1
§ 112.7(a)(1)	General requirements; discussion of facility's conformance with rule requirements.	1/1; throughout SPCC Plan
§ 112.7(a)(2)	Deviations from Plan requirements.	3/3.2; 4 & 5/ 3.4.1
§ 112.7(a)(3)	Facility characteristics that must be described in the Plan and the Facility Diagram.	1 & 2/2
§ 112.7(a)(3)(i)	Types of oil and container storage capacity.	Attachment C
§ 112.7(a)(3)(ii)	Discharge prevention measures.	2 through 8/3
§ 112.7(a)(3)(iii)	Discharge or drainage controls.	3 through 7/3.2; 3.3; 3.4
§ 112.7(a)(3)(iv)	Countermeasures for discharge, discovery, response, and cleanup	8/4
§ 112.7(a)(3)(v)	Methods of disposal of recovered or waste materials	4 through 6/3.3; 3.4; 3.4.3; 3.4.4
§ 112.7(a)(3)(vi)	Contact list and phone numbers.	Attachment E
§ 112.7(a)(4)	Spill reporting information in the Plan.	8/5; Attachment I
§ 112.7(a)(5)	Emergency procedures.	2/2; 9/4; Attachment F
§ 112.7(b)	Fault analysis. Equipment failure information.	2/2; Attachment F
§ 112.7(c)	Secondary containment.	4/3.4.1; 5/3.4.2; 7/3.4.7
§ 112.7(d)	Contingency planning, alternative means, integrity testing.	4/3.4.1; 5/3.4.2; 8/4; Attachment F
§ 112.7(e)	Inspections, tests, and records.	4/3.4.1; 5/3.4.2; 9/6
§ 112.7(f)	Employee training and discharge prevention procedures.	2 & 3/3.1
§ 112.7(g)(1)	Security (excluding oil production facilities).	3/3.2
§ 112.7(g)(2)	Flow valves secured.	3/3.2
§ 112.7(g)(3)	Oil pumps controls locked.	3/3.2
§ 112.7(g)(4)	Secure loading/unloading connections on oil piping.	Not Applicable
§ 112.7(g)(5)	Provide facility lighting.	3/3.2
§ 112.7(h)(1)	Loading/unloading (excluding offshore facilities): provide containment system for loading and unloading area.	Not Applicable
§ 112.7(h)(2)	Loading/unloading: systems to prevent vehicles from departing before complete disconnection.	5/3.4.1
§ 112.7(h)(3)	Loading/unloading: inspect vehicle to prevent liquid discharge while in transit.	4/3.4.1
§ 112.7(i)	Brittle fracture evaluation requirements.	Not applicable
§ 112.7(j)	Discuss conformance with more stringent State rule, regulations, and guidelines.	7/9
§ 112.8 / § 112.12	Requirements for onshore facilities (excluding production facilities).	-
§ 112.8(a) / § 112.12(a)	General and specific requirements	See above and below
§ 112.8(b) / § 112.12(b)	Facility drainage.	4/3.4.1
§ 112.8(c) / § 112.12(c)	Bulk storage containers.	4/3.4.1; 5/3.4.2
§ 112.8(d) / § 112.12(d)	Facility transfer operations, pumping, and facility process.	4/3.4.1; 5/3.4.2
§ 112.9 / § 112.13	Requirements for onshore production facilities	Not applicable

SPCC Rule	Description of Section	Page/Section
§ 112.9(a) / § 112.13(a)	General and specific requirements	Not applicable
§ 112.9(c) / § 112.13(c)	Oil production facility bulk storage containers.	Not applicable
§ 112.9(d) / § 112.13(d)	Facility transfer operations, oil production facility.	Not applicable
§ 112.10 / § 112.14	Requirements for onshore oil drilling and workover facilities.	Not applicable
§ 112.10(a) / § 112.14(a)	General and specific requirements.	Not applicable
§ 112.10(b) / § 112.14(b)	Mobile facilities.	Not applicable
§ 112.10(c) / § 112.14(c)	Secondary containment - catchment basins or diversion structures.	Not applicable
§ 112.10(d) / § 112.14(d)	Blowout prevention.	Not applicable
§ 112.11 / § 112.15	Requirements for offshore oil drilling, production, or workover facilities.	Not applicable
§ 112.11(a) / § 112.15(a)	General and specific requirements.	Not applicable
§ 112.11(b) / § 112.15(b)	Facility drainage.	Not applicable
§ 112.11(c) / § 112.15(c)	Sump systems.	Not applicable
§ 112.11(d) / § 112.15(d)	Discharge prevention systems for separators and treaters.	Not applicable
§ 112.11(e) / § 112.15(e)	Atmospheric storage or surge containers; alarms.	Not applicable
§ 112.11(f) / § 112.15(f)	Pressure containers; alarm systems.	Not applicable
§ 112.11(g) / § 112.15(g)	Corrosion protection.	Not applicable
§ 112.11(h) / § 112.15(h)	Pollution prevention system procedures.	Not applicable
§ 112.11(i) / § 112.15(i)	Pollution prevention systems; testing and inspection.	Not applicable
§ 112.11(j) / § 112.15(j)	Surface and subsurface well shut-in valves and devices.	Not applicable

Attachment B
Contractor Yard or Fueling Station Facility Diagram

DRAFT

DRAFT

Attachment C

Hazardous Materials Inventory and Reportable Quantities

DRAFT

DRAFT

Attachment D
Contractor's Training Program

DRAFT

DRAFT

Attachment E
Emergency Response Contacts

DRAFT

DRAFT

Emergency Response Contacts

DIAL 911 IN CASE OF EMERGENCY

The Contractor is to fill out the applicable information required below. Contractor will attach additional sheets as necessary.

Contractor: _____ Spread/Station: _____

Contractor Spill Response Coordinator: _____
NAME TELEPHONE NUMBER

Keystone Representative: _____
NAME TELEPHONE NUMBER

Sheriffs' Telephone Numbers, by County	County	Telephone Number
--	--------	------------------

Highway Patrol: _____

U.S. Poison Control Center: 800-222-1222

Hospitals Near Work Areas	Address	Telephone Number	County
---------------------------	---------	------------------	--------

Spill Response and Cleanup Contractor: _____
NAME TELEPHONE NUMBER

Spill Response and Cleanup Contractor: _____
NAME TELEPHONE NUMBER

Spill Response and Cleanup Contractor: _____
NAME TELEPHONE NUMBER

Keystone is the designated contact for all agency notifications.

Agency	Telephone Number	Home Page Website	Online Spill Report Form Webpage
Federal			
National Response Center	800-424-8802	http://www.nrc.uscg.mil/nrchp.html	http://www.nrc.uscg.mil/report.html
Montana			
Montana Department of Environmental Quality	800-424-8802	http://www.deq.mt.gov/enf/spillpol.asp	http://www.deq.mt.gov/enf/spill.asp
South Dakota			
South Dakota Department of Environment & Natural Resources	605-773-3296 and 605-773-3231 after hours	http://www.state.sd.us/denr/DES/ground/Spills/SpillReporting.htm	http://www.state.sd.us/denr/DES/ground/Spills/SpillsFollowUp.asp
Nebraska			
Department of Environmental Quality	402-471-2186 or 877-253-2603 and Nebraska State Patrol at 402-471-4545 after hours	http://www.deq.state.ne.us/	Not applicable
Kansas			
Kansas Emergency Management	800-275-0297 or 785-296-8013	http://www.kansas.gov/kdem/hazards/hmenrg.shtml	http://www.kansas.gov/kdem/pdf/hazards/082102_formA.pdf
Oklahoma			
Oklahoma Corporation Commission	918-367-3396 and 405-521-2240 after hours	http://www.occ.state.ok.us/Divisions/OG/spill(c).htm	Not applicable
Texas			
Texas Commission on Environmental Quality (TCEQ)	800-832-8224	http://www.tceq.state.tx.us/response/spills.html	Not applicable

Attachment F
Contractor's Emergency Response Procedures

DRAFT

DRAFT

Equipment Failure and Potential Spill Source Prediction¹

Source	Type of Failure	Total Quantity (gallons)	Rate of Flow (gpm) ²	Direction of Flow	Containment

¹ Title 40 CFR 112 states: "where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure."

² GPM = gallons per minute

DRAFT

Attachment G
Contractor's Commitments

DRAFT

DRAFT

Contractor's Commitments

I hereby certify that I am at a level of management within _____, with the authority to, and do hereby commit the necessary manpower, equipment, and materials to implement this SPCC Plan (40 CFR Part 112) in accordance with the provisions set forth therein.

Name: _____

Name: _____ (Signature)

Title/Company: _____

Date: _____

DRAFT

DRAFT

Attachment H
Professional Engineer's Certification

DRAFT

DRAFT

Registered Professional Engineer Certification

By means of this certification, I attest that:

- I have reviewed this Spill Prevention, Control and Countermeasure Plan (SPCC);
- I am familiar with the requirements of Title 40 Code of Federal Regulations (CFR) Part 112;
- I or my agent has visited and examined the facility;
- This SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of Title 40 CFR Part 112;
- Procedures for required inspections and testing have been established; and
- This SPCC Plan is adequate for the facility.

Signature of Registered Professional Engineer

Name (Printed)

Date

DRAFT

Attachment I
State Requirements

DRAFT

DRAFT

Attachment J

Contractor's Material Safety Data Sheets (MSDS)

DRAFT

DRAFT

Attachment K
Typical Layouts; Fuel Transfer Stations

DRAFT

DRAFT

Attachment L
Spill Report Form

DRAFT

DRAFT

SPILL REPORT FORM

LOCATION AND DATE DETAILS

Facility Telephone Number:

Form Completed by: _____ Date: _____

Date of spill: _____ Time of spill: _____

Date of spill discovery: _____ Time of spill recovery: _____

Location: _____ County: _____

Short legal description: T _____ R _____ S _____ Weather Conditions: _____

Directions from nearest community: _____

Name and Title of Discoverer: _____
NAME TITLE

SPILL AND MATERIAL DETAILS

Type of material spilled and product name: _____

Manufacturer's name: _____

Estimated volume spilled: _____ Estimated volume recovered: _____

Topography and surface condition of spill site: _____

Spill medium: Pavement Soil Water Other: _____ (Check all that apply)

Responsible party (Name, Phone Number): _____
NAME TELEPHONE NUMBER

Describe the causes and circumstances resulting in the spill: _____

WATER RESOURCES AFFECTED

Did the spill reach a waterbody? Yes No If "Yes", was a sheen present? Yes No

Proximity of spill to surface waters or wetlands: _____ Feet

Estimated quantity of material that entered surface waters or wetland: _____

Direction and time of travel (if in stream): _____

SPILL REPORT FORM CONTINUED

DESCRIPTION OF SPILL/ HARMFUL EFFECTS

Describe extent of observed contamination, both horizontal and vertical: _____

Resources and installations that may be affected: _____

Describe any injuries or potential impact on human health caused by the spill: _____

COURSE OF ACTION

Describe immediate spill control and/or cleanup methods used and implementation schedule: _____

Evacuation necessary? Yes No Describe: _____

Current status of cleanup actions: _____

Future follow-up required, if any: _____

NAME/COMPANY/TELEPHONE NUMBER FOR THE FOLLOWING

Contractor Superintendent:	_____	_____	_____
	NAME	COMPANY	TELEPHONE NUMBER
Contractor's Environmental Coordinator:	_____	_____	_____
	NAME	COMPANY	TELEPHONE NUMBER
Lead Environmental Inspector:	_____	_____	_____
	NAME	COMPANY	TELEPHONE NUMBER
Other:	_____	_____	_____
	NAME	COMPANY	TELEPHONE NUMBER

Contractor must complete this form for any spill that meets state or federal reportable quantities, and for petroleum spills that enter waterbodies or wetlands, affect human health, or exceed 42 gallons, and submit the form to the Lead Environmental Inspector immediately.

Attachment M

Certification of the Applicability of the Substantial Harm Criteria

DRAFT

DRAFT

Certification of the Applicability of the Substantial Harm Criteria

Facility Name: **Keystone Pipeline Project**
Facility Address: **Various locations along the pipeline route in Montana, South Dakota, Nebraska, Kansas, Oklahoma, and Texas. Mailing address:**

**Keystone XL Pipeline Project
7509 Tiffany Springs Parkway
Northpointe Circle II, Suite 200
Kansas City, Missouri 64153**

1. 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 No

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and 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 within any aboveground oil storage tank area?

Yes No

3. 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 Attachment C-III to this appendix or a comparable formula³) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 13, for availability) and the applicable Area Contingency Plan.

Yes No

4. 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 Attachment C-III to this appendix or a comparable formula¹) such that a discharge from the facility would shut down a public drinking water intake⁴?

Yes No

5. 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 discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes No

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 this information, I believe that the submitted information is true, accurate, and complete.

Signature

Name (please type or print)

Title

³ If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

⁴ For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

DRAFT

APPENDIX I, continued

Emergency Response Plan Redaction Summary

Emergency Response Plan

Notice of Redaction of Confidential Information

The Emergency Response Plan has been made available for review by the general public. Accordingly, security sensitive, business confidential, personal, and otherwise confidential information has been removed. A summary of redacted information is presented on the following pages.

-This page intentionally left blank-

KEYSTONE PIPELINE EMERGENCY RESPONSE PLAN – TABLE OF REDACTED INFORMATION

PAGE NO.	REDACTED MATERIAL	REASON FOR REDACTION	NOTES
6	Location of oil control center and backup oil control center	Security concerns	1
14	Discharge scenario barrels and planning volume barrels	Security concerns	2
21-23	Personnel names and telephone numbers	Security concerns / Privacy	3
69-71	Bomb threat info	Security concerns	4
72	Environmental sensitive areas	Security concerns	5
154	Environmental sensitive areas	Security concerns	5
155-173	High Consequence Area (HCA) / Other Environmentally sensitive areas and associated maps	HCA confidentiality / Security concerns / Canada	6
174	Drain tiles	Security and land owner privacy concerns	7
190-220	Agreements/Contracts	Commercial / Safety / Canada	8
223	Worst Case Discharge Volumes and Calculations	Security concerns / Canada	2
226	Worst Case Discharge Volumes and Calculations	Security concerns / Canada	2
227	Worst Case Discharge Volumes and Calculations	Security concerns / Canada	2
230	Worst Case Discharge Volumes and Calculations	Security concerns / Canada	2
231	Worst Case Discharge Volumes and Calculations	Security concerns	2
234	Worst Case Discharge Volumes and Calculations	Security concerns	2
235	Worst Case Discharge Volumes and Calculations	Security concerns	2
238	Worst Case Discharge Volumes and Calculations	Security concerns	2
239	Worst Case Discharge Volumes and Calculations	Security concerns	2
242	Worst Case Discharge Volumes and Calculations	Security concerns	2

REDACTION MATERIAL FOR TRANSCANADA (Cont'd)

PAGE NO.	REDACTED MATERIAL	REASON FOR REDACTION	NOTES
286-287	Keystone Commodities	Shipper confidentiality / Commercial	9
289-293	MSDS	Shipper confidentiality / Commercial	9
295-302	MSDS	Shipper confidentiality / Commercial	9
304-310	MSDS	Shipper confidentiality / Commercial	9
312-318	MSDS	Shipper confidentiality / Commercial	9
320-325	MSDS	Shipper confidentiality / Commercial	9
327-338	MSDS	Shipper confidentiality / Commercial	9
340-350	MSDS	Shipper confidentiality / Commercial	9
352-362	MSDS	Shipper confidentiality / Commercial	9
364-373	MSDS	Shipper confidentiality / Commercial	9
375-385	MSDS	Shipper confidentiality / Commercial	9
387-388	MSDS	Shipper confidentiality / Commercial	9
390-391	MSDS	Shipper confidentiality / Commercial	9
393-394	MSDS	Shipper confidentiality / Commercial	9
396-405	MSDS	Shipper confidentiality / Commercial	9
407-412	MSDS	Shipper confidentiality / Commercial	9
414-415	MSDS	Shipper confidentiality / Commercial	9
417-426	MSDS	Shipper confidentiality / Commercial	9
428-436	MSDS	Shipper confidentiality / Commercial	9
438-439	MSDS	Shipper confidentiality / Commercial	9
441-447	MSDS	Shipper confidentiality / Commercial	9
449-456	MSDS	Shipper confidentiality / Commercial	9
458-469	MSDS	Shipper confidentiality / Commercial	9
471-474	MSDS	Shipper confidentiality / Commercial	9
476-481	MSDS	Shipper confidentiality / Commercial	9
483-489	MSDS	Shipper confidentiality / Commercial	9
491-498	MSDS	Shipper confidentiality / Commercial	9

REDACTION MATERIAL FOR TRANSCANADA (Cont'd)

PAGE NO.	REDACTED MATERIAL	REASON FOR REDACTION	NOTES
500-507	MSDS	Shipper confidentiality / Commercial	9
509-517	MSDS	Shipper confidentiality / Commercial	9
519-525	MSDS	Shipper confidentiality / Commercial	9
527-534	MSDS	Shipper confidentiality / Commercial	9
536-543	MSDS	Shipper confidentiality / Commercial	9
545-551	MSDS	Shipper confidentiality / Commercial	9
553-562	MSDS	Shipper confidentiality / Commercial	9
564-568	MSDS	Shipper confidentiality / Commercial	9
624-625	Personnel	Privacy concern / Canada	3
629-632	Personnel	Privacy concerns	3
635-636	Personnel	Privacy concern/ Canada	3
648-649	Personnel	Privacy concerns	3
664-665	Personnel	Privacy concerns	3
679-680	Personnel	Privacy concerns	3

Notes

- 1 The Oil Control Center and Backup Oil Control Center are both critical components when initiating an oil spill emergency response and, therefore, are included on the Emergency Response Plan's distribution list. However, the address of each location has been redacted to protect the safety of the employees that work there and the security of the critical facility.
- 2 In preparing the ERP, TransCanada performed calculations to determine the worst potential discharges from each of the line sections along the pipeline system in addition to the location of the calculated discharges. These volumes and locations were identified for purposes of establishing emergency response scenarios and for emergency response planning. These volumes and locations are redacted for homeland security purposes, as disclosure would make public potential target locations for terrorist attacks or other threats. Further, as indicated, some of these locations are in Canada and would have no impact on the United States.
- 3 TransCanada considers safety of our employees and their families to be a concern of utmost importance. Therefore, the names and contact information of company employees are being withheld for their safety and privacy. This information is not material to understanding the ERP.

- 4 In addition to addressing oil spills, the ERP contains emergency response actions that should be taken for other emergencies including bomb threats. Making public the details of our response procedures in the event of a bomb threat could compromise our efforts in reacting to such an event. Accordingly, this information is redacted.
- 5 While preparing the ERP, TransCanada researched and identified environmentally sensitive areas along the pipeline system to help develop appropriate planning considerations that are critical for responding to an oil spill in those areas. These pre-identified sensitive areas are being redacted to avoid disclosing locations for potential terrorist attacks or other threats.
- 6 High Consequence Areas (HCAs), as identified by PHMSA, include highly populated areas, drinking water sources, and unusually sensitive ecological areas. The specific locations of these HCAs are only available to pipeline operators due to the sensitive nature of their content. TransCanada obtains this information under a confidentiality commitment. Moreover, these locations are being redacted to avoid disclosing locations for potential terrorist attacks or other threats.
- 7 While preparing the ERP, TransCanada research field drain tiles as they can provide a conduit for spilled oil to reach environmentally sensitive areas. Therefore, the locations of these tiles are being redacted to avoid disclosing locations for potential terrorist attacks or other threats.
- 8 TransCanada has contracted with a nationally recognized Oil Spill Removal Organization (OSRO) to ensure that resources and personnel are available to TransCanada during an oil spill. The commercial terms of our contracts and key individuals for each party are redacted for proprietary reasons. In addition, names and contact information of individuals mobilizing response resources are redacted for their safety.
- 9 TransCanada is prohibited under contract to disclose proprietary information provided by its shippers regarding the commodities transported through the pipeline. This specifically includes Material Safety Data Sheets (MSDSs). In lieu of the MSDSs, TransCanada is providing a document that summarizes the range of information and considerations reflected on the MSDSs for the products expected to be shipped on the pipeline.

EMERGENCY RESPONSE PLAN**Keystone Pipeline System*****Prepared for:***

TransCanada
450 - 1st Street
Calgary, Alberta T2P 5H1
(403)920-2033

Prepared by:

O'Brien's Response Management Inc.
818 Town & Country Blvd., Suite 200
Houston, TX 77024-4564
Phone: (281) 320-9796 | Fax: (281) 320-9700
www.obriensrm.com

Executive Summary

The Keystone Pipeline is a 3,460-kilometre pipeline that transports crude oil from Hardisty, Alberta to markets in the American Midwest at Wood River and Patoka in Illinois, and at Cushing, Oklahoma. The Canadian portion of the pipeline runs from Hardisty, Alberta east into Manitoba where it turns south and crosses the border into North Dakota. From North Dakota, the pipeline runs south through South Dakota and Nebraska. At Steele City, Nebraska, one arm of the pipeline runs east through Missouri for deliveries into Wood River and Patoka, Illinois; another arm runs south through Oklahoma for deliveries into Cushing, Oklahoma.

Deliveries to Wood River and Patoka began in the summer of 2010, and deliveries to Cushing began in February of 2011. The pipeline system currently has the capacity to deliver up to 590,000 bpd of Canadian crude oil into these important North American refining markets.

A critical aspect of operating the Keystone Pipeline system is to have a comprehensive Emergency Management System. A key component of the system includes having an Emergency Response Plan. The Keystone emergency response plan was prepared to achieve a number of goals: ensure regulatory compliance, appropriate for all key stakeholders including field operations, include all emergencies and response measures, timely internal and external notification procedures, and training requirements. In addition, the plan contains information related to worst case discharge, company owned equipment, environmental sensitivities, contract resources, and public officials, and tactical control plans.

The plan is distributed to key internal and external stakeholders and delivered to TransCanada personnel through a secure internet portal hosted by one of TransCanada's emergency response providers and co-preparer of the plan. The plan has been submitted to the National Energy Board in Canada and the United States Department of Transportation's Pipeline and Hazardous Material safety Administration office. The plan will be updated annually and when substantial changes are made or when deemed necessary by either of the agencies.

The Keystone Emergency Response Plan is combined with a rigorous training program,, retention of and access to the industry's most known response experts, and a state of the art pipeline integrity and maintenance program making emergency response for the Keystone pipeline system a priority fully endorsed at all levels within TransCanada.

ACKNOWLEDGMENT AND PLAN APPROVAL

The information and procedures in this Plan must be treated as guidelines only. The user should determine to what extent it is practical and advisable to follow them. This decision may involve considerations not discussed in this Plan.

The information and procedures contained herein are considered to be accurate as of this date and are consistent with the National Contingency Plan (NCP) and applicable Area Contingency Plans (ACP) as detailed in Section 1.5.

CERTIFICATION OF QUALIFIED INDIVIDUAL AND ALTERNATE QUALIFIED INDIVIDUAL

TransCanada hereby certifies that the individuals identified as Qualified Individual and Alternate Qualified Individual in this Plan have the full authority in accordance with the applicable United States Federal and State regulations and as detailed in this Plan to:

1. Activate and engage in contracting with oil spill removal organizations.
2. Act as a liaison with the pre-designated Federal On-Scene Coordinate (OSC), and
3. Obligate funds required to carry out response activities.

Plan Approved:



VP of Pipeline Operations in the U.S.

Signature

Title


Vern Meier

Name (please type or print)

12/06/2012

Date

NOTE: O'Brien's Response Management Inc. provided consulting and plan development services in the preparation of this Plan utilizing data provided by the owner/operator. O'Brien's assumes no liability for injury, loss, or damage of any kind resulting directly or indirectly from the use of the regulatory interpretation, response planning, or information contained in this plan.

OPERATOR'S STATEMENT - SIGNIFICANT AND SUBSTANTIAL HARM AND CERTIFICATION OF RESPONSE RESOURCES	
FACILITY NAME:	<u>Keystone Pipeline System</u>
CORPORATE ADDRESS:	<u>450 - 1st Street Calgary, Alberta T2P 5H1</u>
1. Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than 10 miles (16.1 km) in length? and	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. Has any line section experienced a release greater than 1,000 barrels (159 cubic meters) within the previous five years? or	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
3. Has any line section experienced two or more reportable releases, as defined in 49 CFR 195.50, within the previous five years? or	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
4. 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
5. 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
6. 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>Based on the U.S. DOT PHMSA criteria above, the Keystone Pipeline System is considered "Significant and Substantial Harm".</p> <p>TransCanada hereby certifies to the Pipeline and Hazardous Materials Safety Administration of the U.S. Department of Transportation that we have identified and ensured, by contract or by other means, the availability of personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge.</p>	
	VP of Pipeline Operations in the U.S.
Signature	Title
Vern Meier	12/06/2012
Name (please type or print)	Date

NOTE: It is the responsibility of the holder of this Plan to ensure that all changes and updates are made. The Plan Holder must:

- Remove and discard obsolete pages.
- Replace obsolete pages with the updated pages.

REVISION RECORD		
CHANGE DATE	AFFECTED PAGE NUMBER(S)	DESCRIPTION OF CHANGE(S)
May 2011	Section 2	Update Notification
December 2009	Appendix F	Updated Air Operations Checklist
March 2010	Appendix A	Added Location description to A.1
April 2010	FWD	Distribution List updated TSB contact
June 2011		Shared Contact has been updated.
October 2011	Section 6	Added Drain Tile
December 2011	Entire Plan	Qualified Individual Updated, Drain Tile Information Added, Air Monitoring Guideleins Updated, OSRO Updated, Activation Flowchart Updated, Emergency Response Contractors Updated, MSDS Updated, Misc. Forms Updated
February 2012		Contact Association has been updated.
February 2012		Contact Association has been updated.
February 2012		Shared Contact has been updated.
March 2012		Pipeline has been updated.
March 2012	Section 3	Added Range of Reported thicknesses table to Section 3
April 2012	Section 2, Glossary and Acronyms	Updated External Notifications and Glossary
July 2012		Shared Contact has been updated.
December 2012	Foreword, Sections 1 - 4, Section 6, Apps. C & D, App. G, App. I, Glossary, and Response Zones	Updated Approver, QI(s), other contacts & Distrib. List, Revised Notification Procedures and Response Actions, Revised and added new MSDS, Updated Environmental/Socio Economic Sensitivities, Updated Media Information, Updated Glossary, Updated 24-Hour Emergency Contact Number in all Response Zones, minor typo changes, Uploaded Guidelines for Creating and Maintaining Privilege US and Canada documents and the Oil Properties Composition List into "Other Documents" section

DISTRIBUTION LIST	
COPY NUMBER	PLAN HOLDER¹
1	TransCanada Dean Cowling - VP of Community Safety & Envir. 450 1st Street SW Calgary, Alberta T2P 5H1
2	TransCanada Senior Emergency Management Specialist 450 1st Street SW Calgary, Alberta T2P 5H1
3	TransCanada Corporate Emergency Operations Center 450 1st Street SW Calgary, Alberta T2P 5H1
4	TransCanada Alternate Corporate EOC 450 1st Street SW Calgary, Alberta T2P 5H1
5	TransCanada Emergency Response Analyst 450-1st Str. SW Calgary, T2P 5H1
6	TransCanada Central Region Emergency Prepar Coordinator 104 Terracon Place Winnipeg, Manitoba R2J 4G7
7	TransCanada Central Region Emergency Operations Center 104 Terracon Place Winnipeg, Manitoba R2J 4G7
8, 9, 10	National Energy Board Secretary 444 Seventh Avenue SW Calgary, Alberta T2P 0X8
11, 12 (electronic)	Office of Pipeline Safety - PHMSA Melanie Barber U.S. Department of Transportation 1200 New Jersey Avenue, SE-E-22-321 Washington, District Of Columbia 20590
13	O'Brien's Response Management ePlanPro Manager 818 Town & Country Blvd., Suite 200 Houston, Texas 77024
14	TransCanada Great Plains Emergency Operations Center 13710 FNB Parkway; Suite 300 Omaha, Nebraska 68154
15	TransCanada Incident Management Specialist

	13710 FNB Parkway; Suite 300 Omaha, Nebraska 68154
16	TransCanada Oil Control Center [REDACTED]
17	TransCanada Alternate Oil Control Center [REDACTED]
18	Transportation Safety Board Larry Gales Transportation Safety Board of Canada Place du Center 4th Floor - Suite 481 200 Promenade du Portag Gatineau (Hull), Quebec K1A 1K8
19	TransCanada Director of Operations Central Region 104 Terracon Place Winnipeg, Manitoba R2J 4G7
20	TransCanada Director of Operations Great Plains Region 13710 FNB Parkway; Suite 300 Omaha, Nebraska 68154
21	TransCanada Incident Management Specialist 104 Terracon Place Winnipeg, Manitoba R2J 4G7
22	TransCanada Vern Meier - VP of US Pipeline Operations 717 Texas Street Houston, Texas 77002-2761
23	TransCanada Garnet Scaman - VP of Cdn Pipeline Operations 450 1st Street SW Calgary, Alberta T2P 5H1

NOTE¹: The Distribution of this Plan is controlled by the Copy Number located on the front cover or CD label. The Plan Distribution Procedures provided in Section 1.3 and the Plan Review and Update Procedures provided in Section 1.4 should be followed when making any and all changes.

1.0 INTRODUCTION AND PLAN CONTENT

- 1.1 [Plan Purpose/Objectives](#)
 - 1.2 [Scope of Plan](#)
 - 1.3 [Controlled Plan Distribution Procedures](#)
 - 1.4 [Plan Review and Update Procedures](#)

 - 1.5 [Regulatory Compliance](#)
- Figure 1.1 [Facility Information](#)
- Figure 1.2 [Piping System Overview](#)

1.1 PLAN PURPOSE/OBJECTIVES

The purpose of this Emergency Response Plan (ERP) is to assist TransCanada personnel in preparing for and responding quickly and safely to emergencies originating from the pipelines and associated facilities. The Plan provides techniques and guidelines for achieving an efficient, coordinated, and effective response to emergencies which may occur along the pipeline.

The specific objectives of the Plan are to:

- Establish Response Teams, assign individuals to fill the positions on the teams, and define the roles and responsibilities of team members.
- Define notification, activation, and mobilization procedures to be followed when a discharge occurs.
- Define organizational lines of responsibility to be adhered to during a response operation.
- Document equipment, manpower, and other resources available to assist with the response.
- Ensure compliance with National Energy Board (NEB) Onshore Pipeline Regulations 1999 and the U.S. National Oil and Hazardous Substances Pollution Contingency Plan and associated Area Contingency Plan(s) for the area of operation.

1.2 SCOPE OF PLAN

This Plan has been developed in accordance with the regulation published in SOR/99-294, S. 32-354 – Emergency Procedures Manual and 49 CFR Part 194 - Response Plans for Onshore Oil Pipelines.

This Plan contains prioritized procedures for Company personnel to prevent or mitigate emergencies resulting from the operation of the pipeline. A description of the Pipeline's details is presented in Figure 1.1 with additional information provided in the sections, appendices and annexes.

1.3 CONTROLLED PLAN DISTRIBUTION PROCEDURES

Senior Emergency Response Analyst is responsible for maintenance and distribution of the Plan. Distribution will be handled in the following manner:

- Distribution of controlled Plans is determined by the copy number assigned to agency and designated corporate Plan Holders. A distribution list is included in the Foreword.
- Company personnel who may be called upon to provide assistance during discharge response activities will have access to a copy of the Plan for their use and training.
- Any person holding a controlled copy of the Plan shall ensure that the copy is transferred to their replacement in the event of reassignment or change in responsibility.
- Various regulatory agencies will also be distributed a controlled copy of the Plan. The list of agencies is detailed in the Distribution List located in the Foreword.

1.4 PLAN REVIEW AND UPDATE PROCEDURES

Review/Update

The Plan resides as a web-based document, which permits authorized Corporate and field staff access to make:

- Appropriate revisions as required by operational or organizational changes.
- Appropriate revisions as required by changes in the names and phone numbers detailed in Section 2.0.
- Appropriate revisions as required by improved procedures or deficiencies identified during response team tabletop exercises or actual emergency responses.

Incorporation of Plan Revisions

Email notification allows Authorized Plan Holders to update hard copy Plans as changes occur.

The Individual Plan Holder shall:

- Review and insert the revised pages into the Plan.
- Discard or archive the obsolete pages.

Agency Revision Requirements

Company shall revise and resubmit changes to the Canadian National Energy Board (CA NEB) and the U.S. DOT/PHMSA Pipeline Response Plans Officer within 30 days of each change that would substantially affect the implementation of the Response Plan. Additionally, the South Dakota Department of Environment and Natural Resources shall be notified within 30 days of any change. Examples of changes in operating conditions that would cause a significant change to the Plan include:

Requiring Changes

- 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 portions of the pipeline, which in any way substantially affect the information included in this Plan, such as a change in the Worst Case Discharge volume.
- A change in the type of oil handled, stored, or transferred that materially alters the required response resources.
- A change in the name of the Oil Spill Removal Organization (OSRO).
- A material change in capabilities of the OSRO that provides equipment and personnel.
- A change in emergency response procedures.
- A change in the Qualified Individual.
- A change in the NCP or an ACP that has significant impact on the equipment appropriate for response activities.

- Any other changes that materially affect the implementation of the Plan.
- As a result of post incident or drill evaluations.

1.5 Regulatory Compliance

CA NEB and U.S. DOT/PHMSA must be provided such revisions. The Company must submit the U.S. DOT/PHMSA issued Facility Control Number with the changes (the PHMSA Control Number is listed in Figure 1.1). In addition to the required changes listed above, TransCanada will resubmit the Emergency Response Plan to U.S. DOT/PHMSA annually from the last approval date of the Plan.

Except as provided above, amendments to the following do not require approval by U.S. DOT/PHMSA:

- Personnel and telephone number lists included in the Plan.
- OSRO(s) change which does not result in a material change in support capabilities.

The development, maintenance, and use of this Plan implements Company policy and addresses the following regulatory requirements and guidelines:

The response zones have been reviewed for consistency with the following plans:

- Canada - United States Joint Inland Pollution Contingency Plan - Annex II CANUSCENT
- CA National Environmental Emergencies Contingency Plan
- Greater St. Louis Sub-Area Plan
- U.S. EPA Region 5 Oil and Hazardous Substances Integrated Contingency Plan
- U.S. EPA Region 6, Regional Integrated Contingency Plan
- U.S. EPA Region 7 Regional Contingency Plan
- U.S. EPA Region 8 Regional Contingency Plan
- U.S. National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

FIGURE 1.1

FACILITY INFORMATION

GENERAL INFORMATION					
Facility Name:	Keystone Pipeline System				
U.S. DOT/PHMSA Control:	TC59				
Owner Name:	(Canada)TransCanada (U.S.)				
Address:	<table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left;">Physical Address</th> <th style="text-align: left;">Operators Address</th> </tr> </thead> <tbody> <tr> <td>450 - 1st Street Calgary, Alberta T2P 5H1</td> <td>450 - 1st Street S.W. Calgary, Alberta T2P 5H1</td> </tr> </tbody> </table>	Physical Address	Operators Address	450 - 1st Street Calgary, Alberta T2P 5H1	450 - 1st Street S.W. Calgary, Alberta T2P 5H1
Physical Address	Operators Address				
450 - 1st Street Calgary, Alberta T2P 5H1	450 - 1st Street S.W. Calgary, Alberta T2P 5H1				
Mainline Number:	(800) 447-8066 (24 Hours)				
Contact Person:	Niki Affleck Senior Emergency Management Specialist				
Primary NAICS Code:	486910				
Determination of Significant and Substantial Harm (U.S. DOT PHMSA):	All Response Zones meet the criteria for "Significant and Substantial Harm."				
Operator Statement of (U.S. DOT PHMSA) "Significant and Substantial Harm":	It is the Company's goal to respond as quickly as possible to all uncontrolled releases of crude oil, regardless of the source point location along the system. Based upon this goal, and the overbreadth of the definitions provided in 49 CFR 194.103 (c)(4) & (5), the Company is compelled to consider all the active line sections listed below in the Response Zone Annexes as capable of a release potentially causing "significant and substantial harm".				
PIPELINE LOCATION					
Provinces/States/Counties:	The System covers 5 specific Response Zones covering 3 Provinces, 7 States and 56 Counties specifically detailed in this Figure 1.1.				
Provinces Traversed:	Alberta, Saskatchewan, Manitoba				
States Traversed:	North Dakota, South Dakota, Nebraska, Kansas, Missouri, Illinois, Oklahoma				
Pipeline System Overview Diagram:	See Figure 1.2				

PHYSICAL DESCRIPTION - PIPELINE

Response Zone(s):

- The Keystone Pipeline transports crude oil from Hardisty, Alberta to U.S. Midwest markets at Wood River, Patoka, Illinois and Cushing, Oklahoma. The Canadian portion includes 232 miles (373 km) of pipeline, pump stations and terminal facilities at Hardisty, Alberta. The U.S. portion includes approximately 1,352 miles (2,846 km) of pipeline and pump stations.
- The Keystone Pipeline System is divided into 5 specific Pipeline Response Zones. The Response Zones are as follows (Specific information to Response Zones are provided later in the Response Zone Appendices):
 - Hardisty Pump Station/ Regina Pump Station
 - Regina Pump Station / Haskett Pump Station
 - North Dakota, South Dakota, Nebraska
 - Kansas, Missouri, Illinois
 - Cushing Extension

General:

- The Keystone Pipeline System includes pipeline sections of 30, 34 or 36-inch diameter as well as pump stations.
- This Plan is written in English and understood by personnel responsible for carrying out the Plan.

Pipeline Specifications:

- **Products Type:**

Crude Oil

- **Pipe Detail:** The pipeline system consists of several pipeline sections with the following diameters.

30" - 0 km Point (KP) - 274.2 KP and 1148.3 KP to 1239.4 KP (CANADA, New Construction AB, SK, MB)

34" - 274 KP - 1148 KP (CANADA, Line 1 Conversion, SK& MB, New Construction, MB)

30" - 1239.4 KP - 2983.9 KP (USA, ND, SD, NE, KS, MO, IL)

36" - 0 KP - 479.5 KP (initiates at 2268.5 KP, USA KS, OK)

RESPONSE ZONE INFORMATION

Response Resources:

Facility spill mitigation procedures and response guidelines are provided in Section 3.0 for discharges that could result from any of the following scenarios:

- Pipeline rupture/leak
- Explosion and/or fire
- Failure of facility piping
- Equipment failure (e.g. pumping system failure, relief valve failure, etc.)

Response Zone	Discharge Scenario (Bbls.)	Provinces / Counties Traversed	Planning Volume (Bbls.)
Hardisty Pump Station/ Regina Pump Station	█	Alberta, Saskatchewan, Eastern Alberta, Western Saskatchewan, Eastern Saskatchewan	█
Regina Pump Station / Haskett Pump Station	█	Saskatchewan, Manitoba, Eastern Saskatchewan, Southwestern Manitoba, Western Saskatchewan	█
North Dakota, South Dakota, Nebraska	█	Barnes, Beadle, Butler, Cavalier, Cedar, Clark, Colfax, Day, Gage, Hanson, Hutchinson, Jefferson, Kingsbury, Marshall, McCook, Miner, Nelson, Pembina, Platte, Ransom, Saline, Sargent, Seward, Stanton, Steele, Walsh, Wayne, Yankton, Lincoln	█
Kansas, Missouri, Illinois	█	Audrain, Bond, Brown, Buchanan, Caldwell, Carroll, Chariton, Clinton, Doniphan, Fayette, Lincoln, Madison, Marion, Marshall, Montgomery, Nemaha, Randolph, St. Charles, Washington, Clay, Dickinson, Butler, Cowley	█
Cushing Extension	█	Butler, Clay, Cowley, Dickinson, Jefferson, Kay, Lincoln, Marion, Noble, Payne, Washington, Marshall, Nemaha, Brown, Doniphan, Cedar, Wayne, Stanton, Platte, Colfax, Seward, Saline, Gage	█

FIGURE 1.2
PIPING SYSTEM OVERVIEW



2.0 NOTIFICATION PROCEDURES

2.1 [Internal Notifications](#)

2.2 [External Notifications](#)

Figure 2.1 [Emergency Activation Flowchart](#)

Figure 2.2 [Internal Notification References](#)

Figure 2.3 [Notification Data Sheet](#)

Figure 2.4 [External Notification Flowchart](#)

Figure 2.5 [External Notification References](#)

Figure 2.6 [Possible Command Post Locations](#)

This Section is a guide for notification procedures that should be implemented immediately after discovering a discharge incident and, if possible, securing the source. Internal and external notifications are described separately for clarification purposes only. All notifications are of extreme importance and must be completed in a timely manner.

2.1 INTERNAL NOTIFICATION

The following internal notifications should be made for each emergency incident to the extent that the incident demands (telephone reference is provided in Figure 2.2). 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. The typical internal notification responsibilities for each person potentially involved in the initial response are as follows:

Employee Discovering Discharge

- Immediately notify the Keystone Oil Control Center (OCC) (contact information is listed in Figure 2.2).
- Notify the local fire department, police department, and rescue, as needed.
- Notify the Spill Response Contractor, Quantam Murray at (877) 378-7745 (Canada only).
- Notify the Spill Response Contractor, National Response Corporation at (800) 337-7455 (US only).
- Notify the contracted Spill Management Team, the O'Brien's Group at (985) 781-0804 if required (Canada & US).
- Notify Area Manager or Regional On-Call Manager.

Keystone Oil Control Center (OCC)

- Verify emergency.
- Immediately notify the Keystone Console Manager and Regional On-Call Manager.
- Notify the emergency response contractor if the employee that discovered the discharge has not already made the notification.
- Notify: U.S. National Response Center, the CA Transportation Safety Board National Response Center, CA National Energy Board, appropriate Federal agencies, County Emergency Management, Province/State Environmental Agency, and the Utilities One-Call, as needed (notification requirements and contact information are listed in Figure 2.5).

Calgary Emergency Operations Center (EOC) Manager

- Once the emergency has been verified by the Oil Control Center (OCC), request contact information for Regional On Call Manager.
- Contact the Regional On Call Manager to confirm activation of Regional EOC and inform that activation of the Corporate EOC will be completed.
- Notify the Corporate Emergency Response Team (CERT) and activate the Corporate Emergency Operations Center (EOC).
- Dial into Regional EOC conference line to establish communications with Regional EOC and Incident Management Team on site.
- Once Corporate EOC is activated, determine with Corporate Security whether emergency seems to meet "crisis" criteria.
- If yes, ensure Corporate Security activates TransCanada's Crisis Management Team.
- Continue to provide support to both Regional EOC and Incident Management Team throughout the emergency response phase.

Corporate Security

- Engage in Corporate Emergency Operations Center (EOC)
- Confirm emergency meets "crisis" criteria.
- Notify the Executive VP of Operations and Engineering.

Regional Emergency Operations Center

- Activate Regional Emergency Operations Center (EOC).
- Set up Regional conference line to establish communications with Incident Management Team and Corporate Emergency Operations Center (EOC).
- Immediately provide support to Incident Management Team.
- Complete all local notifications.
- Facilitate ongoing communication between Incident Management Team and the Corporate EOC.
- Transmit appropriated MSDS to Incident Commander, local officials, and State Environmental Agencies.

Corporate Emergency Response Team (CERT)

- Attend Corporate Emergency Operations Center (EOC).
- Immediately notify senior management to inform about the emergency event.
- Fulfill profile of service and functional plan as required based on the type of emergency event.
- Continue to provide support to Incident Management Team and Regional EOC.

O'Brien's Response Management Command Center

- Email is received at the O'Brien's Command Center as well as by key Response Services personnel.
 - Primary - response@obriensrm.com
 - Secondary - ccenter@obriensrm.com

FIGURE 2.1

EMERGENCY ACTIVATION FLOWCHART

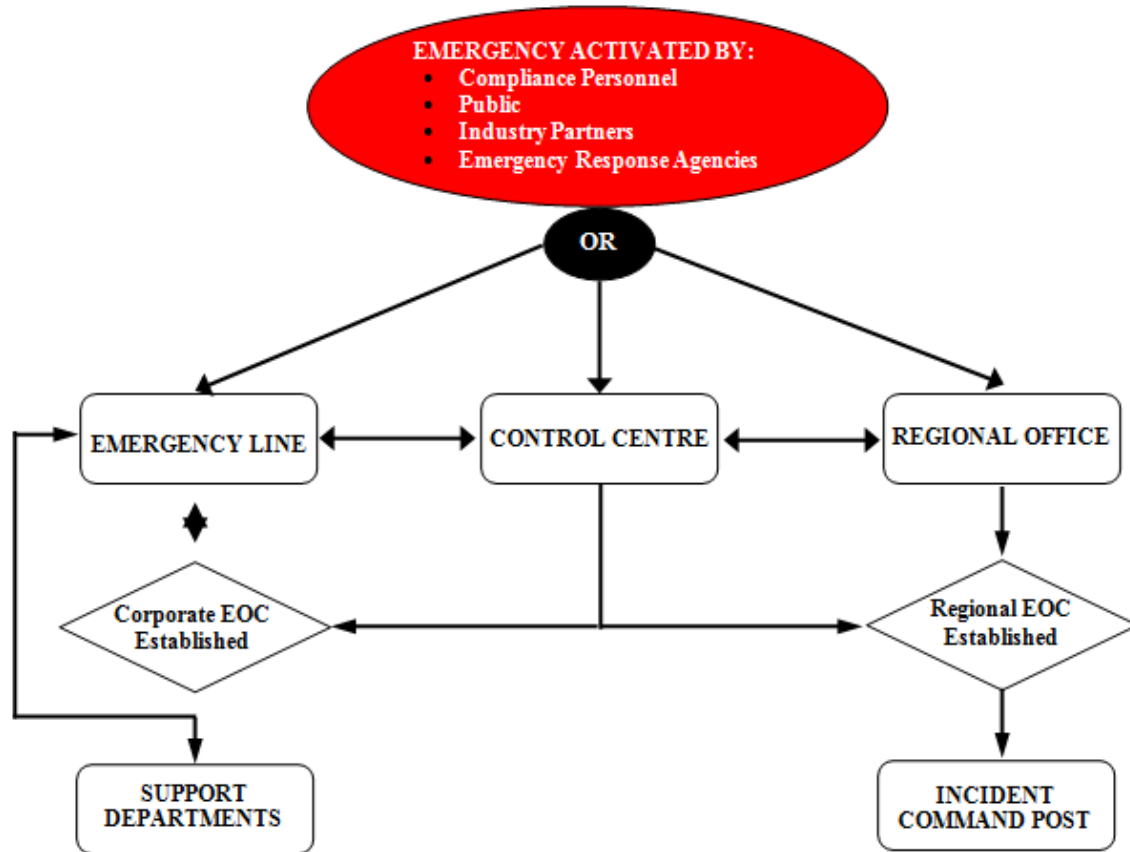


FIGURE 2.2

INTERNAL NOTIFICATION REFERENCES

CORPORATE RESPONSE PERSONNEL / OTHER COMPANY CONTACTS					
INTERNAL NOTIFICATIONS					
POSITION/TITLE	NAME	OFFICE	HOME	CELL	PAGER

Hardisty Pump Station/ Regina Pump Station					
POSITION/TITLE	NAME	OFFICE	HOME	CELL	PAGER
_____		_____	_____	_____	
_____	_____	_____	_____	_____	
		_____	_____	_____	
_____		_____	_____	_____	
_____		_____	_____	_____	
	_____	_____	_____	_____	
_____	_____	_____	_____	_____	

Regina Pump Station / Haskett Pump Station					
POSITION/TITLE	NAME	OFFICE	HOME	CELL	PAGER
_____	_____	_____	_____	_____	
_____		_____	_____	_____	
	_____	_____	_____	_____	
_____		_____	_____	_____	
	_____	_____	_____	_____	

North Dakota, South Dakota, Nebraska					
POSITION/TITLE	NAME	OFFICE	HOME	CELL	PAGER
_____	_____	_____		_____	

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Kansas, Missouri, Illinois

POSITION/TITLE	NAME	OFFICE	HOME	CELL	PAGER
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Cushing Extension

POSITION/TITLE	NAME	OFFICE	HOME	CELL	PAGER
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

2.2 EXTERNAL NOTIFICATIONS

External notifications are those made to entities outside of the Company including Federal, Province/State and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements.

Verbal Notification Requirements

Immediate internal notification is to be made in accordance with the Internal Notification Procedures found in Section 2.1 when a system operational failure or other type of incident occurs. This will allow immediate evaluation and classification of incidents and prompt immediate telephonic notification as detailed in Figure 2.4 and 2.5 to the Transportation Safety Board, National Response Center (NRC), Province/State agencies, local agencies, and other Federal agencies as required. The information found on the Notification Data Sheet, Figure 2.3, should be used to disseminate incident information to the appropriate agencies.

For the purpose of this procedure, immediate reporting means reporting the instant a person has knowledge of an actual or suspected leak, uncontrolled release of product, any unplanned spill or other pipeline system failure. Information that causes any employee to reasonably suspect a leak or uncontrolled release of product must be immediately reported, even when the actual existence or location of a leak or release cannot yet be confirmed.

Written Notification Requirements

In the United States, a written report is to be filed as soon as practical, but not later than 30 days after discovery of the incident to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, US Department of Transportation. Information concerning the event shall be reported on Pipeline and Hazardous Materials Safety Administration Form 7000-1 on-line on the Pipeline and Hazardous Materials Safety Administration website via log-in. Paper reports are not required. This report is to be filed for all incidents reported telephonically and other incidents required to be reported in accordance with the criteria listed below.

The information required for completing the 30-day written report will be furnished by the Area Offices to the Department of Transportation Regulatory Compliance Department for submission to the Department of Transportation. Any subsequent or additional information that was not reported on the initial written report must be reported to the Department of Transportation Regulatory Compliance Department by the Area Office. This information will be utilized in filing a supplemental written report to the Department of Transportation as soon as possible, but no later than 30 days after its discovery.

In Canada, a detailed written incident report is required as soon as practicable.

Transportation Safety Board (TSB)

The TSB's role is to advance transportation safety through the investigation of transportation occurrences in the marine, pipeline, rail and aviation modes.

TSB Classification System

The primary criterion for determining if an occurrence in any mode will be investigated is whether or not such analysis is likely to lead to a reduction of risk to persons, property, or the environment.

Class 1 Occurrences (Public Inquiry)

- the potential for reducing the risk to persons, property, or the environment;
- whether an inquiry would uncover facts that might not otherwise be made known;
- whether an inquiry would result in quicker remedial action;
- the actual or potential extent of injuries and/or loss of life;

- the degree of public interest in and concern about public safety; or
- the possible involvement of an arm of government.

Class 2 Occurrence (Individual Occurrence Investigation)

- there is a high probability of advancing Canadian transportation safety in that there is significant potential for reducing the risk to persons, property, or the environment; or
- the Governor in Council so requests (pursuant to Section 14(1) of the CTAISB Act).

Class 3 Occurrences (Individual Occurrence Investigation)

- there is significant public expectation that the TSB should independently make findings as to cause(s) and contributing factors; or
- there is potential for better understanding the latent unsafe conditions contributing to a significant safety issue; or
- a government representative so requests (pursuant to Section 14(2) of the CTAISB Act); or
- the Board must do so to meet its obligations or commitments.

Class 4 Occurrences (Safety Issue Investigation)

Multiple occurrences, which the Board deems to be indicative of significant unsafe situations or conditions, will be subject to a safety issue investigation when:

- there is a high probability of advancing Canadian transportation safety by reducing the risk to persons, property, or the environment; or
- in the Board's opinion, there is widespread public expectation that the TSB should independently analyze a particular safety issue.

Class 5 Occurrences (Data Collection)

Data pertaining to occurrences that do not meet the criteria of classes 1 through 4 will be recorded in suitable scope and detail for possible safety analysis, statistical reporting, or archival purposes.

National Energy Board (NEB)

The NEB's role and responsibilities generally includes:

- The NEB's top priority in any emergency is to make sure that people are safe and secure, and that property and the environment are protected. Any time there is a serious incident, the NEB Inspectors may attend the site to oversee a company's immediate response. The NEB will require that all reasonable actions are taken to protect employees, the public and the environment. Further, the NEB will verify that the regulated company conducts adequate and appropriate clean-up and remediation of any environmental effects caused by the incident.

And/or

As lead regulatory agency, the NEB:

- Monitors, observes and assesses the overall effectiveness of the company's emergency response in terms of:
 - Emergency Management
 - Safety
 - Security
 - Environment
 - Integrity of operations and facilities; and
 - Energy Supply.

- Investigates the event, either in cooperation with the Transportation Safety Board of Canada, under the Canada Labour Code, or as per the National Energy Board Act or Canada Oil & Gas Operations Act (whichever is applicable)
- Inspects the pipeline or facility
- Examines the integrity of the pipeline or facility
- Requires appropriate repair methods are being used
- Requires appropriate environmental remediation of contaminated areas is conducted
- Coordinates stakeholder and Aboriginal community feedback regarding environmental clean-up and remediation
- Confirms that a company is following its Emergency Procedures Manual(s) commitments, plans, procedures, and NEB regulations and identifies non-compliances
- Initiates enforcement actions as required
- Approves the restart of the pipeline.

Transportation Safety Board of Canada Pipeline Occurrence Reporting	
Citation	Description
Extracts from Transportation Safety Board Regulations Sections 5(1) and 5 (5)	When a reportable pipeline accident or incident takes place, the operator and any employee of the operator having direct knowledge of the accident or incident shall report to the Board as soon as possible and by the quickest means available. Where any person mentioned above makes a report, no other person referred to is required to make such a report.
Transportation Safety Board Regulations Section 2(1)	A "reportable pipeline accident" is an accident resulting directly from the operation of a pipeline, where <ul style="list-style-type: none"> (a) a person sustains a serious injury or is killed as a result of being exposed to <ul style="list-style-type: none"> i. a fire, ignition or explosion, or ii. a commonly released from the pipeline, or (b) the pipeline <ul style="list-style-type: none"> i. sustains damage affecting the safe operation of the pipeline as a result of being contacted by another object or as a result of a disturbance of its supporting environment, ii. causes or sustains an explosion, or a fire or ignition that is not associated with normal operating circumstances, or iii. sustains damage resulting in the release of any commodity.
Transportation Safety Board Regulations Section 2(1)	A "reportable pipeline incident" means an incident resulting directly from the operation of a pipeline where <ul style="list-style-type: none"> (a) an uncontained and uncontrolled release of a commodity occurs, (b) the pipeline is operated beyond design limits, (c) the pipeline causes an obstruction to a ship or to a surface vehicle owing to a disturbance of its supporting environment, (d) any abnormality reduces the structural integrity of the pipeline below design limits, (e) any activity in the immediate vicinity of the pipeline poses a threat to the structural integrity of the pipeline, or (f) the pipeline, or a portion thereof, sustains a precautionary or emergency shut-down for reasons that relate to or create a hazard to the safe transportation of a commodity.

NOTE: Refer to Figure 2.5 for any additional Province/State written reporting requirements.

FIGURE 2.3

NOTIFICATION DATA SHEET		
Date: _____	Time: _____	
INCIDENT DESCRIPTION		
Reporter's Full Name: _____	Position: _____	
Day Phone Number: _____	Evening Phone Number: _____	
Company: _____	Organization Type: _____	
Facility Address: _____ _____	Owner's Address: _____ _____	
Facility Latitude: _____	Facility Longitude: _____	
Spill Location: _____ <i>(if not at Facility)</i>		
Responsible Party's Name: _____		Phone Number: _____
Responsible Party's Address: _____		
Source and/or cause of discharge: _____ _____		
Nearest City: _____		
County: _____	State: _____	Zip Code: _____
Section: _____	Township: _____	Range: _____
Distance from City: _____		Direction from City: _____
Container Type: _____		Container Storage Capacity: _____
Facility Oil Storage Capacity: _____		
Material: _____		
Total Quantity Released	Water Impact (YES or NO)	Quantity into Water
RESPONSE ACTION(S)		
Action(s) taken to Correct, Control, or Mitigate Incident: _____ _____		
Number of Injuries: _____		Number of Deaths: _____
Evacuation(s): _____		Number Evacuated: _____
Damage Estimate: _____		
More information about impacted medium: _____ _____		
Possible hazards to human health or the environment outside of the Facility: _____ _____		
CALLER NOTIFICATIONS		
National Response Center (NRC): 1-800-424-8802		Transportation Safety Board: 819-997-7887
Additional Notifications (Circle all applicable): USCG NEP EPA Province State Other		
National Response Center Incident Assigned No. _____		
ADDITIONAL INFORMATION		
Any information about the incident not recorded elsewhere in this report including estimated quantity and disposition of recovered material: _____ _____		
NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.		

FIGURE 2.4
EXTERNAL NOTIFICATION FLOWCHART

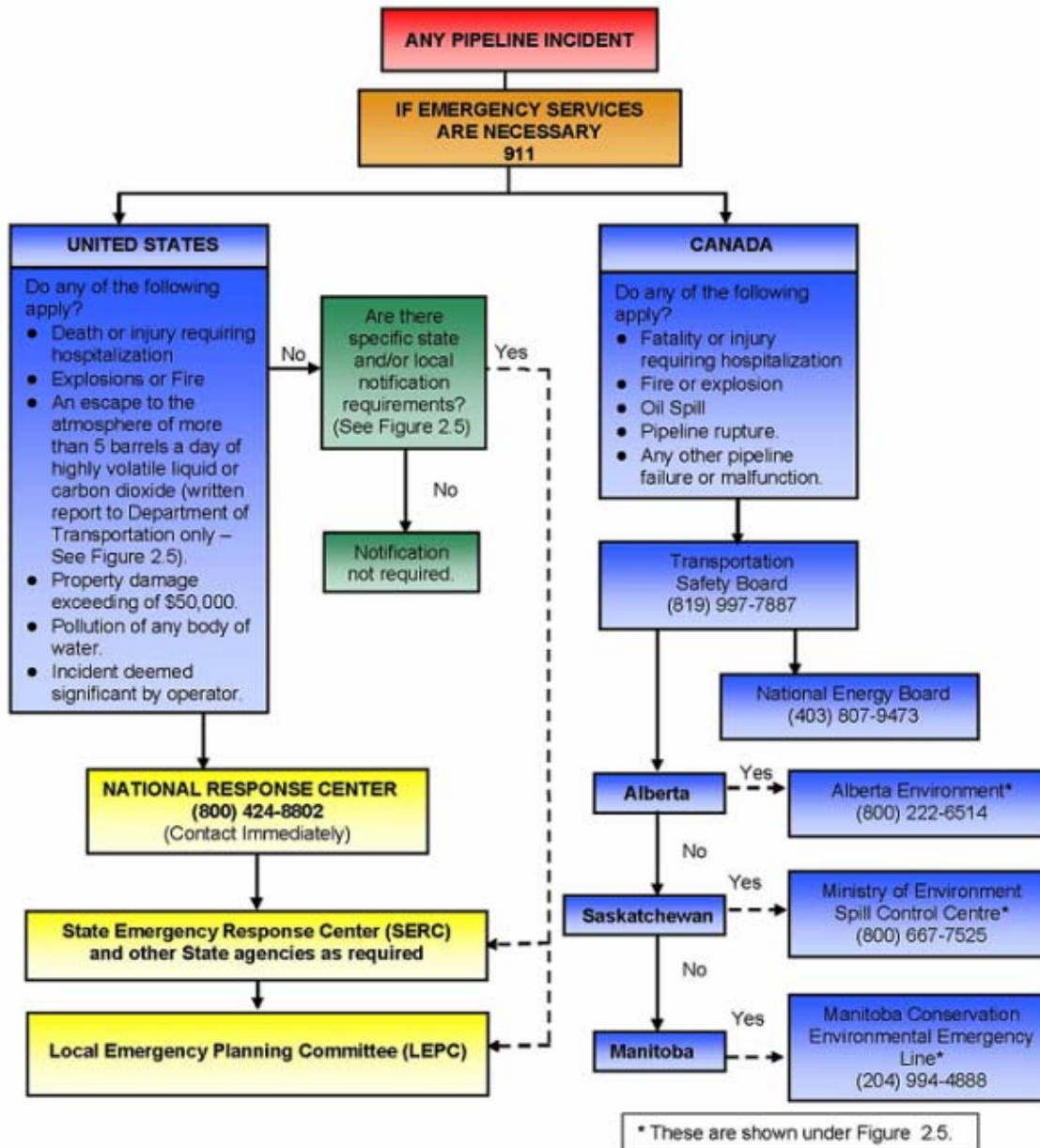


FIGURE 2.5
EXTERNAL NOTIFICATION REFERENCES

REQUIRED NOTIFICATIONS	
National Response Center (NRC) c/o United States Coast Guard (CG-5335) - Stop 7581, 2100 2nd Street, SW Washington, District Of Columbia 20593-0001	(800) 424-8802 (202) 267-2675
REPORTING REQUIREMENTS	
TYPE: Any discharge or sighting of oil on navigable waters.	
VERBAL: Immediate notification required (within 2 hours).	
WRITTEN: If an RQ limit is reached, refer to state requirements for written report requirements.	
NOTE: A call to the NRC must also be made for spills or releases of hazardous substances that meet or exceed their RQ.	
Office of Pipeline Safety and Hazardous Materials U.S. Department of Transportation 1200 New Jersey Avenue SE-E-22-321 Washington, District Of Columbia 20590	(202) 366-4000
REPORTING REQUIREMENTS	
TYPE: In addition to the reporting of accidents to the NRC as noted below, a written accident report PHMSA Form 7000-1.	
VERBAL: Call to the NRC meets the required verbal notification under DOT reporting requirement.	
WRITTEN: Reported on PHMSA Form 7000-1 no later than 30 days, submit a report resulting from explosion/ fire/ hospitalization, death, property damage greater than \$50,000, or above reportable quantity.	
NOTE:	
Saskatchewan Environment and Resource Management Box 3003, 800 Central Avenue. Prince Albert, Saskatchewan S5V 6G1	(800) 667-7525
REPORTING REQUIREMENTS	
TYPE: Any oil spill to water or oil spill greater than or equal to 50 L. to land.	
VERBAL: Immediately	
WRITTEN: Within 7 days.	
NOTE:	
Transportation Safety Board (TSB) of Canada 200 Promenade du Portage, Place du Centre, 4th Floor Gatineau, Quebec 1K8	(819) 997-7887 (800) 387-3557
REPORTING REQUIREMENTS	
TYPE: All pipeline accidents with fatality or serious injury, fire or explosion, oil spill, pipeline rupture or any other pipeline failure or malfunction.	
VERBAL: Immediately.	
WRITTEN: Within 30 days.	
NOTE:	

Alberta Environment 9915 -108 Street 10th Floor, Petroleum Plaza South Tower Edmonton, Alberta T5K 2G8	(800) 222-6514
REPORTING REQUIREMENTS	
TYPE: All spills to water or exceeds a reportable quantity or emission level.	
VERBAL: Immediately.	
WRITTEN: Within 7 days.	
NOTE:	
Canadian National Energy Board (CA NEB) 444 Seventh Avenue SW Calgary, Alberta T2P 0X8	(403) 807-9473 (800) 899-1265
REPORTING REQUIREMENTS	
TYPE: All pipeline incidents with fatality or serious injury, fire or explosion, oil spill or hydrocarbon release, or any operation beyond the design limits of the pipeline.	
VERBAL: Immediately.	
WRITTEN: As requested by the Agency.	
NOTE: For further definition of Incident see Glossary.	
Manitoba Water Stewardship Manitoba Water Stewardship Box 11 200 Saulteaux Crescent Winnipeg, Manitoba R3J 3W3	1-866-626-4862 1-204-945-6398
REPORTING REQUIREMENTS	
TYPE:	
VERBAL:	
WRITTEN:	
NOTE:	
Manitoba Conservation Environmental Emergency Line Winnipeg, Manitoba	(204) 994-4888
REPORTING REQUIREMENTS	
TYPE: All spills or discharges.	
VERBAL: Immediately.	
WRITTEN: As requested by the Agency.	
NOTE:	
South Dakota Department of Environment and Natural PMB 2020 Joe Foss Building, 523 East Capitol Pierre, South Dakota 57501-3182	(605) 773-3296 (605) 773-3231
REPORTING REQUIREMENTS	
TYPE: All spills or discharges	
VERBAL: Immediately.	
WRITTEN: As requested by the Agency.	
NOTE:	

U.S. Environmental Protection Agency, Region 8 999 18th Street Suite 500 Denver, Colorado 80202-246	(303) 312-6312
REPORTING REQUIREMENTS	
TYPE: Immediately for spills that impact or threaten navigable water or adjoining shoreline.	
VERBAL: Notification to the EPA is typically accomplished by the call to the NRC.	
WRITTEN: In accordance with the applicable SPCC regulations, within 60 days for a spill in excess of 1,000 gallons (24 Bbls) in a single event or two spill events within a twelve month period into or upon nav	
NOTE: In accordance with the applicable SPCC regulations, within 60 days for a spill in excess of 1,000 gallons (24 Bbls) in a single event or two spill events within a twelve month period into or upon nav	
Department of Environmental Quality 1200 N Street Suite 400 / PO Box 98922 Lincoln, Nebraska 68509-8922	(402) 471-2186 (402) 471-4545
REPORTING REQUIREMENTS	
TYPE: Any Discharge that leaves the Facility or threatens to impact navigable waters.	
VERBAL: Immediately, but not longer than 30 minutes.	
WRITTEN: As Requested by the Agency	
NOTE:	
Department of Natural Resources Nebraska	(308) 697-3730
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
Environmental Health Sect, Div. of Water Quality North Dakota	(701) 328-5210
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
Game & Fish, Conservation and Communication Div North Dakota	(701) 328-6612 (701) 328-6300
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	

Game, Fish and Parks South Dakota	(605) 223-7660
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
Nebraska Emergency Management Agency Lincoln, Nebraska	(402) 499-1219
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
North Dakota Dept. of Health-Environmental Health 918 East Divide Avenue Bismarck, North Dakota 58501-1947	(701) 328-5150 (701) 328-5210
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
Nebraska Game & Parks Commission Lincoln, Nebraska	(402) 471-5423 (402) 471-0641 (402) 271-5440
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
City of South Sioux Nebraska	(402) 494-7517 (402) 494-7500
REPORTING REQUIREMENTS	
TYPE:	
VERBAL: Courtesy Reporting	
WRITTEN:	
NOTE:	
North Dakota Division of Emergency Management PO Box 5511 Bismarck, North Dakota 58506-5511	(701) 328-8100
REPORTING REQUIREMENTS	

TYPE: Any spill or discharge above RQ.
 VERBAL: Immediately.
 WRITTEN: Within 30 days.
 NOTE:

North Dakota Industrial Commission State Capitol, 14th Floor, 600 E. Boulevard Ave., Dept 405 Bismarck, North Dakota 58505-0840	(701) 328-8020
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REPORTING REQUIREMENTS

TYPE:
 VERBAL: Courtesy Reporting
 WRITTEN:
 NOTE:

City of Fargo Fargo, North Dakota	(701) 241-1310
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REPORTING REQUIREMENTS

TYPE:
 VERBAL: Courtesy Reporting
 WRITTEN:
 NOTE:

Public Service Commission, Public Utilities Divisi North Dakota	(701) 328-4077
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REPORTING REQUIREMENTS

TYPE:
 VERBAL: Courtesy Reporting
 WRITTEN:
 NOTE:

South Dakota DENR, Div of Environmental Services 523 East Capitol Ave. Pierre, South Dakota 57501-3182	(605) 773-3296 (605) 773-3231
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REPORTING REQUIREMENTS

TYPE: Any Spill or discharge greater than reportable quantity.
 VERBAL: Immediately.
 WRITTEN: Within 30 days.
 NOTE:

South Dakota DENR, Division of Oil and Gas South Dakota	(605) 394-2229
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REPORTING REQUIREMENTS

TYPE:
 VERBAL: Courtesy Reporting
 WRITTEN:
 NOTE:

South Dakota Department of Environment and Natural South Dakota	(605) 773-6035
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
South Dakota Department of Transportation, RR South Dakota	(605) 773-3046 (605) 773-3921
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
South Dakota Department of Transportation, ROW South Dakota	(605) 773-3710 (605) 773-4249
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
South Dakota Office of Emergency Management South Dakota	(605) 773-3231
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
South Dakota Public Utilities Commission South Dakota	(605) 773-3201
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
Tri-County Water District North Dakota	(701) 345-8240
REPORTING REQUIREMENTS	

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Environmental Protection Agency - IL Office
Illinois

(217) 524-3908

(217) 785-9250

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

U.S. Environmental Protection Agency, Region 5
77 W. Jackson Blvd., 5th Floor
Chicago, Illinois 60604

(312) 353-2318

(312) 353-2000

REPORTING REQUIREMENTS

TYPE: Any oil discharge that has impacted or threatens to impact navigable waters or release of hazardous substances in an amount equal or greater than the reportable quantity.

VERBAL: Notification to the EPA is typically accomplished by the call to the NRC.

WRITTEN: For oil discharge within 60 days, in accordance with applicable SPCC RQ.

NOTE:

City of Troy
Troy, Missouri

(636) 528-4712 x.227

(636) 528-7562

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

DeKalb County PWSD No 1
Missouri

(816) 393-5311

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Douglas County Commission
Missouri

(417) 683-4714

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Hickory County Commission Missouri	(417) 745-6450
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
Illinois Department of Natural Resources (IDNR) 1 Natural Resources Way Springfield, Illinois 62702	(618) 462-1181 (Region 4) (217) 782-6302 (State of IL)
REPORTING REQUIREMENTS TYPE: Wildlife Protection / Rehabilitation VERBAL: Courtesy Reporting WRITTEN: As the agency may request depending on circumstances. NOTE:	
Illinois Department of Transportation (IDOT) 2300 S. Dirksen Parkway Springfield, Illinois 62764	(217) 782-7820 (217) 782-2937
REPORTING REQUIREMENTS TYPE: All spills or discharges. VERBAL: Immediately. WRITTEN: As requested by the Agency. NOTE: As requested by the Agency.	
Illinois Emergency Management Agency (SERC) 2200 South Dirksen Parkway Springfield, Illinois 62703	(800) 782-7860 (217) 782-7860
REPORTING REQUIREMENTS TYPE: Any Discharge or sighting of oil, or hazardous substances exceeding a reportable quantity in Cook County, IL. VERBAL: Immediately. WRITTEN: As soon as practicable after the release. NOTE:	
Kansas Department of Health & Environment Curtis State Office Building 1000 SW Jackson Topeka, Kansas 66612	(785) 296-1679
REPORTING REQUIREMENTS TYPE: All Spills that impact soil, surface water or groundwater. VERBAL: Immediately, within one hour. WRITTEN: As requested by Agency. NOTE:	

Kansas Dept. of Transportation Dwight D. Eisenhower State Office Building, 700 S.W. Harrison Street Topeka, Kansas 66603-3754	(785) 296-3566
REPORTING REQUIREMENTS TYPE: All spills or discharges. VERBAL: Immediately. WRITTEN: As requested by the Agency. NOTE:	
Kansas Dept. of Wildlife and Parks Kansas	(620) 672-5911 (620) 672-0795
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
McDonald County Commission Missouri	(417) 223-4717
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
Missouri DNR, Environmental Improvement and Energy PO Box 176 Jefferson City, Missouri 65102	(573) 751-4919
REPORTING REQUIREMENTS TYPE: Any Spill or discharge that meets or exceeds the Federal reportable quantity. VERBAL: Immediately, within 30 minutes WRITTEN: As requested by Agency. NOTE:	
Missouri U.S. Fish and Wildlife Service Columbia, Missouri	(573) 234-2132
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
New Madrid County Commission New Madrid, Missouri	(573) 748-2524

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Nodaway County Commission
Maryville, Missouri

(660) 582-2251

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Pike County Commission
Missouri

(573) 324-2412

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Polk County Commission
Missouri

(417) 326-4031

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

Taney County
Missouri

(417) 546-7200

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

U.S. Army Corps of Engineers, Missouri Office
Missouri

(573) 634-5667

REPORTING REQUIREMENTS

TYPE:

VERBAL: Courtesy Reporting

WRITTEN:

NOTE:

U.S. Corps of Engineers - Illinois Illinois	(309) 794-5351
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
Vernon County Commission Missouri	(417) 448-2500
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
Oklahoma Department of Environmental Quality 707 N Robinson Oklahoma City, Oklahoma 73102	(405) 702-1000
REPORTING REQUIREMENTS TYPE: VERBAL: Courtesy Reporting WRITTEN: NOTE:	
U.S. Environmental Protection Agency, Region 6 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202	(214) 665-6595 (866) 372-7745
REPORTING REQUIREMENTS TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Notification to the EPA is typically accomplished by the call to the NRC. WRITTEN: As the agency may request depending on circumstances. NOTE: N/A	

ADDITIONAL RESPONSE RESOURCES		
Planning and Incident Support		
COMPANY	LOCATION	TELEPHONE
National Response Corporation	3500 Sunrise Hwy Ste. T103 Great River, New York 11739	(800) 899-4672
O'Brien's Response Management Inc.	Slidell, Louisiana	(985) 781-0804
ENSR	Fort Collins, Colorado	(800) 722-2440
Western Canadian Spill Services	Calgary, Alberta	(403) 250-9606
Saskatchewan Co-op Area 1 Chairman	Saskatchewan	(780) 573-7350
Saskatchewan Co-op Area 1 Alt. Chairman	Saskatchewan	(306) 387-6449
Saskatchewan Co-op Area 2 Chairman	Box 1132 Kindersley, Saskatchewan S0L 1S0	(306) 968-2503
Saskatchewan Co-op Area 2 Co-Chairman	Box 5 Coleville, Saskatchewan S0L 0K0	(306) 965-2731
Saskatchewan Co-op Area 2 Custodian	Saskatchewan	(306) 834-7898
Saskatchewan Co-op Area 3 Chairperson	Saskatchewan	(306) 773-0234
Saskatchewan Co-op Area 3 Secretary	Saskatchewan	(306) 773-9381
Saskatchewan Co-op Area 3 Custodian	Saskatchewan	(306) 672-3723
Saskatchewan Co-op Area 4&5 Chair	Saskatchewan	(306) 842-1818
Saskatchewan Co-op Area 4&5 Vice-Chair	Saskatchewan	(306) 842-3088
Saskatchewan Co-op Area 6 Call-out	Saskatchewan	(306) 791-5058
Aberdeen Flying Service	Aberdeen, South Dakota	(605) 225-1384
Advantage Flight Solutions	Reno, Nevada	(775) 852-3512
Aero Air, LLC	Hillsboro, Oregon	(503) 640-3711
Air Services Inc	Traverse City, Michigan	(888) 922-0406
Airwest Helicopters,	Glendale, Arizona	(623) 516-2790
American Jet Charter	Oklahoma City, Oklahoma	(405) 495-5453
Aviation Charter Inc	Duluth, Michigan	(800) 486-5387
Bemidji Aviation	Bimidji, Minnesota	(218) 751-1880
Blatti Aviation, Elwood, IL	Elwood, Illinois	(815) 423-5659
Brainerd Helicopter Service	Brainard, Minnesota	(218) 829-5484
Charter First	Marshall, Minnesota	(866) 776-6261
Concrod Helicopter Charters	Concord, New Hampshire	(800) 615-1655
Crow Executive Air	Millbury, Ohio	(800) 972-2769
Custom Air Charter	Greenville, Mississippi	(662) 334-6444
Duncan Aviation	Lincoln, Nebraska	(402) 475-2611
Elliott Aviation - Des Moines	Des Moines, Iowa	(800) 447-6711
Elliott Aviation - Moline	Moline, Illinois	(800) 447-6711
Encore FBO, Sioux Falls, SD	Sioux Falls, South Dakota	(800) 888-1646

Executive Air	Bismark, North Dakota	(701) 258-5024
Executive Aircraft Charter	Lafayette, Louisiana	(866) 343-9940
Fargo Jet Center	Fargo, North Dakota	(701) 235-3600
Felts Field Aviation	Spokane, Washington	(509) 535-9011
First Wing Executive Air	Indianapolis, Indiana	(317) 293-6935
Frontline Aviation	Green Bay, Wisconsin	(800) 379-3359
Helimotion, LLC	Joliet, Illinois	(815) 725-9300
Hillsboro Aviation	Hillsboro, Oregon	(503) 648-2831
JBH Helicopter Service	Pembroke, New Hampshire	(603) 225-3134
Jet Linx	Omaha, Nebraska	(402) 422-0393
Leading Edge Aviation	Bend, Oregon	(541) 383-8825
MaxAir Inc	Appleton, Wisconsin	(800) 833-1544
Midwest Corporate Aviation	Wichita, Kansas	(316) 636-9738
North Country Aviation	Gaylord, Michigan	(800) 959-1829
North Country Heliflite	North Clarendon, Vermont	(518) 361-1380
PHI Helicopters	Lafayette, Louisiana	(337) 235-2452
Rhineland Flying Service	Wausau, Wisconsin	(715) 365-3456
Sharkeys Helicopters	West Lebanon, New Hampshire	(603) 298-8728
Silver Hawk Aviation	Lincoln, Nebraska	(800) 479-5851
Tri State Aero	Evansville, Indiana	(800) 473-2904
Tulip City Air Service	Holland, Michigan	(800) 748-0515
Ultra Air, LLC	Omaha, Nebraska	(402) 345-7372
Vermont Helicopter Charters	Burlington, Vermont	(866) 224-8830
Worcester Helicopter Charters	Worcester, Massachusetts	(800) 226-1116
Quantam Murray	100-3600 Viking Way Richmond, B.C., V6V1N6	1-877-378-7745
Alberta Coop Area 2U Custodian	Hardisty, Alberta	(780) 888-3845
Albert Coop Area 1S Regional Custodian	Lethbridge, Alberta	(403) 329-0427
Alberta Coop Area 1S Equip. Custodian	Brooks, Alberta	(403) 362-6551
Quantam Murray	100-3600 Viking Way Richmond, B.C., V6V1N6	1-877-378-7745
Euroway Industrial Svc Co. Ltd	Winnipeg, Manitoba	(204) 661-0500

FIGURE 2.6
POSSIBLE COMMAND POST LOCATIONS

TRANSCANADA COMMAND POSTS			
Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Hardisty PS/Lakesend PS	R&R Hotel 4744-49th Street Hardisty, Alberta Canada Box 251 Hardisty AB TOB 1VO	(780) 888-0004	Meeting Room Accomodates 40 people
Lakesend PS/Monitor PS	La Biche Inn PO Box 321 Lac La Biche, AB T0A 2C0, Canada	(780) 623-4427	Meeting Room accommodates 30 people
Monitor PS/Oyen PS	Super 8 - Provost 3611 57th Avenue Provost, AB T0B 3S0, Canada	(780) 753-2255	Meeting Room accommodates 55 people
Monitor PS/Oyen PS	Lucky Lake Hotel Main St Lucky Lake, SK S0L 1Z0, Canada	(306) 858-2008	Meeting Room accommodates 40 people
Oyen PS/Bindloss PS	None Available		
Bindloss PS/Cabri PS	Super 8 Motel Junction of Hwy 9 & 41 Oyen, AB T0J 2J0, Canada	(403) 664-3010	Meeting Room accommodates 65 people
Bindloss PS/Cabri PS	Swift Current Travelodge 605 North Service Road, East Swift Current, SK S9H 3T8, Canada	(306) 773-3101	Meeting Room accommodates 20 people
Cabri PS/Herbert PS	Super 8 Motel 405n Service Rd E Swift Current, SK S9H 0A1, Canada	(306) 778-6088	Meeting Room accommodates 20 people
Cabri PS/Herbert PS	Best Western Inn 105 George St W Swift Current, SK S9H 0K4, Canada	(306) 773-4660	Meeting Room accommodates 35 people
Herbert PS/Caron PS	Howard Johnson Inn - Swift Current 1150 South Service Road East Swift Current, SK S9H 3X6, Canada	(306) 773-2033	Meeting Room accommodates 55 people
Herbert PS/Caron PS	Days Inn Hwy 1 E Swift Current, SK S9H 3X6, Canada	(306) 773-4643	Meeting Room accommodates 250 people
	Comfort Inn & Suites		

Caron PS/Regina PS	155 Thatcher Drive W. Moose Jaw, SK S6J 1M1, Canada	(306) 692-2100	Meeting Room accommodates 40 people
Caron PS/Regina PS	Hotel Saskatchewan Radisson Plaza 2125 Victoria Avenue Regina, SK S4P 0S3, Canada	(306) 522-7691	Meeting Room accommodates 100-800 people

TRANSCANADA COMMAND POSTS (Cont'd)			
Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Regina PS/Kendal PS	Best Western 7 Oaks Inn 777 Albert St Regina, SK S4R 2P6, Canada"	(306) 757-0121	Meeting Room accommodates 150 people
Regina PS/Kendal PS	Holiday Inn Express Hotel & Suites Regina 1907 11th Avenue Regina, SK S4P 0J2, Canada"	(877) 863-4780	Meeting Room accommodates 50 people
Kendal PS/Grenfell PS	The Prince William Suites Hotel Box 1030 21 Mall Road, Melville, SK S0A 2P0, Canada	(306) 728-4546	Meeting Room accommodates 300 people
Kendal PS/Grenfell PS	Holiday Inn Hotel & Suites Regina 1800 Prince Of Wales Drive Regina, SK S4Z 1A4, Canada	(877) 863-4780	Meeting Room accommodates 80 people
Grenfell PS/Moosomin PS	Katepwa Beach Resort Hotel Lebret, SK S0G 2Y0 Canada	(306) 332-4696	Meeting Room accommodates 30 people
Grenfell PS/Moosomin PS	Whitewood Inn Hwy 1 & 9 Whitewood, SK S0G 5C0, Canada	(306) 735-2651	Meeting Room accommodates 250 people
Moosomin PS/Rapid City PS	The Russell Inn Hwy 16 & 83 MB R0J 1W0, Canada	(204) 773-2186	Meeting Room accommodates 150 people
Moosomin PS/Rapid City PS	Royal Oak Inn & Suites Brandon 3130 Victoria Avenue Brandon, MB R7B 0N2, Canada	(204) 728-5775	Meeting Room accommodates 50 people
Rapid PS/Portage La Prairie PS	Canadian Inn 150 5th Street Brandon, MB R7A 3K4, Canada	(204) 727-6404	Meeting Room accommodates 200 people
Rapid PS/Portage La Prairie PS	Super 8 Portage La Prairie MB Saskatchewan Avenue West Portage la Prairie, MB R1N, Canada	(204) 857-8883	Meeting Room accommodates 20 people
Portage La Prairie PS/Carman PS	Days Inn Highway 1 Quill Trail Portage la Prairie, MB R1N 3C3, Canada	(204) 857-9791	Meeting Room accommodates 50 people
Portage La Prairie PS/Carman PS	Days Inn & Suites-Winkler 395 Boundary Trail Winkler, MB R6W 4B1, Canada	(204) 325-8888	Meeting Room accommodates 40 people
Carman PS/Haskett PS	Super 8 Motel 400 Main St S MB R0G 1K0, Canada	(204) 746-6879	Meeting Room accommodates 30 people

TRANSCANADA COMMAND POSTS (Cont'd)			
Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Carman PS/Haskett PS	Heartland Inn 851 Main St Winkler, MB R6W 2L8, Canada	(204) 325-4381	Meeting Room accommodates 300 people
Haskett PS/Edinburg PS	Holiday Mountain Ski Resort & Golf Course Holiday Mountain La Riviere, MB R0G 1A0, Canada	(204) 242-2172	Meeting Room accommodates 70 people
Haskett PS/Edinburg PS	Cedar Inn Steak House & Motel 502 Division Ave S Cavalier, ND 58220	(701) 265-8341	Meeting Room accommodates 50 people
Edinburg PS/Niagara PS	Forestwood Inn 504 Sunset Ave Walhalla, ND 58282	(701) 549-2651	Meeting Room accommodates 30 people
Niagara PS/Luverne PS	Holiday Inn Express Hotel & Suites Grand Forks 4051 32nd Ave South Grand Forks, ND 58201	(877) 863-4780/ (701) 772-7700	Meeting Room accommodates 30 people
Niagara PS/Luverne PS	Quality Inn & Suites 507 25th St. SW Jamestown, ND 58401	(701) 252-3611	Meeting Room accommodates 325 people
Luverne PS/Fort Ransom PS	Governors Inn & Conference Center 2050 Governors Dr Casselton, ND 58012	(701) 347-4524	Meeting Room accommodates 450 people
Luverne PS/Fort Ransom PS	America Inn 280 Wintershow Rd SW Valley City, ND 58072	(701) 845-5551	Meeting Room accommodates 60 people
Fort Ransom PS/Ludden PS	Holiday Inn Express Jamestown 803 20th St. S.W. Jamestown, ND 58401	(701) 251-2131	Meeting Room accommodates 25 people
Fort Ransom PS/Ludden PS	Ramada Aberdeen 2727 6th Avenue SE Aberdeen, SD 57401	(605) 225-3600	Meeting Room accommodates 25 people
Ludden PS/Ferney PS	Best Western-Ramkota Hotel 1400 8th Ave NW Aberdeen, SD 57401-2602	(605) 229-4040	Meeting Room accommodates 150 people
Ludden PS/Ferney PS	Ramada 2727 6th Ave SE Aberdeen, SD 57401 US	605-225-3600	Meeting Room accommodates 400 people
Ferney PS/Carpenter PS	Holiday Inn Express Hotel & Suites Aberdeen 1330-1399 7th Ave SE Aberdeen, SD 57401	(877) 863-4780/ (605) 725-4000	Meeting Room accommodates 100 people

TRANSCANADA COMMAND POSTS (Cont'd)			
Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Ferney PS/Carpenter PS	Country Inn Suites Watertown Reviews 100 S Maple Watertown, SD 57201	(605) 886-8900	Meeting Room accommodates 70 people
Carpenter PS/Roswell PS	Best Western Of Huron 2000 Dakota Ave S Huron, SD 57350-4027	(605) 352-2000	Meeting Room accommodates 50 people
Carpenter PS/Roswell PS	Super Deluxe Inn & Suites 288 US Highway 14 W De Smet, SD 57231	(605) 854-9388	Meeting Room accommodates 100 people
Roswell PS/Freeman PS	Days Inn Mitchell 1506 South Burr St. Mitchell, SD 57301	(605) 996-6208	Meeting Room accommodates 50 people
Roswell PS/Freeman PS	Best Western Ramkota Hotel Sioux Falls 3200 West Maple Street Sioux Falls, SD 57107	(605) 336-0650	Meeting Room accommodates 700-1500 people
Freeman PS/Hartington PS	Cameron Inn 131 E Main St Canistota, SD 57012	(605) 296-3555	Meeting Room accommodates 25 people
Freeman PS/Hartington PS	Best Western Kelly Inn 1607 East Highway 50 Route Yankton, SD 57078	(605) 665-2906	Meeting Room accommodates 125 people
Hartington PS/Stanton PS	Holiday Inn Express Hotel & Suites Vermillion 1200 N. Dakota St. Vermillion, SD 57069	(877) 863-4780/ (605) 624-7600	Meeting Room accommodates 100 people
Hartington PS/Stanton PS	Holiday Inn Express Hotel & Suites Norfolk 920 South 20th Street Norfolk, NE 68701	(877) 863-4780/ (402) 379-1524	Meeting Room accommodates 200 people
Stanton PS/David City PS	New World Inn & Conference Center 265 33rd Ave Columbus, NE 68601	(402) 564-1492	Meeting Room accommodates 1000 people
Stanton PS/David City PS	Holiday Inn Express Hotel & Suites Columbus 524 E 23rd St Columbus, NE 68601	(877) 863-4780/ (402) 564-2566	Meeting Room accommodates 200 people
David City PS/Wilber PS	Sleep Inn & Suites 303 23rd St Columbus, NE 68601	(402) 562-5200	Meeting Room accommodates 35 people
David City PS/Wilber PS	Holiday Inn Lincoln-Downtown 141 N. 9th St. Lincoln, NE 68508	(877) 863-4780/ (402) 475-4011	Meeting Room accommodates 500-1000 people

TRANSCANADA COMMAND POSTS (Cont'd)			
Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Wilbur PS/Steele City PS	Embassy Suites Hotel Lincoln 1040 P Street Lincoln, NE 68508	(402) 474-1111	Meeting Room accommodates 500-1000 people
Wilbur PS/Steele City PS	Hotel Wilber 203 S Wilson St Wilber, NE 68465	(402) 821-2020	Meeting Room accommodates 30 people
Steele City (to State Line)	Travelers Lodge 3500 North 6th Street Beatrice, NE 68310	(402) 223-4074	Meeting Room accommodates 30 people
Steele City (to State Line)	Holiday Inn Express Hotel & Suites Beatrice 4005 N 6th Street Beatrice, NE 68310	(402) 228-7000	Meeting Room accommodates 350 people
State Line to Seneca	Hiawatha Lodge 101 Lodge Rd Hiawatha, KS 66434	(785) 742-7401	Meeting Room accommodates 50 people
State Line to Seneca	Oak Tree Inn 1127 Pony Express Hwy # A Marysville, KS 66508	(785) 562-1234	Meeting Room accommodates 40 people
Seneca PS/Severance PS	Marysville Surf Motel 2105 Center Street Marysville, KS 66508	(785) 562-2354	Meeting Room accommodates 30 people
Seneca PS/Severance PS	Big Lake Resort Big Lake State Park 200 Lake Shore Drive Big Lake, MO 64437-4477	(660) 442-5432	Meeting Room accommodates 35, can use dining hall which adds an additional 100 people
Severance PS/Turney PS	Days Inn - St. Joseph 4312 Frederick Ave. Saint Joseph, MO 64506	(816) 279-1671	Meeting Room accommodates 40 people
Severance PS/Turney PS	Crowne Plaza Hotel Kansas City Downtown 1301 Wyandotte St. Kansas City, MO 64105	(888) 444-0401/ (816) 474-6664	Meeting Room accommodates 200-250 people
Turney PS/Tina PS	Radisson Hotel Kansas City Airport 11828 NW Plaza Cir Kansas City, MO 64153	(816) 464-2423	Meeting Rooms accommodates 200 people
Turney PS/Tina PS	Comfort Inn 1803 Comfort Lane Cameron, MO 64429	(816) 632-5655	Meeting Room accommodates 30 people
Tina PS/Salisbury PS	Comfort Inn Marshall Station 1356 W. College Ave. Marshall, MO 65340	(660) 886-8080	Meeting Room accommodates 25 people

TRANSCANADA COMMAND POSTS (Cont'd)			
Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Tina PS/Salisbury PS	Holiday Inn Express Hotel & Suites 1801 West Outer Road Moberly, MO 65270	(877) 863-4780/ (660) 269-9700	Meeting Room accommodates 30 people
Salisbury PS/Centralia PS	Country Inns & Suites 817 N Keene St Columbia, MO 65201	(573) 445-8585	Meeting Room accommodates 50 people
Centralia PS/Middletown PS	Holiday Inn - Wentzville 1175 Technology Drive O'Fallon, MO 63368	(636) 300-4844	5 Meeting Rooms accommodates 10-250 people
Centralia PS/Middletown PS	Days Inn Conference Center Columbia 1900 I-70 Drive SW Columbia, MO 65203	573-445-8511	Accommodates 400 people
Middletown PS/Saint Paul PS	Comfort Inn 425 E. Veterans Memorial Pkw Warrenton, MO 63383	(636) 456-6000	Meeting Room accommodates 25 people
Middletown PS/Saint Paul PS	Comfort Inn & Suites - O'Fallon/St Charles 100 Comfort Inn Court O'Fallon, MO 63366	(636) 696-8000	Meeting Room accommodates 35 people
Saint Paul PS/Hartford PS	Holiday Inn Express St. Louis Airport - Riverport 13735 Riverport Drive St. Louis, MO 63043	(314) 298 3400	Meeting 120 Classroom Style
Saint Paul PS/Hartford PS	Best Western Airport Plaza Inn & Conf. Center 4530 N. Lindbergh Blvd. Bridgeton, MO 63044	314-731-3800	Accommodates 300 people
Hartford PS/Pierron PS	Mariners Village Resort 1 Resort Dr Carlyle, IL 62231	618-594-7666	TBD
Hartford PS/Pierron PS	Holiday Inn Express Highland 20 Central Blvd. Highland, IL 62249	(877) 786-9480/ (618) 651-1100	TBD
Pierron PS/Patoka Terminal	Holiday Inn Express Hotel & Suites 21 Mattes Ave Vandalia, IL 62471	618-283-0010	Meeting Room
Pierron PS/Patoka Terminal	Ramada 2707 Veterans Ave. Vandalia, IL, 62471	618-283-1400	Meeting Room accommodates 30 people
Steel City PS/ Hope PS	Herington Inn & Suites 565 Highway 77 Herington, KS 67449	785-258-3300	Meeting Room accommodates 20 people

TRANSCANADA COMMAND POSTS (Cont'd)

Pump Station to Pump Station	Hotel Name	Contact Numbers	Accommodations
Steel City PS/ Hope PS	Holiday Inn Express Hotel & Suites 110 E. Lafayette Abilene, KS 67410	(877) 863 4780/ (325) 675-9800	Meeting Room accommodates 20 people
Hope PS/ Rock PS	Hampton Inn Derby 1701 Cambridge Street Derby, KS 67037	316-425-7900	Meeting Room accommodates 30 people
Hope PS/ Rock PS	Holiday Inn Express Hotel & Suites Andover East 54 Wichita 600 S Allen St. Andover, KS 67002	(877) 863-4780/ (316) 733-8833	Meeting Room accommodates 40 people
Rock PS/ Ponca City PS	Comfort Inn & Suites 3101 N. 14th Street Ponca City, OK 74604	(580) 765-2322	Meeting Room accommodates 30 people
Rock PS/ Ponca City PS	Holiday Inn Express Hotel & Suites Ponca City 2809 North 14th St. Ponca City, OK 74601	(877) 863-4780/ (580) 762-3700	Meeting Room accommodates 100 people
Noosomin PS/Rapid City PS	Canalta Hotel 405 Mtn. Street Moosomin, SK Canada	(306) 435-3044	Meeting Room Accomodates 40 ppl
Severence PS/Turney PS	Stoney Creek Inn 1201 North Woodbine Road St. Joseph, MO 64506	(816) 901-9600	TBD

3.0 RESPONSE ACTIONS

3.1 [Initial Response Actions](#)

[Figure 3.1 Spill Classification](#)

[Initial Response](#)

[Line Break Or Leak](#)

[Fire](#)

[Severe Thunderstorm/Flash Flooding/Landslide](#)

[Tornadoes](#)

[Earthquake](#)

[Winter Storm](#)

[Volcanic Eruptions](#)

[Bomb Threat](#)

[Release To Groundwater](#)

[Abnormal Operations](#)

3.2 [Documentation of initial Response Actions](#)

3.3 [Oil Containment, Recovery and Disposal/Waste Management](#)

[Figure 3.2 Product Specific Response Considerations](#)

3.4 [Storage/Disposal](#)

3.5 [Sampling and Waste Analysis Procedures](#)

3.6 [Safety Awareness](#)

3.7 [Emergency Medical Treatment and First Aid](#)

3.1 INITIAL RESPONSE ACTIONS

Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the Initial Response Team (described in Section 4.0) is formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

The pages that follow discuss initial response actions for a variety of emergencies that have the possibility of occurring. These emergencies are discussed in the order listed below:

- Initial Response
- Line Break or Leak
- Fire
- Severe Thunderstorm/Flash Flooding/Landslide
- Tornadoes
- Earthquake
- Winter Storm
- Volcanic Eruptions
- Bomb Threat
- Release to Groundwater
- Abnormal Operations

It is important to note that **these actions are intended only as guidelines** . The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note, that **without exception, employees and public safety is first priority.**

The first Company person on scene will function as the Incident Commander (IC) until relieved by an authorized supervisor who will assume the IC position. Transfer of command will take place as more senior management respond to the incident. The role of IC will typically be assumed and retained by area management.

The person functioning as **Incident Commander** during the initial response period **has the authority to take the steps necessary to control the situation and must not be constrained by these general guidelines.**

INITIAL RESPONSE ACTIONS - SUMMARY PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY

RESPONSE TIMES*

US DOT Tier	1	2	3
High Volume Area	6 HR	30 HR	54 HR
All Other Areas	12 HR	36 HR	60 HR

CONTROL

- Eliminate sources of ignition
- Isolate the source of the discharge, minimize further flow

NOTIFY

- Make internal and external notifications
- Activate local Company personnel as necessary
- Activate response contractors and other external resources as necessary

CONTAIN

- Begin spill mitigation and response activities
- Monitor and control the containment and clean-up effort
- Protect the public and environmental sensitive areas

* Response resources and personnel available to respond within time specified after discovery of a worst case discharge per US DOT 49 CFR Part 194.115

In addition to the potential emergency events outlined in this Section, the Company has identified several "abnormal operations" that could be expected in the pipeline facilities. The Company has defined the events and established procedures to identify, eliminate or mitigate the threat of a worst case discharge due to these events. In compliance with 49 CFR 195.402(d), these procedures are defined in the Company's Operations Manual.

Company First Responder / On Scene

- Verify emergency exists.
- Notify the Keystone Oil Control Center of the incident.
- Follow the appropriate steps outlined in the "Specific Incident Response Checklist" (Figure 3.1) and the "Product Specific Response Considerations" (Figure 3.2).
- Notify the Keystone Oil Control Center of the incident.
- Contact / Utilize local emergency services, as necessary (police, fire, medical).
- Follow TransCanada's Working Alone Procedures (EDMS No. 003743627).

Regional Emergency Operation Center

- Ensure local emergency agencies have been contacted (police, fire, medical).
- Assign personnel immediately to the discharge site to assist with emergency response (QI) and spill containment.
- Activate additional company and response contractors to site as situation demands.
- Confirm safety aspects at site, including need for Personal Protective Equipment (PPE), sources of ignition, and potential need for evacuation.
- Evaluate the severity, potential impact, safety concerns and response requirements based on the initial data provided by the First Person On-scene. Refer to the spill response evaluation Flowchart in this section.
- Establish communications with the Corporate Emergency Operations Center
- Perform notifications using Figure 2.1, as appropriate.

Area Management

- Proceed to spill site and coordinate response and clean-up operations.
- Assume the role of Incident Commander.
- Coordinate/perform activation of additional spill response contractors, as the situation demands (telephone reference is provided in Figure 2.5).
- Direct containment, dispersion, and/or clean-up operations in accordance with the "Product Specific Response Considerations" provided in Figure 3.2.
- Complete the "Product Release Report" provided in Appendix F.

Local Company Personnel

- Assigned personnel will immediately respond to a discharge from the Pipeline or Facility, as the situation demands.
- Assist as directed at the spill site.
- Assume Incident Management Team roles as deemed by Incident Commander

Range of Reported Oil Thicknesses Tool

	Barely Discernible	Silvery Sheen	Rainbow Colors	Darkening Bands of Color	Dull Colors	Light Brown
Reported average threshold, Microns	0.09	0.1	0.6	0.9	2.7	8
Range, microns	0.04 - .016	0.05 - 0.18	0.1 - 1.0	0.1 - 2.5	1.0 - 5.5	2.0 - 15.0

Source ExxonMobil Research and Engineering Company, Oil Spill Response Field Manual. Revised 2008

FIGURE 3.1**Spills/Releases to Environment:****Minor**

- A spill/release, onsite, that poses no adverse affect to the environment nor impact neither to a water body nor to groundwater. The spill may or may not be reportable to a regulatory agency.

Serious

- A spill/release, onsite or off-site/off-right-of-way, that poses an adverse affect to the environment but no impact to a water body nor to groundwater.

Major

- A spill/release, onsite or off-site/off ROW, that poses an adverse affect to the environment including an impact to a water body or to groundwater.

Critical

- Emergency response for containment or clean up is required. A spill/release, onsite or off-site/off ROW, that poses an adverse affect to the environment including an impact to a water body or to groundwater.

Complaints - Health & Safety:**Minor**

- Unverified community complaint from a Landowner, Police, Fire, Municipality, or a Ministry.
- Verified employee complaint where an investigation is required to obtain resolution.

Serious

- Verified community complaint likely to cause danger/risk to the public, employees or TransCanada facilities.

Major

- Employee work refusal based on belief of unhealthy or unsafe work conditions.

Critical

- Regulatory body notified of employee complaint (by employee) and investigates employee work refusal.

SPECIFIC INCIDENT RESPONSE CHECKLIST

INITIAL RESPONSE

- Take appropriate personal protective measures.
- Conduct vapour monitoring
- Complete hazard assessment
- Secure site.
- Call for medical assistance if an injury has occurred.
- Notify Keystone Oil Control Center and area management of the incident.
- Eliminate possible sources of ignition in the near vicinity of the spill.
- Advise personnel or public in the area of any potential threat and/or initiate evacuation procedures.
- Identify/isolate the source and minimize the loss of product.
- Restrict access to the spill site and adjacent area as the situation demands. Take additional steps necessary to minimize any threat to health and safety.
- Verify the type of product and quantity released. (Material Safety Data Sheet(s) are provided in Appendix G).

All personnel are reminded that outsiders other than emergency services will not be allowed in the area during the time of an emergency and that statements issued to the media or other interested parties should be given by designated Company Management. Be courteous with media representatives and direct them to the designated spokesperson.

LINE BREAK OR LEAK, SPECIFIC RESPONSE (Including Piping Rupture/ Leak Valve Rupture/Leak and Manifold Failure)***Oil Control Center (OCC)***

- Shut down pipeline.
- Close upstream and downstream block valves.
- Notify On-call regional designate to attend site as a First Responder.
- Initiate Regional EOC Manager Notification once incident is confirmed by First Responder.
- Initiate Calgary EOC Manager Notification and pass on Regional EOC contact Information.
- Notify Oil Control Center On-call designate.
- Notify Oil Movements Scheduling.
 - During Business /After hours - Callout Database
- Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

FIRES (MINOR, MAJOR, EXPLOSION) SPECIFIC RESPONSE

Oil Control Procedures

Be aware of Fire Weather conditions.

- Watch - Critical fire weather conditions are forecast to occur.
- Red Flag Warning - Critical Fire weather conditions are either occurring or will shortly.

Individual Discovering the Fire - (All Employees)

- Call the Local Emergency Response Agency (911).
- Notify Oil Control Center (this should be the 1st notification completed in the event that it is a remote location with no immediate impacts to life safety).
- Notify Area Management.
- Complete all First Responder responsibilities and initially assume the role of TransCanada's Incident Commander.
- Ensure ongoing communications with Keystone Oil Control Center.
- Follow the instructions outlined in section 3.1 Initial Response and the Responsibilities outlined in TransCanada's First Responder checklist.

Note: Pipeline right-of-ways are used by Firefighters as a fire break (barrier) to isolate fires and prevent them from growing in size. Right-of-ways are commonly used to access to fire areas. Many times Firefighters will need to increase the size of the cleared space over the Pipeline right-of-way to prevent the fire from leaping from tree top to tree top. To do this, heavy equipment may be used to quickly increase the amount of cleared space between the fire area and unignited forest. The following are steps to consider when working with the local authority on creating these fire breaks.

- Use your best judgment to ensure the safety of staff, fire ground workers and the public when determining if this activity is safe to perform;
- Call and confirm with Asset Reliability if this activity is safe and implement any instructions provided by Asset Reliability. Asset Reliability's role is to provide directions to protect the health and safety of those involved as well as pipeline integrity;
- Be physically on site to coordinate the activities related to any pipeline crossings;
- Stake the pipeline to identify the location of the pipe(s) in the right-of-way.
- First preference is to use already existing pipeline crossing areas;
- Gather the appropriate information to complete a formal pipeline crossing agreement. In Canada, send required information to the Land Department in Calgary.
- Notify Keystone Console and area management.
- Shut off pumps.
- Coordinate with the Keystone Oil Control Center to close appropriate valves to isolate in the vicinity of the fire, if necessary.
- Isolate Pump Station from Mainline.
- Evacuate site as safety considerations dictates.
- Notify Keystone Console of evacuation route and final destination.
- Notify Keystone Console of safe arrival.

- Inspect pump station, equipment and controls after the fire is extinguished and safe to return.
- Evaluate pipeline, monitoring or control systems for evidence of heat damage.
- Notify engineering to conduct further investigation if damage is found.
- Make appropriate repairs and return Pipeline to service.

Third Party Call In Confirmation of Fire

This procedure applies to a pipeline facility integrity threat identified received via third party thru TransCanada Emergency Line (PDL 800-447-8066) or direct call to Keystone Oil Control reporting a fire at or adjacent to Keystone Pipeline Facilities or ROW.

If the third party indicates a pipeline facility (Pump Station/QMU Building/ESB Building etc.) is on fire or in jeopardy of catching fire the controller will do the following:

- Should the call come from PDL, confirm receipt of third party call-in contact information. If third party call-in comes direct to console please fill out third party call-in form Third Party Template
- Once confirming all information with the caller and it is clear that the pipeline facilities are at risk, implement the following steps:
 - Shutdown and Isolate the affected pump station OR
 - Confirm, checking with leak triggers and discussion with third party, that the fire is not due to a pipeline failure.
 - Once confirmed that the source is not us, keep the pipeline running.
 - Notify On-call regional designate to investigate as a First Responder and provide further guidance.
 - Initiate Regional EOC Manager Notification once incident is confirmed by First Responder.
 - Initiate Calgary EOC Manager Notification and pass on Regional EOC contact Information.
 - Notify Oil Control Center On-call designate.
 - Notify Oil Movements Scheduling.
 - During Business /After hours - Callout Database
 - Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

Aerial Pipeline Patrol Confirmation of Fire

If the Oil Control Center receives a call from the Aerial Pipeline Patrol indicating a fire on or adjacent to Keystone Pipeline ROW/Facilities, the controller's response will be as follows:

If the pilot/observer indicates a pipeline facility (Pump Station/QMU Building/ESB Building etc.) is on fire or in jeopardy of catching fire the controller will do the following:

- Once confirming all information from the pilot/observer is clear that the pipeline facilities are at risk.
- Shutdown and Isolate the affected pump station.
- Notify On-call regional designate to investigate as a First Responder and provide further guidance.
- Initiate Regional EOC Manager Notification once incident is confirmed by First Responder.
- Initiate Calgary EOC Manager Notification and pass on Regional EOC contact Information.

- Notify Oil Control Center On-call designate.
- Notify Oil Movements Scheduling.
 - During Business /After hours - Callout Database

If the pilot/observer indicates a fire on or adjacent to our Pipeline ROW, the controller will do the following:

- Confirm, checking with leak triggers and discussion with third party, that the fire is not due to a pipeline failure.
- Once confirmed that the source is not us keep the pipeline running.
- Notify On-call regional designate to investigate as a First Responder and provide further guidance.
- Initiate Regional EOC Manager Notification once incident is confirmed by First Responder.
- Initiate Calgary EOC Manager Notification and pass on Regional EOC contact Information.
- Notify Oil Control Center On-call designate.

Company Employee Confirmation of Fire

If the integrity threat is confirmed by a TransCanada Employee that has been dispatched as a First Responder to a third party call-in of a fire, at or adjacent to Keystone Pipeline Facilities or ROW, the controller's response will be as follows:

- Confirm isolation of affected area, including valve positions with Regional personnel and commence further isolation or pipeline shutdown strategy with Regional personnel as required.
- Should the recommendation from the field be to shutdown the pipeline, the controller is to do a controlled shutdown and isolate as per Pipeline Isolation and Segmentation Standards
- Confirm EMS has been initiated and Calgary EOC is active. Continue Monitoring pressure profiles using SCADA/LDS.
- Ensure all receipt and delivery interconnects are notified and updated as required.
- Notify Oil Control Center On-call designate.
- Notify Oil Movements Scheduling.
 - During Business /After hours - Callout Database
- Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

TRANSCANADA GAS PIPELINE RUPTURE/FIRE - KEYSTONE CONVERSION PIPE ROW

This procedure applies to a Keystone Pipeline integrity threat from an adjacent TransCanada Gas Pipeline rupture/fire in the conversion Pipeline ROW. The Conversion Pipeline ROW extends from Burstall Pigging Station to Elm Creek Pigging Station.

In the Event that the controller receives a suspected or a confirmed notification of a TransCanada Gas Pipeline rupture/fire adjacent to Keystone Oil Pipeline, the controller is to do the following:

- Confirm thru SCADA/LDS that pressures and flow rates are steady and that no other leak triggers are present.
- If no other leak triggers are present, the controller is to drive Keystone Pipeline to safe discharge limits and continue running.
- Notify On-call designate/first responder that the Keystone Pipeline is still running and we will await their direction once they arrive on scene.

- First responder will instruct the controller to shutdown or continue running once on scene and the integrity of Keystone Pipeline has been assessed.
- Notify Oil Control Center On-call designate.
- Confirm EMS has been initiated and Regional/Calgary EOC is active. Continue monitoring pressure profiles using SCADA/LDS.
- Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

If one or more leak triggers exist, the controller is to initiate an Emergency Pipeline Shutdown and isolate as per Pipeline Isolation and Segmentation Standards

- Notify On-call designate/first responder that the Keystone Pipeline has been shutdown and we will await their direction once they arrive on scene.
- Notify Oil Control Center On-call designate.
- Confirm EMS has been initiated and Regional/Calgary EOC is active. Continue monitoring pressure profiles using SCADA/LDS.
- Notify Oil Movements Scheduling.
 - During Business /After hours - Callout Database
- Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

TRANSCANADA GAS PIPELINE RUPTURE/FIRE - KEYSTONE CONVERSION PIPE SHARED PUMP STATION

This procedure applies to a Keystone Pipeline integrity threat from an adjacent TransCanada Gas Pipeline rupture/fire at a shared pump station . The Shared Pump Stations include Cabri, Herbert, Caron, Regina, Kendall, Grenfell, Moosomin, Rapid City and Portage La Prairie.

In the event that the suspected or confirmed TransCanada Gas Pipeline rupture/fire occurs at a shared pump station facility, the controller is to do the following:

- Confirm thru SCADA/LDS that pressures and flow rates are steady and that no other leak triggers are present.
- If no other leak triggers are present, the controller is to isolate the pump station from the mainline and drive Keystone Pipeline to safe discharge limits and continue running.
- Notify On-call designate/first responder that the Keystone Pipeline is still running and we will await their direction once they arrive on scene.
- First responder will instruct Keystone Pipeline Operator to shutdown or continue running once on scene and the integrity of Keystone Pipeline has been assessed.
- Notify Oil Control Center On-call designate.
- Confirm EMS has been initiated and Regional/Calgary EOC is active. Continue monitoring pressure profiles using SCADA/LDS.
- Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

If one or more leak triggers exist, the controller is to initiate an Emergency Pipeline Shutdown and isolate as per Pipeline Isolation and Segmentation Standards

- Notify On-call designate/first responder that the Keystone Pipeline has been shutdown and the pump station has been isolated and we will await their direction once they arrive on scene.
- Notify Oil Control Center On-call designate.
- Confirm EMS has been initiated and Regional/Calgary EOC is active. Continue monitoring pressure profiles using SCADA/LDS.
- Notify Oil Movements Scheduling.
 - During Business /After hours - Callout Database
- Should media inquiries be received directly in the Oil Control Center, inform callers that all media inquiries are to be referred to our Media Relations Representative at the following Phone Numbers:
 - (403) 920-7859
 - (800) 608-7859

SEVERE THUNDERSTORM (Flash Flooding/Landslide) SPECIFIC RESPONSE

Severe Thunderstorm/Flash Flooding/Landslide

Thunderstorms are a year round occurrence with lightning a major threat. The potential of flash flooding is also possible when one area is affected for an extended period.

- Be aware of changing weather conditions.
 - Severe Thunderstorm Watch - Conditions are favorable to the development of thunderstorms.
 - Severe Thunderstorm Warning - A severe thunderstorm has been observed or is imminent.
 - Flash Flood Watch- Flash flooding is possible within 6 hours after heavy rains have ended.
 - Flash Flood Warning - Flash flooding is occurring or imminent.
- Terminate outdoor work when lightning is occurring and move to shelter.
- Avoid areas subject to sudden flooding until the thunderstorm passes.
- Evaluate the situation after weather event.
 - Does standing water prevent visual inspection?
 - Have flood waters damaged the Pipeline?
 - Have flood waters exposed buried piping?
 - Has soil shifted that could lead to a landslide?
- Initiate appropriate pipeline patrol by the most expedient means possible to determine extent of damage.
- Make all necessary repairs.

TORNADO/STRAIGHT LINE WINDS SPECIFIC RESPONSE

Tornadoes

Although many disasters cannot be prevented or predicted, preparation can significantly reduce losses. In the event of a severe weather condition or a natural disaster, the Area Manager or assigned designee will be the Emergency Coordinator.

- **Be Aware of Changing Weather Conditions**

- Tornado watch - Conditions are right for the formation of a tornado.
- Tornado warning - A tornado has been sighted but is not in the area at this time.
- Tornado alert - A tornado has been sighted in the immediate area, take cover immediately.

- **If Severe Weather Conditions Threaten**

- Carry a battery operated portable radio and monitor conditions.
- If a tornado is observed and time permits, evacuate the area.
- If the tornado is approaching a pump station, notify the Keystone Console to remotely isolate the station.
- In vehicle, drive away from tornado at right angle. Get out of car and seek shelter if tornado cannot be avoided.
- If outdoors, shelter in ditch, excavation or other low spot and lie flat, face down.
- Make certain that all personnel are aware of the condition.
- Stay in shelter until conditions are safe.

- **Immediately After the Storm**

- Account for all personnel.
- Survey for damages.
- Initiate team for any repairs.
- Refer to this Plan for additional response guidance regarding fires, spills, etc., as needed.

EARTHQUAKE SPECIFIC RESPONSE

Earthquake

The actual movement of the ground in an earthquake is rarely the direct cause of death or injury. Most casualties result from falling objects and debris because the shocks can shake, damage or demolish buildings and other structures.

- **Stay calm. Don't panic.**
- If you are indoors, stay there. Do not run outside.
- If you are in a building, take cover under a heavy furniture or stand in an inside doorway away from windows. (A door frame or the inner core of a building is its strongest point and least likely to collapse.)
- Exit building as situation determines.
- If you are outside, stay there. Move away from buildings to avoid falling debris. Avoid damaged utility lines.
- If you are driving, stop quickly and stay in your car. If possible, do not stop on a bridge, overpass or where buildings can fall on you. Your car can provide protection from falling debris.
- Do not reenter damaged buildings. Walls may collapse after the original shaking has ceased.
- Evaluate the situation and initiate appropriate pipeline patrol by the most expedient means possible to determine extent of damage.
- Make all necessary repairs as resources and conditions allow.

SEVERE WINTER STORM SPECIFIC RESPONSE

Winter Storm

- Be aware of Changing Weather Conditions
 - Winter Storm Watch - Conditions are expected but not imminent.
 - Winter Storm Warning - A significant winter storm is occurring, imminent, or likely.
 - Blizzard Warning - Winds at least 35 mph, blowing snow frequently reducing visibility to 0.25 miles or less, and dangerous wind chills are expected.
- Listen to local radio stations for weather advisory and road condition reports, carry a survival kit, and start the trip with a full tank of gasoline.
- Inspect pump station, equipment, and controls after storm for damage.
- Make any repairs as necessary.

VOLCANIC ERUPTIONS SPECIFIC RESPONSE

Volcanic Eruptions

If a volcanic eruption ejects a large ash plume and the wind carries the ash to the pipeline facilities, this may cause a disruption of operations by making travel difficult or impossible due to reduced visibility.

- Begin gathering information from news media, field personnel, etc. to assess any ash cloud size, location, heading and speed as soon as news of an eruption breaks.
- Consider recalling crews prior to the expected arrival of the ash cloud while it is still clear to travel. If a crew is at a station when an ash fall begins, they should probably stay there for the duration and not travel until it is determined to be safe after the event.
- Advise contract aerial patrol service of the situation if contacted for the beginning of a pipeline patrol or if an aerial patrol is in progress.
- Inspect pump station, equipment and controls after eruption for damage.
- Make any repairs as necessary.



Bomb Threats

The following pages provide guidelines for actions to be taken in the event a bomb threat is received. A bomb threat to the pipeline system or personnel may present itself in any of several ways:

- Phone
- E-mail
- Fax
- Radio
- Mail
- Word-of-mouth
- Increase in the Homeland Defense Status



- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]



- [Redacted]
- [Redacted]
- [Redacted]
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[Redacted]

RELEASE TO GROUNDWATER SPECIFIC RESPONSE

The following procedure has been prepared in the event of a release of crude oil from the pipeline into a hydraulically sensitive groundwater resource area, but may not be currently identified as a high consequence area by PHMSA. Specific areas of concern have been evaluated for their sensitivity and plans to effect cleanup have been discussed. These specific areas include:

- [REDACTED]
- [REDACTED]
- [REDACTED]

RESPONSE PROCEDURE

- Evaluate the topography and evidence of surface contamination.
- Establish containment, accounting for public safety, spill volume, terrain, and presence of surface water.
- Notify landowner and appropriate public agencies of potential groundwater contamination.
- Immediately retain an independent consultant with expertise in this area to evaluate impacts and remediation options.
- Consult with appropriate agencies regarding remediation, including water and soil cleanup levels, and need for groundwater monitoring.
- Notify and procure additional response equipment and personnel as necessary to address site-specific conditions.
- Dig intercept trench downgradient of release point.
- Line trench and stage vacuum truck to remove contaminated oil/water mixture.
- Excavate surface catchment upgradient of the intercept trench and near leading edge of visible contamination.
- Excavate until contaminated soil is completely removed and clean soil is encountered or conditions prohibit continued digging.
- Line the catchment to limit or prohibit further groundwater contamination.
- Move vacuum truck from intercept trench to catchment to recover oil and/or oily water.
- Line drop down area to stage contaminated soil as excavated.
- Segregate waste streams to minimize later disposal.
- Based on anticipated release, stage temporary storage and additional vacuum trucks to ensure recovery efforts continue without interruption.

Options for Long term Remediation:

- Air sparging
- Vacuum extraction
- Conventional pump and treat
- Bioslurping
- Excavation
- Enhanced biodegradation/bioremediation
- Chemical addition/oxidation

- Natural Attenuation
- Enlist additional experts, as appropriate, for continuing remediation and coordination with appropriate agencies.

ABNORMAL OPERATIONS SPECIFIC RESPONSE

Abnormal Operations Specific Response

- If operating design limits have been exceeded (increase or decrease pressure or flow) and no emergency condition exists, stop operations and immediately investigate the pipeline.
- Verify whether a true safety problem, equipment malfunction, or operator error is present. Note: In all cases, safety to operations, the general public, and property will govern actions taken.
- Make appropriate repairs before continuing operations. Note: Corrective action will only be done by qualified personnel to perform the type of work involved.
- Monitor affected systems until normal operations are resumed.
- Complete follow-up and written reporting, as the situation demands.

Note: It is the responsibility of the pipeline operator to carry out the response procedures for abnormal pipeline operations as outlined in their respective O&M Manual.

3.2 DOCUMENTATION OF INITIAL RESPONSE ACTIONS

It is difficult, particularly during the first few minutes of an initial response operation, to think about the importance of documentation. A log should be maintained which documents the history of the events and communications that occur during the response. When recording this information, it is important to remember that the log may become instrumental in legal proceedings, therefore:

- Record only facts, do not speculate.
- Do not criticize the efforts and/or methods of other people/operations.
- Do not speculate on the cause of the spill.
- Do not skip lines between entries or make erasures. If an error is made, draw a line through it, add the correct entry above or below it, and initial the change.
- Record the recommendations, instructions, and actions taken by government/regulatory officials.
- Document conversations (telephone or in person) with government/regulatory officials.
- **Request that government/regulatory officials document and sign their recommendations or orders (especially if company personnel do not agree with the suggestions, instructions, or actions).**

3.3 OIL CONTAINMENT, RECOVERY AND DISPOSAL/WASTE MANAGEMENT

After initial response has been taken to stop further spillage and notifications made to the required agencies, the Company will begin spill containment, recovery, and disposal operations.

The Incident Commander will assess the size and hazards of the spill (see Figure 3.2). The type of product, the location of the spill, and the predicted movement of the spill will be considered.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill. Boom may be deployed in waterways to contain the spill and to protect socio-economic and environmentally sensitive areas. Booms may also be used in waterways to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent material. Clean-up equipment and material will be used in the manner most effective for rapid and complete clean-up of all spilled product.

Response and clean-up will continue until all recoverable product is removed, the environment is returned to its pre-spill state, and the Unified Command of the Company Incident Commander and the Federal and/or State On-Scene Coordinators determine that further response and cleanup is no longer necessary.

FIGURE 3.2

FLAMMABLE LIQUIDS (Non-Polar/Water-Immiscible)	
<p>The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. The information is intended for guideline purposes only.</p>	
PRODUCTS: Crude Oil	
HAZARD IDENTIFICATION / RECOGNITION	
GUIDE NO. 128	DANGERS <ol style="list-style-type: none"> 1. HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. 2. Vapors may form explosive mixtures with air. 3. Vapors may travel to source of ignition and flash back. 4. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). 5. Vapor explosion hazard indoors, outdoors or in sewers. 6. Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. 7. Runoff to sewer may create fire or explosion hazard. 8. Containers may explode when heated. 9. Many liquids are lighter than water. 10. Substance may be transported hot. 11. If molten aluminum is involved, refer to Emergency Response Guide No. 169.
HEALTH	
<ol style="list-style-type: none"> 1. Move victim to fresh air. Call 911 or emergency medical service. 2. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. 3. Remove and isolate contaminated clothing and shoes. 4. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. 5. Wash skin with soap and water. 6. Keep victim warm and quiet. 7. Ensure that medical personnel are aware of the material(s) involved, and take precautions. 	
PUBLIC SAFETY	
<ol style="list-style-type: none"> 1. Isolate spill or leak area immediately for at least 50 meters (150 feet) in all directions. 2. Keep unauthorized personnel away. 3. Stay upwind. 4. Keep out of low areas. 5. Ventilate closed spaces before entering. 	
EVACUATION	Large Spill 1. Consider initial downwind evacuation for at least 300 meters (1,000 feet). Fire 1. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.
Information provided by the Emergency Response Guidebook 2008.	

3.4 STORAGE/DISPOSAL

Strict rules designed to ensure safe and secure handling of waste materials govern the Company waste disposal activities. To ensure proper disposal of recovered oil and associated debris, the following guidelines should be considered:

- In the event of a product spill, Facilities have limited capacity to store recovered product and water. Separated product is pumped to frac tanks or to trucks to be carried to the Facility for processing.
- Oily debris will be segregated on site and containerized for temporary storage prior to disposal in accordance with hazardous waste regulations.
- Transportation of waste material will be performed in accordance with all applicable Federal and State Regulations.
- Waste associated with the spill will be disposed at sites that have the necessary permits to accept the type of waste to be discharged.

The Company's Community, Safety and Health Administration Dept. will coordinate activities and secure the permits to ensure proper disposal or recycling of recovered product and debris.

3.5 SAMPLING AND WASTE ANALYSIS PROCEDURE

The Company's sampling and waste analysis practices are governed by the regulations for the applicable Province/State and Federal agency. These regulations outline methods and procedures for determining the chemical and physical characteristics of wastes generated by the Facility, including waste associated with spills, so that they may be properly stored, treated, or disposed.

3.6 SAFETY AWARENESS

It is the corporate policy of the Company to provide a safe workplace for all workers. All employees and contractors are responsible for maintaining the safety and health of all workers on the pipeline and the response operations.

Prior to engaging in any spill response activity:

- All employees/contractors must have received orientation from the Company Safety Plan.
- All U.S. contractor response personnel must be in compliance with Occupational Safety and Health Administration training requirements.
- All other personnel will have completed appropriate training for their position as outlined in Section 4.0.
- No employee/contractor shall engage in activities which place them at risk without the appropriate protective equipment and training.

Response Safety

All Company and contractor personnel are expected to comply with the Site Safety Plan for each spill incident.

- Any concern regarding health or safety issues should be immediately addressed.
- The First Responder must consider the spill site as dangerous and the local atmosphere explosive until air monitoring procedures prove that the area is safe.

- The First Responder must exit the area against or across the wind, if possible, and must also evacuate others who are working in the area.
- All injuries, no matter how minor, must be reported to the Incident Commander in a timely manner.
- Prior to entering a spill area, a qualified person must perform an initial safety and health evaluation of the site.

Air Monitoring

A Safety Monitor shall be designated who is trained in the operation of air monitoring equipment. The Incident Commander must ensure that Safety Monitors are trained and that their equipment is maintained and ready for use.

- The air monitoring equipment shall be activated and checked at the location in which it is stored.
- Calibration of instruments should be performed before use.
- Air monitoring measurements which are to be made prior to entry into the spill area include:
 - Oxygen content
 - Lower Explosive Limit (LEL) with a pentane calibrated instrument
 - Benzene level

H2S

- Lower Explosive Limit readings above 10% require immediate evacuation of the area and elimination of ignition sources.
- Oxygen readings below 19.5% require the use of air supplied respiratory protection.
- After assuring that there are no hazards relating to explosion or oxygen depletion, sampling for benzene or total petroleum hydrocarbons shall dictate the appropriate respiratory devices to be used by persons entering the area.
- Benzene levels must be below 0.5 ppm to work without respiratory protection. At a level of greater the 0.5 but less than 5 ppm a half face respirator may be used. When the level is between 5.0 and 25 ppm a full face respirator must be used. Anything readings higher than 25 ppm, a supplied air or SCBA must be used.

If H2S is present in low concentrations respiratory protective equipment may be used following the following criteria based on approved protection factors. Using the approved protection factors of 10 for ½ face respirators and 50 for full face and the most stringent OEL which is 1 ppm (Canadian Federal COHSR) the corresponding maximum use concentrations would be 10 ppm for ½ face and 50 ppm for full face. The use of respirators however should be limited to areas with concentrations less than 10 ppm. If concentrations are higher workers should immediately leave the area.

- Hydrogen Sulfide is an extremely hazardous toxic compound that is present in most crude oils that are transported through the pipeline.
- Air monitoring for Hydrogen Sulfide will be done by all personnel working on or near the pipeline and during any cleanup operation.

- Hydrogen Sulfide is characterized by a rotten egg smell at low level concentrations.
- The gas causes rapid temporary paralysis of the olfactory system leading to the loss of the sense of smell.
- Permissible exposure limits in many countries is 10 ppm. In Canada the occupational exposure level is 1 ppm.

Symptoms of exposure to Hydrogen Sulfide are:

- 0-10 ppm no known health effects for most people
- 10-100 ppm can cause headache, dizziness, nausea (100 ppm is the immediately dangerous to life and health level)
- 100-500 ppm above mentioned effects within a short time and more severe. Loss of breathing and death is possible within minutes.
- 500-700 ppm affects the central nervous system. Symptoms could include a loss of balance and a loss of reasoning. You could become unconscious and stop breathing within seconds
- 700 and greater would result in immediate loss of consciousness and permanent brain damage due to hypoxia or death if not rescued immediately
- The Incident Commander is responsible for arranging industrial hygiene monitoring in the post discovery period.

Decontamination

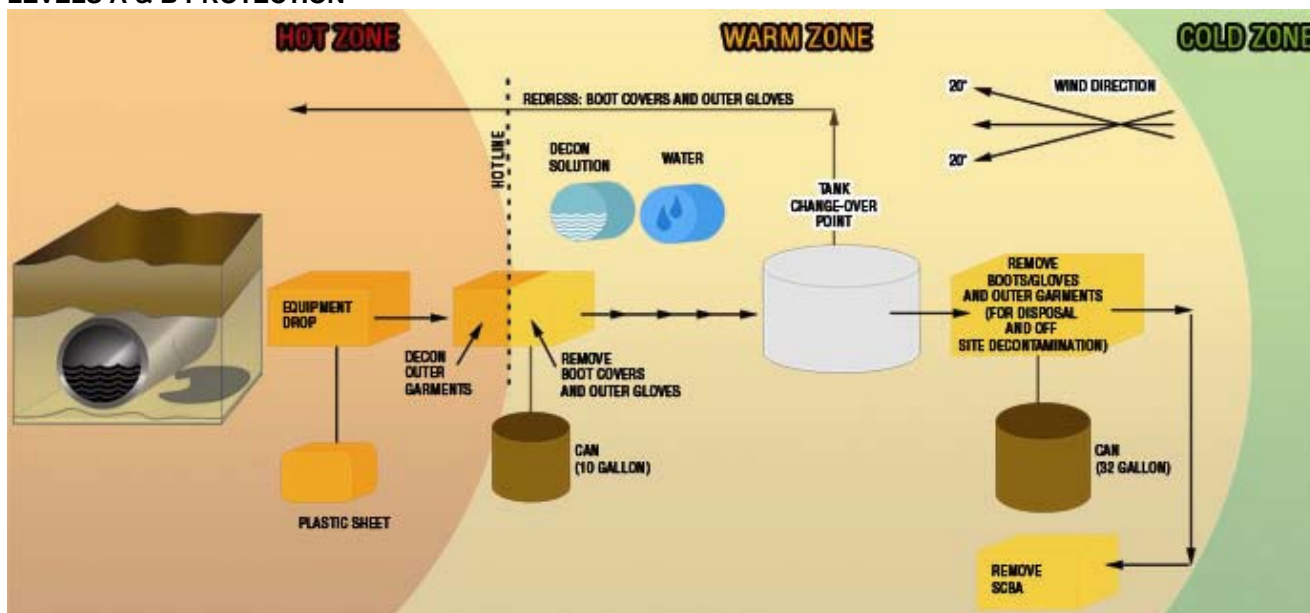
Through training programs, Facility personnel know and understand the importance of the removal of hazardous substances from their person if they are contaminated. Eyewash stations and safety showers provide a means to quickly remove gross contamination of harmful agents, including gasoline. Personnel must immediately shower and remove any clothing which is wet or otherwise contaminated. Showers in the change room are to be used for thorough cleansing. Persons should inspect themselves thoroughly before donning a fresh change of clothing.

Contaminated clothing should be properly disposed. Contaminated personal protective equipment must be washed and sanitized before re-using. The washing of contaminated equipment is performed in a "contained area" to assure that the disposal of the wash water can be handled properly.

Establishing "Exclusion - Hot", "Decontamination - Decon", and "Support - Safe" Zones are required to prevent the removal of contaminants from the contaminated area as well as unauthorized entry into contaminated areas.

- Regardless of the decontamination facilities available, all efforts to minimize personnel exposure should be taken.
- Decontamination facilities should be positioned prior to employee/ contractor entrance to areas where the potential for exposure to contamination exists. The appropriate Material Safety Data Sheets (MSDS) are available to aid health professionals treating the injured parties. Material Safety Data Sheets are located in Appendix G.
- Decontamination facilities should be designed to prevent further contamination of the environment and should have a temporary storage area for items that will be reused in the contaminated area.
- Particular attention should be paid to personal hygiene prior to eating, drinking, or smoking.

**MINIMUM DECONTAMINATION LAYOUT
LEVELS A & B PROTECTION**



Personal Protective Equipment (PPE)

The following represents OSHA/USEPA designated PPE levels for responding to emergencies, post emergency cleanup sites, and/or Temporary Storage and Disposal (TSD) sites. The responder's PPE should be chosen based on his/her level of training and assigned job duties.

<p>LEVEL A</p> <ul style="list-style-type: none"> ● Self Contained Breathing Apparatus (SCBA) (worn inside suit) ● Encapsulated Chemical Protective Suit ● Chemical Protective Gloves ● Chemical Protective Boots ● Hard Hat ● Safety Toe Footwear ● Safety Glasses 	<p>To be selected when the greatest level of skin, respiratory, and eye protection is required.</p>
<p>LEVEL B</p> <ul style="list-style-type: none"> ● SCBA (worn outside suit) ● Chemical Protective Suit w/Hood ● Chemical Protective Boots ● Chemical Protective Gloves ● Hard Hat ● Safety Toe Footwear ● Safety Glasses 	<p>To be selected when the highest level of respiratory protection is necessary but a lesser level of skin is needed.</p>
<p>LEVEL C</p> <ul style="list-style-type: none"> ● Air Purifying Respirator (APR) ● APR a½ Face / Full Face ● Hard Hat ● Glasses (worn with a½ face APR) ● Chemical Protective Boots ● Chemical Protective Gloves ● Chemical Protective Suit/Tyvek ● Safety Toe Footwear ● Safety Glasses 	<p>To be selected when the concentration and type of airborne substances is known and the criteria for using air purifying respirators are met.</p>
<p>MODIFIED LEVEL C Same as level C except no APR requirements.</p>	<p>To be selected when the concentration and type of airborne substances is known and the criteria for using air purifying respirators are met.</p>
<p>LEVEL D</p> <ul style="list-style-type: none"> ● Hard Hat ● Safety Glasses ● Work Uniform / Clothes ● Leather Gloves ● Safety Boots ● Nomex (if required by the Company) 	<p>The atmosphere contains no known hazard and work functions preclude the potential for unexpected inhalation of or contact with hazardous levels of any chemicals.</p>

3.7 EMERGENCY MEDICAL TREATMENT AND FIRST AID

Call 911 immediately. On-site emergency medical response requires the same rapid assessment of the patient as any other situation, but requires the responders to be aware of other considerations that may affect the way they handle the patient. These considerations include the following:

- The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients AFTER the injured party has been decontaminated according to the Site Safety Plan.
- Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.
- If the treatment needed is critical care or "life saving" treatment, rapid decontamination of the injured/ill party should be started. Refer to the Site Safety Plan for steps to be taken in an "abbreviated" decontamination for medical treatment.
- The need for full decontamination should be carefully weighed against the need for prompt medical treatment.
- The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant. Telephone reference is provided in Annexes.
- Material Safety Data Sheet information will be available from the Incident Commander and should be provided to medical personnel to alert them of decontamination requirements.
- Report all injuries, incidents or close calls.
- If emergency medical treatment is needed, the Incident Commander, or his designated representatives, will request assistance from trained medical personnel.

4.0 RESPONSE TEAMS

4.1 [Introduction](#)

4.2 [Qualified Individual](#)

4.3 [Initial Response Team \(IRT\)](#)

4.4 [Regional Emergency Preparedness Team \(REPT\)](#)

4.5 [Incident Command System \(ICS\)](#)

4.6 [Unified Command](#)

[Figure 4.1 Incident Command System](#)

4.7 [ICS Roles and Responsibilities](#)

[Figure 4.2 Operational Period Planning Cycle](#)

4.1 INTRODUCTION

This Section describes organizational features and duties of the local responders, the Regional Emergency Preparedness Team (EPT), and the broader Emergency Management Team (EMT) as defined in TransCanada's Incident Management System (IMS). The Incident Management System integrates Incident Management, Emergency Management and Crisis Management and is maintained separately.

The key to an effective emergency response is a rapid, coordinated, tiered response by the affected Facility, the Regional Emergency Operations Center, and the Corporate Emergency Operations Center, consistent with the magnitude of an incident.

First response to an incident at the Facility will be provided by the local responders. The Regional EOC will respond, to the degree necessary, to incidents exceeding local capability.

Our response teams will use the National Incident Management System (NIMS) Incident Command System (ICS) to manage the emergency response activities. Because the Incident Command System is a management tool that is readily adaptable to incidents of varying magnitude, it will typically be used for all emergency incidents. Staffing levels will be adjusted to meet specific response team needs based on incident size, severity, and type of emergency.

An explanation of Incident Command System and the roles and responsibilities for primary members of the response teams are provided in Section 4.7 per CAN/CSA-2731-03. The USCG Incident Management Handbook (IMH) contains an in-depth description of all Incident Command System positions, Incident Command System development, response objectives and strategies, command responsibilities, Incident Command System specific glossary/acronyms, resource typing, the Incident Action Plan process, and meetings. The IMH can be located on the USCG's Homeport Website.

4.2 QUALIFIED INDIVIDUAL

It is the responsibility of the Qualified Individual (QI) or his/her designee to coordinate with the Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC) throughout the response, if applicable.

Vital duties of the Qualified Individual (QI) 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.
- 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.
- 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).
- Assess and implement prompt removal actions to contain and remove the substance released.
- Coordinate rescue and response actions as previously arranged with all response personnel.
- Activate and engage in contracting with oil spill removal organizations.

- Use authority to immediately access Company funding to initiate cleanup activities.
- Direct cleanup activities until properly relieved of this responsibility.
- Arrangements will be made to ensure that the Qualified Individual (QI) or the Alternate Qualified Individual (AQI) is available on a 24-hour basis and is able to arrive at the Facility in a reasonable time.
- The AQI shall replace the QI in the event of his/her absence and have the same responsibilities and authority.

4.3 INITIAL RESPONSE TEAM (IRT)

The first Company person on scene (First Responder) will function as the Incident Commander and person-in-charge until relieved by an authorized supervisor who will then assume the position of Incident Commander (IC). Transfer of command will take place as more senior management contract support respond to the incident. For response operations within the control of the Initial Response Team, the role of IC will typically be assumed and retained by the Qualified Individual.

The number of positions/personnel required to staff the Incident Management Team will depend on the size and complexity of the incident. The duties of each position may be performed by the IC directly or delegated as the situation demands. The IC is always responsible for directing the response activities and will assume the duties of all the primary positions until the duties can be delegated to other qualified personnel.

A complete functional ICS organization is shown in Figure 4.1. The Incident Commander should try to fill the necessary positions within the Incident Management Team and request additional support from both the Regional and Corporate Emergency Operations Centers to fill/back up all the positions as the incident may dictate. Detailed job descriptions of the primary response team positions are provided in Section 4.7.

4.4 REGIONAL EMERGENCY PREPAREDNESS TEAM (EPT)

The Emergency Preparedness Team (EPT) will activate a Regional Emergency Operations Center (EOC) to support the Initial Response Team/Incident Management Team. The number of positions/personnel required to staff the Regional EOC will depend on the size and complexity of the incident.

The Regional EOC is staffed by personnel from various Regional locations. The Regional EOC provides necessary information to the appropriate Federal, State/Province, and Local authorities with designated response roles, including the National Response Center (NRC), the Canadian National Energy Board (NEB), if necessary, State Emergency Response Commission (SERC) Provincial Ministry, and local response agencies.

4.5 INCIDENT COMMAND SYSTEM (ICS)

The Incident Command System is intended to be used as an emergency management tool to aid in mitigating all types of emergency incidents. This system is readily adaptable to very small emergency incidents as well as more significant or complex emergencies. The Incident Command System utilizes the following criteria as key operational factors:

- Assigns overall authority to one individual
- Provides structured authority, roles and responsibilities during emergencies

- The system is simple and familiar, and is used routinely at a variety of incidents
- Communications are structured
- There is a structured system for response and assignment of resources
- The system provides for expansion, escalation, and transfer/transition of roles and responsibilities
- The system allows for "Unified Command" where agency involvement at the command level is required

Effective establishment and utilization of the Incident Command System during response to all types of emergencies can:

- Provide for increased safety
- Shorten emergency mitigation time by providing more effective and organized mitigation
- Cause increased confidence and support from local, State, Federal, and public sector emergency response personnel
- Provide a solid cornerstone for emergency planning efforts

Section 4.7 provides a comprehensive list of every response team member's duty assignment.

4.6 UNIFIED COMMAND

As a component of an Incident Command System, the Unified Command (UC) is a structure that brings together the Incident Commanders of all major organizations involved in the incident to coordinate an effective response while still meeting their own responsibilities. The Unified Command links the organizations responding to the incident and provides a forum for the Responsible Party and responding agencies to make consensus decisions. Under the Unified Command, the various jurisdictions and/or agencies and responders may blend together throughout the organization to create an integrated response team. The Incident Command System process requires the Unified Command to set clear objectives to guide the on-scene response resources.

Multiple jurisdictions may be involved in a response effort utilizing Unified Command. These jurisdictions could be represented by any combination of:

- Geographic boundaries
- Government levels
- Functional responsibilities
- Statutory responsibilities

The participants of Unified Command for a specific incident will be determined taking into account the specifics of the incident and existing response plans and/or decisions reached during the initial meeting of the Unified Command. The Unified Command may change as an incident progresses, in order to account for changes in the situation.

The Unified Command is responsible for overall management of an incident. The Unified Command directs incident activities and approves and releases resources. The Unified Command structure is a vehicle for coordination, cooperation and communication which is essential to an effective response.

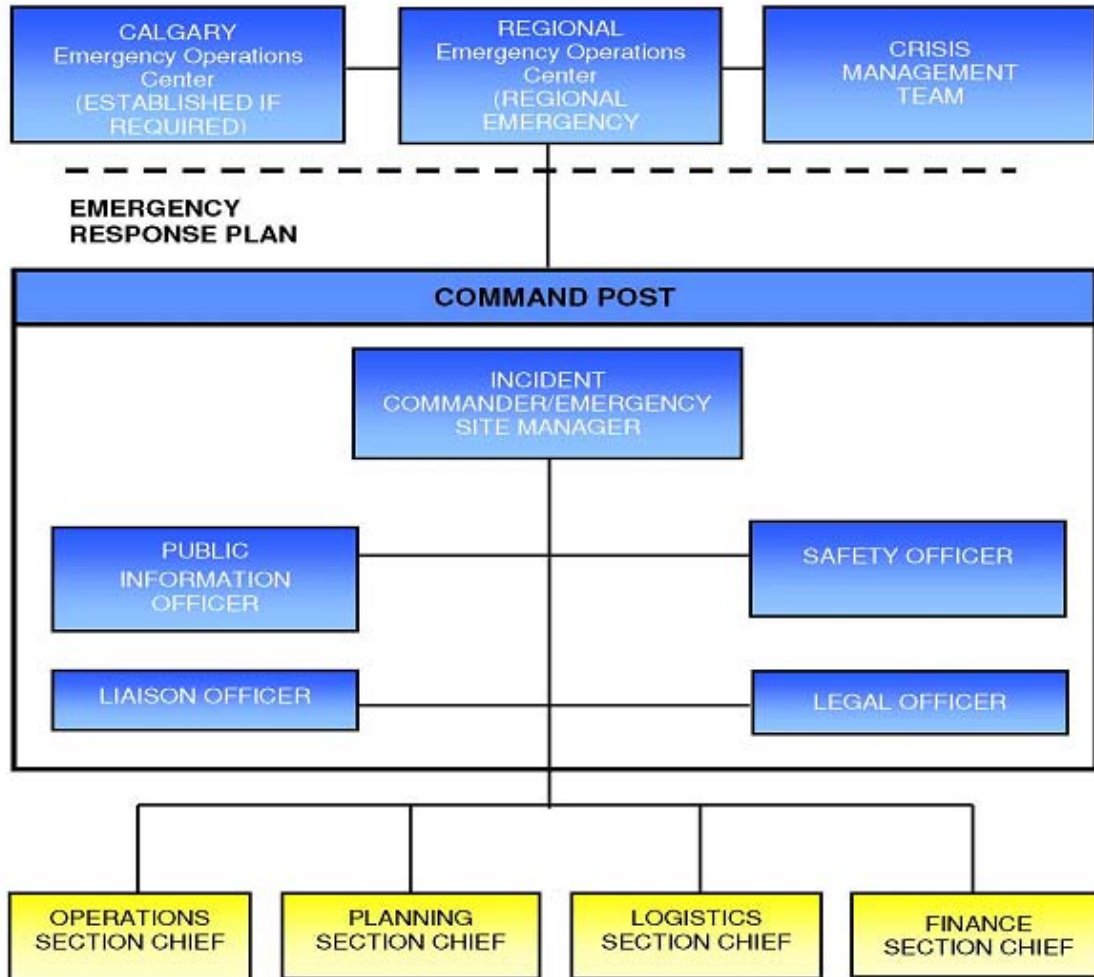
Unified Command representatives must be able to:

- Agree on common incident objectives and priorities
- Have the capability to sustain a 24-hour-7-day-per-week commitment to the incident
- Have the authority to commit agency or Company resources to the incident
- Have the authority to spend agency or Company funds
- Agree on an incident response organization
- Agree on the appropriate Command and General Staff assignments
- Commit to speak with "one voice" through the Public Information Officer or Joint Information Center
- Agree on logistical support procedures
- Agree on cost-sharing procedures

FIGURE 4.1

INCIDENT COMMAND SYSTEM

INCIDENT MANAGEMENT SYSTEM



4.7 ICS ROLES AND RESPONSIBILITIES

COMMON RESPONSIBILITIES

The following is a checklist applicable to all personnel in an Incident Command System organization:

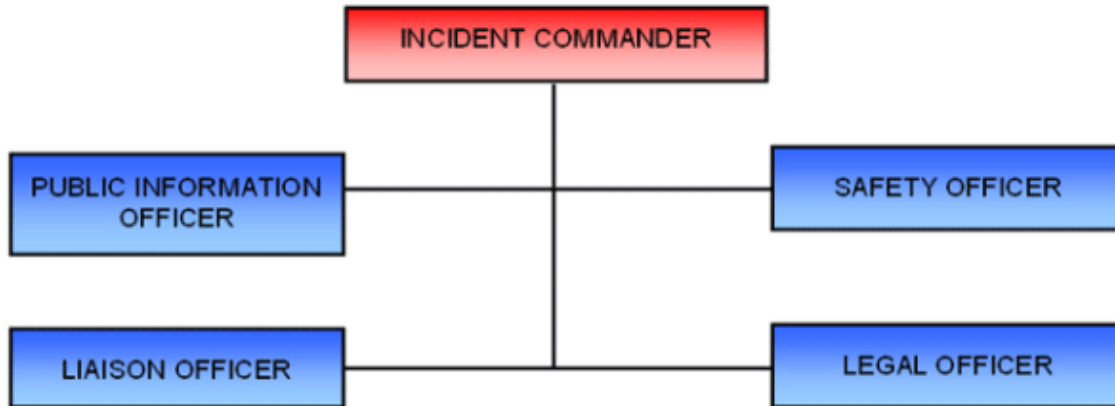
- Receive assignment, including:
 - Job assignment
 - Resource order number and request number
 - Reporting location
 - Reporting time
 - Travel instructions
 - Special communications instructions
- Upon arrival, check-in at designated check-in location.
- Receive briefing from immediate supervisor.
- Acquire work materials.
- Supervisors maintain accountability for assigned personnel.
- Organize and brief subordinates.
- Know your assigned radio frequency(s) and ensure communications equipment is operating properly.
- Use clear text and Incident Command System terminology (no codes) in all communications.
- Complete forms and reports required of the assigned position and send to Documentation Unit.
- Maintain unit records, including Unit Log (ICS Form 214).
- Respond to demobilization orders and brief subordinates regarding demobilization.

UNIT LEADER RESPONSIBILITIES

In Incident Command System, a Unit Leader's responsibilities are common to all units in all parts of the organization. Common responsibilities of Unit Leaders are listed below.

- Review common responsibilities.
- Receive briefing from Incident Commander, Section Chief or Branch Director, as appropriate.
- Participate in incident planning meetings, as required.
- Determine current status of unit activities.
- Order additional unit staff, as appropriate.
- Determine resource needs.
- Confirm dispatch and estimated time of arrival of staff and supplies.
- Assign specific duties to staff; supervise staff.
- Develop and implement accountability, safety and security measures for personnel and resources.
- Supervise demobilization of unit, including storage of supplies.
- Provide Supply Unit Leader with a list of supplies to be replenished.
- Maintain unit records, including Unit Log (ICS Form 214).

COMMAND



INCIDENT COMMANDER

- Assess the situation and/or obtain a briefing from the prior Incident Commander.
- Determine Incident Objectives and strategy.
- Establish the immediate priorities.
- Establish an Incident Command Post.
- Brief Command Staff and Section Chiefs.
- Review meetings and briefings.
- Establish an appropriate organization.
- Ensure planning meetings are scheduled as required. (Refer to Figure 4.2 "Operational Period Planning Cycle" for assistance).
- Approve and authorize the implementation of an Incident Action Plan.
- Ensure that adequate safety measures are in place.
- Coordinate activity for all Command and General Staff.
- Coordinate with key people and officials.
- Approve requests for additional resources or for the release of resources.
- Keep agency administrator informed of incident status.
- Approve the use of trainees, volunteers, and auxiliary personnel.
- Authorize release of information to the news media.
- Ensure incident Status Summary (ICS Form 209-CG) is completed and forwarded to appropriate higher authority.
- Order the demobilization of the incident when appropriate.
- Assign any of the Incident Commander roles and responsibilities to a Deputy Incident Commander as needed.

[Incident Commander's Checklist](#)

PUBLIC INFORMATION OFFICER

- Determine from the Incident Commander if there are any limits on information release.
- Develop material for use in media briefings.
- Obtain Incident Commander approval of media releases.
- Inform media and conduct media briefings.
- Arrange for tours and other interviews or briefings that may be required.
- Obtain media information that may be useful to incident planning.
- Maintain current information summaries and/or displays on the incident and provide information on the status of the incident to assigned personnel.

[Public Information Officer's Checklist](#)

LIAISON OFFICER

- Be a contact point for Agency Representatives.
- Maintain a list of assisting and cooperating agencies and Agency Representatives. Monitor check-in sheets daily to ensure that all Agency Representatives are identified.
- Assist in establishing and coordinating interagency contacts.
- Keep agencies supporting the incident aware of incident status.
- Monitor incident operations to identify current or potential inter-organizational problems.
- Participate in planning meetings, providing current resource status, including limitations and capability of assisting agency resources.
- Coordinate response resource needs for Natural Resource Damage Assessment and Restoration (NRDAR) activities with the Operations during oil and HAZMAT responses.
- Coordinate response resource needs for incident investigation activities with the Operations.
- Ensure that all required agency forms, reports and documents are completed prior to demobilization.
- Coordinate activities of visiting dignitaries.

[Liaison Officer's Checklist](#)

SAFETY OFFICER

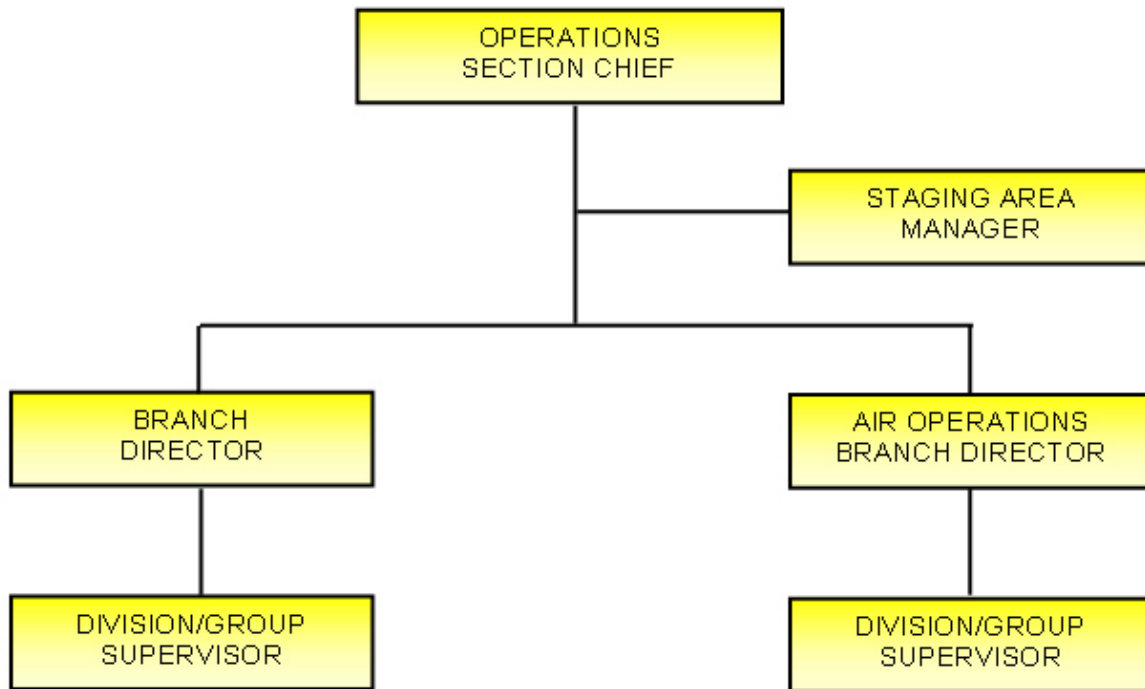
- Participate in planning meetings.
- Identify hazardous situations associated with the incident.
- Review the Incident Action Plan for safety implications.
- Exercise emergency authority to stop and prevent unsafe acts.
- Investigate accidents that have occurred within the incident area.
- Review and approve the medical plan.
- Develop the Site Safety Plan and publish Site Safety Plan summary (ICS Form 208) as required.

[Safety Officer's Checklist](#)

LEGAL OFFICER

- Participate in planning meetings, if requested.
- Advise on legal issues relating to in-situ burning, use of dispersants, and other alternative response technologies.
- Advise on legal issues relating to differences between Natural Resource Damage Assessment Restoration (NRDAR) and response activities.
- Advise on legal issues relating to investigations.
- Advise on legal issues relating to finance and claims.
- Advise on legal issues relating to response.

OPERATIONS



OPERATIONS SECTION GENERAL FUNCTIONS

- Responsible for managing tactical operations at the incident site directed toward reducing the immediate hazard, saving lives and property, establishing situational control, and restoring normal operations.
- Directs and coordinates all incident tactical operations.
- Executes the Incident Action Plan.

OPERATIONS SECTION CHIEF

- Develop operations portion of Incident Action Plan.
- Brief and assign Operations Section personnel in accordance with the Incident Action Plan.
- Supervise Operations Section.
- Determine need and request additional resources.
- Review suggested list of resources to be released and initiate recommendation for release of resources.
- Assemble and disassemble strike teams assigned to the Operations Section.
- Report information about special activities, events, and occurrences to the Incident Commander.
- Respond to resource requests in support of National Resource Damage Assessment and Restoration activities.

[Operations Section Chief's Checklist](#)

BRANCH DIRECTOR

- Develop with subordinates alternatives for Branch control operations.
- Attend planning meetings at the request of the Operations.
- Review Assignment List (ICS Form 204-CG) for Divisions/Groups within the Branch. Modify lists based on effectiveness of current operations.
- Assign specific work tasks to Division/Group Supervisors.
- Supervise Branch operations.
- Resolve logistic problems reported by subordinates.
- Report to Operations when: the Incident Action Plan is to be modified; additional resources are needed; surplus resources are available; or hazardous situations or significant events occur.
- Approve accident and medical reports originating within the Branch.

DIVISION/GROUP SUPERVISOR

- Implement Incident Action Plan for Division/Group.
- Provide the Incident Action Plan to Strike Team Leaders, when available.
- Identify increments assigned to the Division/Group.
- Review Division/Group assignments and incident activities with subordinates and assign tasks.
- Ensure that the Incident Commander and/or Resources Unit is advised of all changes in the status of resources assigned to the Division/Group.
- Coordinate activities with adjacent Division/Group.
- Determine need for assistance on assigned tasks.
- Submit situation and resources status information to the Branch Director or the Operations.
- Report hazardous situations, special occurrences, or significant events (e.g., accidents, sickness, discovery of unanticipated sensitive resources) to the immediate supervisor.
- Ensure that assigned personnel and equipment get to and from assignments in a timely and orderly manner.
- Resolve logistics problems within the Division/Group.
- Participate in the development of Branch plans for the next operational period.

STAGING AREA MANAGER

- Establish Staging Area layout.
- Determine any support needs for equipment, feeding, sanitation and security.
- Establish check-in function as appropriate.
- Post areas for identification and traffic control.
- Request maintenance service for equipment at Staging Area as appropriate.
- Respond to request for resource assignments.
- Obtain and issue receipts for radio equipment and other supplies distributed and received at Staging Area.
- Determine required resource levels from the Operations.
- Advise the Operations when reserve levels reach minimums.
- Maintain and provide status to Resource Unit of all resources in Staging Area.
- Demobilize Staging Area in accordance with the Incident Demobilization Plan.

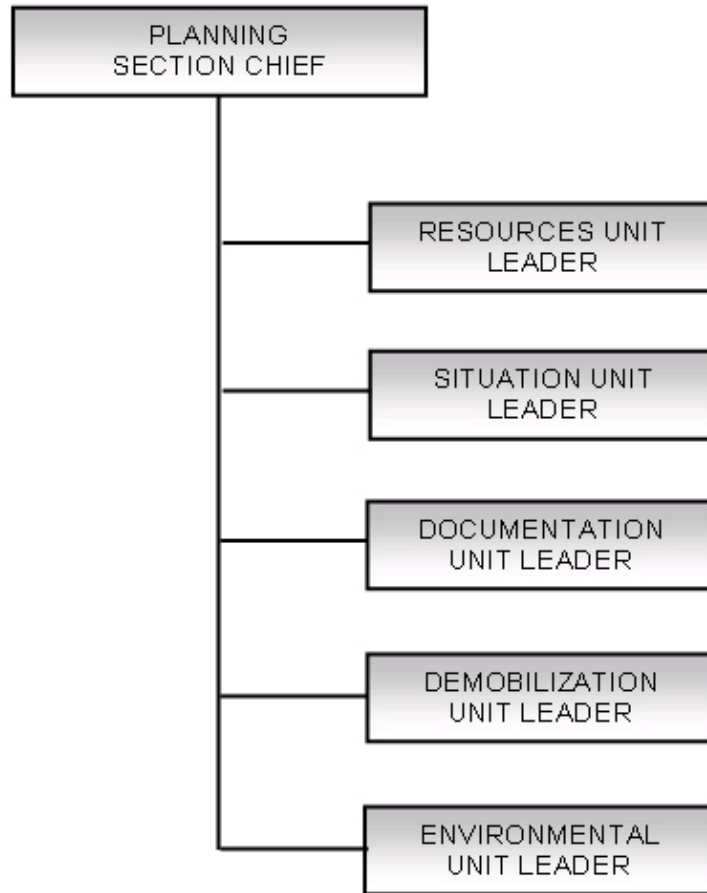
[Staging Area Manager's Checklist](#)

AIR OPERATIONS BRANCH DIRECTOR

- Organize preliminary air operations.
- Request declaration (or cancellation) of restricted air space
- Participate in preparation of the Incident Action Plan through the Operations. Insure that the air operations portion of the Incident Action Plan takes into consideration the Air Traffic Control requirements of assigned aircraft.
- Perform operational planning for air operations.
- Prepare and provide Air Operations Summary (ICS Form 220) to the Air Support Group and Fixed-Wing Bases.
- Determine coordination procedures for use by air organization with ground Branches, Divisions, or Groups.
- Coordinate with appropriate Operations Section personnel.
- Supervise all air operations activities associated with the incident.
- Evaluate helibase locations.
- Establish procedures for emergency reassignment of aircraft.
- Schedule approved flights of non-incident aircraft in the restricted air space area.
- Coordinate with the Operations Coordination Center (OCC) through normal channels on incident air operations activities.
- Inform the Air Tactical Group Supervisor of the air traffic situation external to the incident.
- Consider requests for non-tactical use of incident aircraft.
- Resolve conflicts concerning non-incident aircraft.
- Coordinate with Federal Aviation Administration.
- Update air operations plans.
- Report to the Operations on air operations activities.
- Report special incidents/accidents.
- Arrange for an accident investigation team when warranted.

[Air Operation Branch Director's Checklist](#)

PLANNING



PLANNING SECTION GENERAL FUNCTIONS

- Responsible for gathering, evaluating, and disseminating tactical information and intelligence critical to the incident.
- Maintaining incident documentation and providing documentation services.
- Preparing and documenting Incident Action Plans.
- Conducting long-range and/or contingency planning.
- Developing alternative strategies.
- Tracking resources assigned to the incident.
- Developing plans for waste disposal.
- Developing plans for demobilization.

PLANNING SECTION CHIEF

- Collect and process situation information about the incident.
- Supervise preparation of the Incident Action Plan.
- Provide input to the Incident Commander and the Operations in preparing the Incident Action Plan.
- Chair planning meetings and participate in other meetings as required. (Refer to Figure 4.2 "Operational Period Planning Cycle" for assistance).
- Reassign out-of-service personnel already on-site to Incident Command System organizational positions as appropriate.
- Establish information requirements and reporting schedules for Planning Section Units (e.g., Resources, Situation Units).
- Determine the need for any specialized resources in support of the incident.
- If requested, assemble and disassemble Strike Teams and Task Forces not assigned to Operations.
- Establish special information collection activities as necessary (e.g., weather, environmental, toxics, etc.).
- Assemble information on alternative strategies.
- Provide periodic predictions on incident potential.
- Report any significant changes in incident status.
- Compile and display incident status information.
- Oversee preparation and implementation of the Incident Demobilization Plan.
- Incorporate plans (e.g., Traffic, Medical, Communications, Site Safety) into the Incident Action Plan.

[Planning Section Chief's Checklist](#)

RESOURCES UNIT LEADER

- Establish the check-in function at incident locations.
- Prepare Organization Assignment List (ICS Form 203-CG) and Incident Organization (ICS Form 207-CG).
- Prepare appropriate parts of Assignment List (ICS Form 204).
- Prepare and maintain the Incident Command Post display (to include organization chart and resource allocation and deployment).
- Maintain and post the current status and location of all resources.
- Maintain master roster of all resources checked in at the incident.

SITUATION UNIT LEADER

- Begin collection and analysis of incident data as soon as possible.
- Prepare, post, or disseminate resource and situation status information as required, including special requests.
- Prepare periodic predictions or as requested by the Planning Section Chief.
- Prepare the Incident Status Summary (ICS Form 209-CG).
- Provide photographic services and maps if required.

DOCUMENTATION UNIT LEADER

- Set up work area; begin organization of incident files.
- Establish duplication service; respond to requests.
- File all official forms and reports.
- Review records for accuracy and completeness; inform appropriate units of errors or omissions.
- Provide incident documentation as requested.
- Store files for post-incident use.

[Documentation Unit Leader's Checklist](#)

DEMOBILIZATION UNIT LEADER

- Participate in planning meetings as required.
- Review incident resource records to determine the likely size and extent of demobilization effort.
- Based on the above analysis, add additional personnel, workspace, and supplies as needed.
- Coordinate demobilization with Agency Representatives.
- Monitor the on-going Operations Section resource needs.
- Identify surplus resources and probable release time.
- Develop incident check-out function for all units.
- Evaluate logistics and transportation capabilities to support demobilization.
- Establish communications with off-incident facilities, as necessary.
- Develop an Incident Demobilization Plan detailing specific responsibilities and release priorities and procedures.
- Prepare appropriate directories (e.g., maps, instructions, etc.) for inclusion in the demobilization plan.
- Distribute demobilization plan (on and off-site).
- Provide status reports to appropriate requestors.
- Ensure that all Sections/Units understand their specific demobilization responsibilities.
- Supervise execution of the Incident Demobilization Plan.
- Brief the Planning Section Chief on demobilization progress.

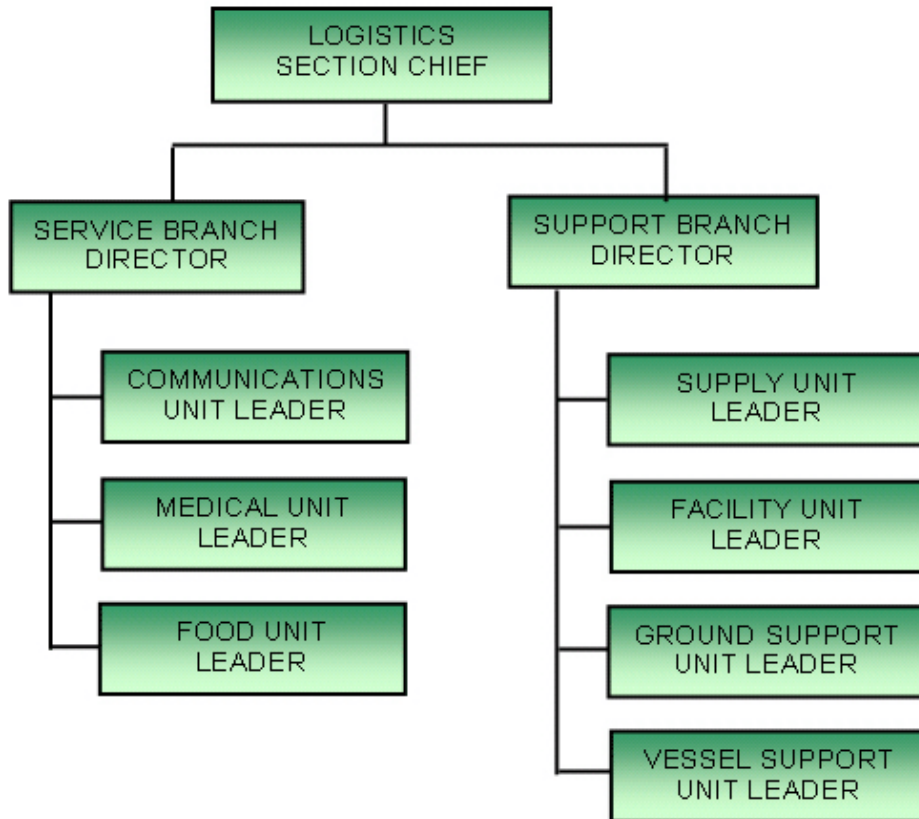
[Demobilization Unit Leader's Checklist](#)

ENVIRONMENTAL UNIT LEADER

- Participate in Planning Section meetings.
- Identify sensitive areas and recommend response priorities.
- Following consultation with natural resource trustees, provide input on wildlife protection strategies (e.g., removing oiled carcasses, pre-emptive capture, hazing, and/or capture and treatment).
- Determine the extent, fate and effects of contamination.
- Acquire, distribute and provide analysis of weather forecasts.
- Monitor the environmental consequences of cleanup actions.
- Develop shoreline cleanup and assessment plans. Identify the need for, and prepare any special advisories or orders.
- Identify the need for, and obtain, permits, consultations, and other authorizations including Endangered Species Act (ESA) provisions.
- Following consultation with the Federal OnScene Commander's Historical/Cultural Resources Technical Specialist identify and develop plans for protection of affected historical/cultural resources.
- Evaluate the opportunities to use various response technologies.
- Develop disposal plans.
- Develop a plan for collecting, transporting, and analyzing samples.

[Environmental Unit Leader's Checklist](#)

LOGISTICS



LOGISTICS SECTION GENERAL FUNCTIONS

- Responsible for all support requirements needed to facilitate effective and efficient incident management, including ordering resources from off-incident locations.
- Ordering, obtaining, maintaining, and accounting for essential personnel, equipment, and supplies.
- Providing communication planning and resources.
- Setting up food services.
- Setting up and maintaining incident facilities.
- Providing support transportation.
- Providing medical services to incident personnel.

LOGISTICS SECTION CHIEF

- Plan the organization of the Logistics Section.
- Assign work locations and preliminary work tasks to Section personnel.
- Notify the Resources Unit of the Logistics Section units activated including names and locations of assigned personnel.
- Assemble and brief Branch Directors and Unit Leaders.
- Participate in preparation of the Incident Action Plan.
- Identify service and support requirements for planned and expected operations.
- Provide input to and review the Communications Plan, Medical Plan and Traffic Plan.
- Coordinate and process requests for additional resources.
- Review the Incident Action Plan and estimate Section needs for the next operational period.
- Advise on current service and support capabilities.
- Prepare service and support elements of the Incident Action Plan.
- Estimate future service and support requirements.
- Receive Incident Demobilization Plan from Planning Section.
- Recommend release of Unit resources in conformity with Incident Demobilization Plan.
- Ensure the general welfare and safety of Logistics Section personnel.

[Logistics Section Chief's Checklist](#)

SERVICE BRANCH DIRECTOR

- Determine the level of service required to support operations.
- Confirm dispatch of Branch personnel.
- Participate in planning meetings of Logistics Section personnel.
- Review the Incident Action Plan.
- Organize and prepare assignments for Service Branch personnel.
- Coordinate activities of Branch Units.
- Inform the Logistics Section Chief of Branch activities.
- Resolve Service Branch problems.

COMMUNICATIONS UNIT LEADER

- Prepare and implement the Incident Radio Communications Plan (ICS Form 205-CG).
- Ensure the Incident Communications Center and the Message Center is established.
- Establish appropriate communications distribution/maintenance locations within the Base/Camp(s).
- Ensure communications systems are installed and tested.
- Ensure an equipment accountability system is established.
- Ensure personal portable radio equipment from cache is distributed per Incident Radio Communications Plan.
- Provide technical information as required on:
 - Adequacy of communications systems currently in operation.
 - Geographic limitation on communications systems.
 - Equipment capabilities/limitations.
 - Amount and types of equipment available.
 - Anticipated problems in the use of communications equipment.
- Supervise Communications Unit activities.
- Maintain records on all communications equipment as appropriate.
- Ensure equipment is tested and repaired.
- Recover equipment from Units being demobilized.

[Communication's Unit Leader's Checklist](#)

MEDICAL UNIT LEADER

- Participate in Logistics Section/Service Branch planning activities.
- Prepare the Medical Plan (ICS Form 206-CG).
- Prepare procedures for major medical emergency.
- Declare major emergency as appropriate.
- Respond to requests for medical aid, medical transportation, and medical supplies.
- Prepare and submit necessary documentation.

[Medical Unit Leader's Checklist](#)

FOOD UNIT LEADER

- Determine food and water requirements.
- Determine the method of feeding to best fit each facility or situation.
- Obtain necessary equipment and supplies and establish cooking facilities.
- Ensure that well-balanced menus are provided.
- Order sufficient food and potable water from the Supply Unit.
- Maintain an inventory of food and water.
- Maintain food service areas, ensuring that all appropriate health and safety measures are being followed.
- Supervise caterers, cooks, and other Food Unit personnel as appropriate.

[Food Unit Leader's Checklist](#)

SUPPORT BRANCH DIRECTOR

- Determine initial support operations in coordination with the Logistics Section Chief and Service Branch Director.
- Prepare initial organization and assignments for support operations.
- Assemble and brief Support Branch personnel.
- Determine if assigned Branch resources are sufficient.
- Maintain surveillance of assigned units work progress and inform the Logistics Section Chief of their activities.
- Resolve problems associated with requests from the Operations Section.

SUPPLY UNIT LEADER

- Participate in Logistics Section/Support Branch planning activities.
- Determine the type and amount of supplies en route.
- Review the Incident Action Plan for information on operations of the Supply Unit.
- Develop and implement safety and security requirements.
- Order, receive, distribute, and store supplies and equipment.
- Receive and respond to requests for personnel, supplies, and equipment.
- Maintain an inventory of supplies and equipment.
- Service reusable equipment.
- Submit reports to the Support Branch Director.

[Supply Unit Leader's Checklist](#)

FACILITY UNIT LEADER

- Review the Incident Action Plan.
- Participate in Logistics Section/Support Branch planning activities.
- Determine requirements for each facility, including the Incident Command Post (See Figure 2.6 for list of hotels).
- Prepare layouts of incident facilities.
- Notify Unit Leaders of facility layout.
- Activate incident facilities.
- Provide Base and Camp Managers and personnel to operate facilities.
- Provide sleeping facilities.
- Provide security services.
- Provide facility maintenance services (e.g., sanitation, lighting, clean up).
- Demobilize Base and Camp facilities.
- Maintain facility records.

[Facility Unit Leader's Checklist](#)

GROUND SUPPORT UNIT LEADER

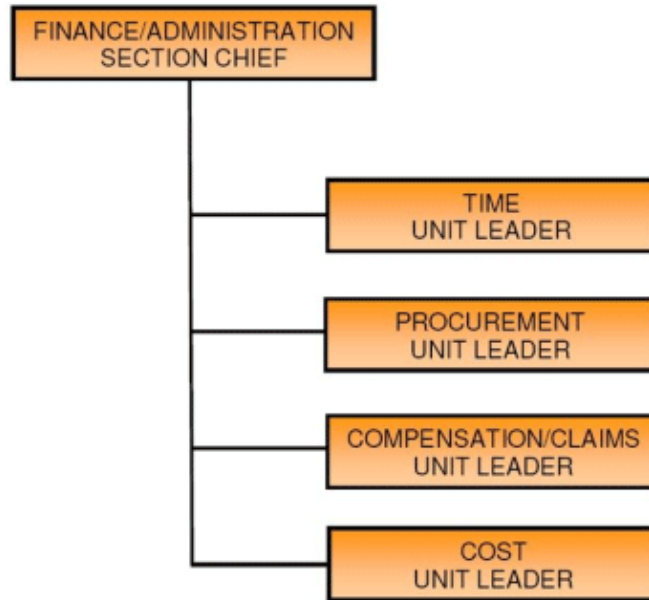
- Participate in Support Branch/Logistics Section planning activities.
- Develop and implement the Traffic Plan.
- Support out-of-service resources.
- Notify the Resources Unit of all status changes on support and transportation vehicles.
- Arrange for and activate fueling, maintenance, and repair of ground resources.
- Maintain Support Vehicle Inventory and transportation vehicles (ICS Form 218).
- Provide transportation services, in accordance with requests from the Logistics Section Chief or Support Branch Director.
- Collect information on rented equipment.
- Requisition maintenance and repair supplies (e.g., fuel, spare parts).
- Maintain incident roads.
- Submit reports to Support Branch Director as directed.

[Ground Support Unit Leader's Checklist](#)

VESSEL SUPPORT UNIT LEADER

- Participate in Support Branch/Logistics Section planning activities.
- Coordinate development of the Vessel Routing Plan.
- Coordinate vessel transportation assignments with the Protection and Recovery Branch or other sources of vessel transportation.
- Coordinate water-to-land transportation with the Ground Support Unit, as necessary.
- Maintain a prioritized list of transportation requirements that need to be scheduled with the transportation source.
- Support out-of-service vessel resources, as requested.
- Arrange for fueling, dockage, maintenance and repair of vessel resources, as requested.
- Maintain inventory of support and transportation vessels.

FINANCE/ADMINISTRATION



FINANCE/ADMINISTRATION SECTION GENERAL FUNCTIONS

- Responsible for all financial and cost analysis aspects of an incident. (Note: Not all incidents will require a separate Finance/Administration Section. In cases that require only one specific function (e.g., cost analysis), this service may be provided by a member of the Planning Section.)
- Administering any contract negotiation.
- Providing cost analysis as it pertains to the Incident Action Plan.
- Maintaining cost associated with the incident.
- Tracking personnel and equipment time.
- Addressing compensation for injury or damage to property issues.

FINANCE/ADMINISTRATION SECTION CHIEF

- Attend planning meetings as required.
- Manage all financial aspects of an incident.
- Provide financial and cost analysis information as requested.
- Gather pertinent information from briefings with responsible agencies.
- Develop an operating plan for the Finance/Administration Section; fill supply and support needs.
- Determine the need to set up and operate an incident commissary.
- Meet with assisting and cooperating agency representatives, as needed.
- Maintain daily contact with agency(s) administrative headquarters on Finance/ Administration matters.
- Ensure that all personnel time records are accurately completed and transmitted, according to policy.
- Provide financial input to demobilization planning.
- Ensure that all obligation documents initiated at the incident are properly prepared and completed.
- Brief administrative personnel on all incident-related financial issues needing attention or follow-up prior to leaving incident.

[Finance/Administration Section Chief's Checklist](#)

TIME UNIT LEADER

- Determine incident requirements for time recording function.
- Determine resource needs.
- Contact appropriate agency personnel/representatives.
- Ensure that daily personnel time recording documents are prepared and in compliance with policy.
- Establish time unit objectives.
- Maintain separate logs for overtime hours.
- Establish commissary operation on larger or long-term incidents as needed.
- Submit cost estimate data forms to the Cost Unit, as required.
- Maintain records security.
- Ensure that all records are current and complete prior to demobilization.
- Release time reports from assisting agency personnel to the respective Agency Representatives prior to demobilization.
- Brief the Finance/Administration Section Chief on current problems and recommendations, outstanding issues, and follow-up requirements.

PROCUREMENT UNIT LEADER

- Review incident needs and any special procedures with Unit Leaders, as needed.
- Coordinate with local jurisdiction on plans and supply sources.
- Obtain the Incident Procurement Plan.
- Prepare and authorize contracts and land-use agreements.
- Draft memoranda of understanding as necessary.
- Establish contracts and agreements with supply vendors.
- Provide for coordination between the Ordering Manager, agency dispatch, and all other procurement organizations supporting the incident.
- Ensure that a system is in place that meets agency property management requirements. Ensure proper accounting for all new property.
- Interpret contracts and agreements; resolve disputes within delegated authority.
- Coordinate with the Compensation/Claims Unit for processing claims.
- Coordinate use of impress funds, as required.
- Complete final processing of contracts and send documents for payment.
- Coordinate cost data in contracts with the Cost Unit Leader.
- Brief the Finance/Administration Section Chief on current problems and recommendations, outstanding issues, and follow-up requirements.

COMPENSATION/CLAIMS UNIT LEADER

- Establish contact with the incident Security Officer and Liaison Officer (or Agency Representatives if no Liaison Officer is assigned).
- Determine the need for Compensation for Injury and Claims Specialists and order personnel as needed.
- Establish a Compensation for Injury work area within or as close as possible to the Medical Unit.
- Review Medical Plan (ICS Form 206-CG).
- Ensure that Compensation/Claims Specialists have adequate workspace and supplies.
- Review and coordinate procedures for handling claims with the Procurement Unit.
- Brief the Compensation/Claims Specialists on incident activity.
- Periodically review logs and forms produced by the Compensation/Claims Specialists to ensure that they are complete, entries are timely and accurate and that they are in compliance with agency requirements and policies.
- Ensure that all Compensation for Injury and Claims logs and forms are complete and routed appropriately for post-incident processing prior to demobilization.
- Keep the Finance/Administration Section Chief briefed on Unit status and activity.
- Demobilize unit in accordance with the Incident Demobilization Plan.

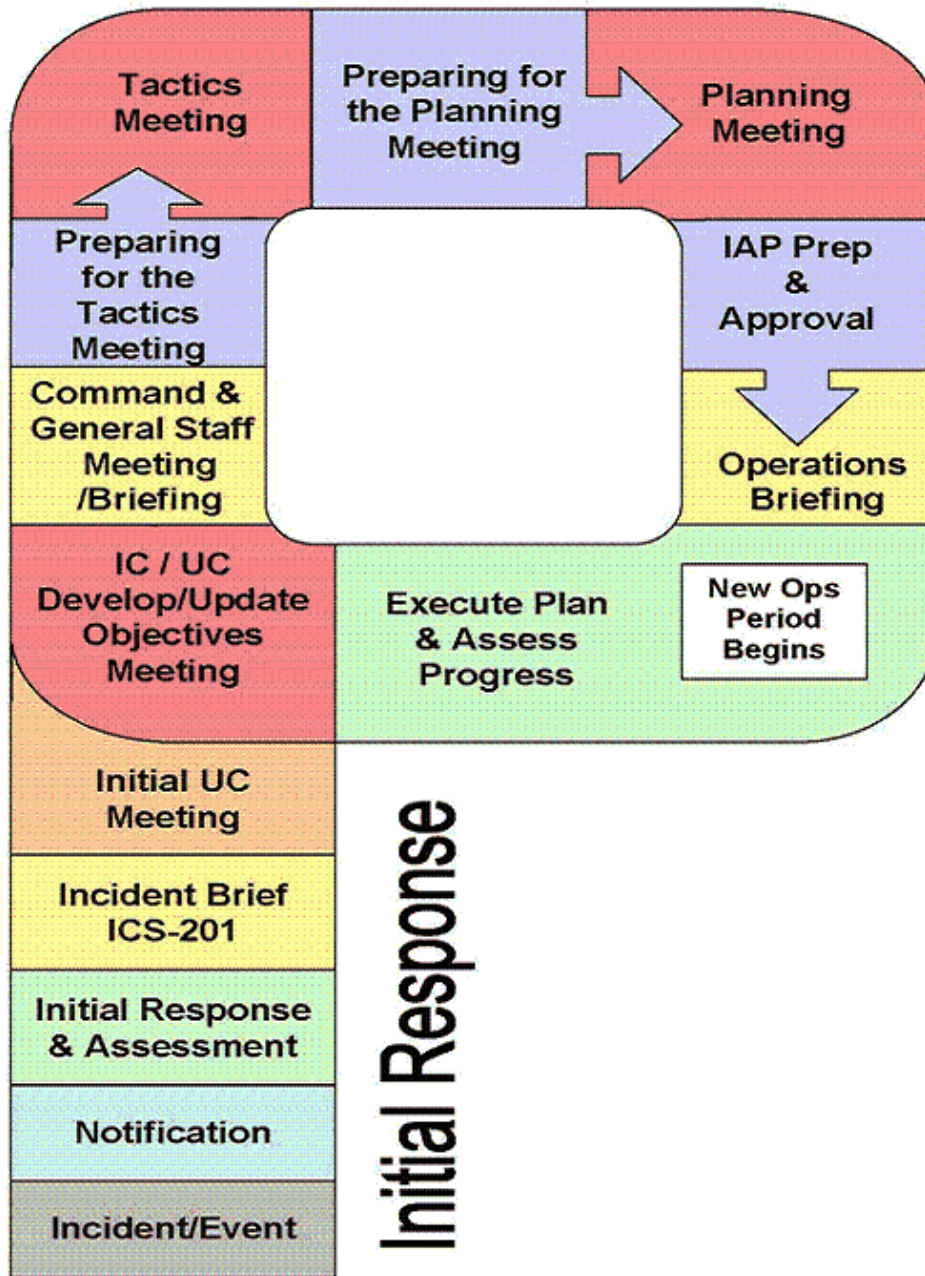
COST UNIT LEADER

- Coordinate cost reporting procedures.
- Collect and record all cost data.
- Develop incident cost summaries.
- Prepare resources-use cost estimates for the Planning Section.
- Make cost-saving recommendations to the Finance/Administration Section Chief.
- Ensure all cost documents are accurately prepared.
- Maintain cumulative incident cost records.
- Complete all records prior to demobilization.
- Provide reports to the Finance/Administration Section Chief.

FIGURE 4.2

UNITED STATES COAST GUARD
Operations Period Planning

The Operational Planning "P"



5.0 RESPONSE PLANNING

5.1 [Incident Action Plan](#)

5.2 [Site Safety Plan](#)

5.1 INCIDENT ACTION PLAN

Emergency response activities are planned and coordinated through the use of an Incident Action Plan (IAP), which is developed for each Operational Period of a response by the Initial Response Team. For small responses, an ICS 201 may be used as the Incident Action Plan and, for all incidents, the ICS 201 will serve as the initial Incident Action Plan.

For larger or more complex incidents, a more complete Incident Action Plan will be necessary. These Incident Action Plans are generally created through the completion and compilation of several standard Incident Command System forms. These forms include, but are not limited to:

ICS FORM NUMBER	FORM TITLE	PREPARED BY
IAP Cover Sheet	ICS IAP Cover Sheet	Planning Section - Situation Unit Leader
201-CG	Incident Briefing	Command Section - Initial Response Incident Commander
202-CG	Incident Objectives	Planning Section - Planning Section Chief
203-CG	Organization Assignment List	Planning Section - Resources Unit Leader
204-CG	Assignment List	Operations Section - Chief & Resources Unit Leader
204a-CG	Assignment List Attachment	Operations Section - Chief & Resources Unit Leader
205-CG	Incident Radio Communication Plan	Logistics Section - Communication Unit Leader
205a-CG	Communications List	Logistics Section - Communication Unit Leader
206-CG	Medical Plan	Logistics Section - Medical Unit Leader
207-CG	Incident Organization	Planning Section - Resources Unit Leader
209-CG	Incident Status Summary	Command Section - Incident Commander
211-CG	Check-In List	
213-RR CG	Resource Request Message	
214-CG	Unit Log	Planning Section - Situation Unit Leader
215-CG	Operational Planning Worksheet	
215A-CG	Incident Action Plan Safety Analysis	
218	Support Vehicle Inventory	Logistics Section - Ground Support Unit Leader
220-CG	Air Operations Summary	Operations Section - Air Operations Branch Director
230-CG	Daily Meeting Schedule	
232-CG	Resources at Risk Summary	Planning Section - Situation Unit Leader
232a-CG	ACP Site Index	
233-CG	Incident Open Action Tracker	
234-CG	Work Analysis Matrix	
235-CG	Facility Needs Assessment Worksheet	

	Site Safety Plan	Command Section - Safety Officer
	Employee Certification Page	
	Media Statement	

Depending on the nature and severity of the emergency, additional documents may be included in the Incident Action Plan. These may include:

- Sensitivity Maps (Provided in Section 6)
- Waste Management and Disposal Plans (Provided in Appendix E)
- Plans for use of Alternative Technologies (Dispersant/In-situ Burning/ Bioremediation)
- Security Plans
- Decontamination Plans
- Traffic Plans

5.2 SITE SAFETY PLAN

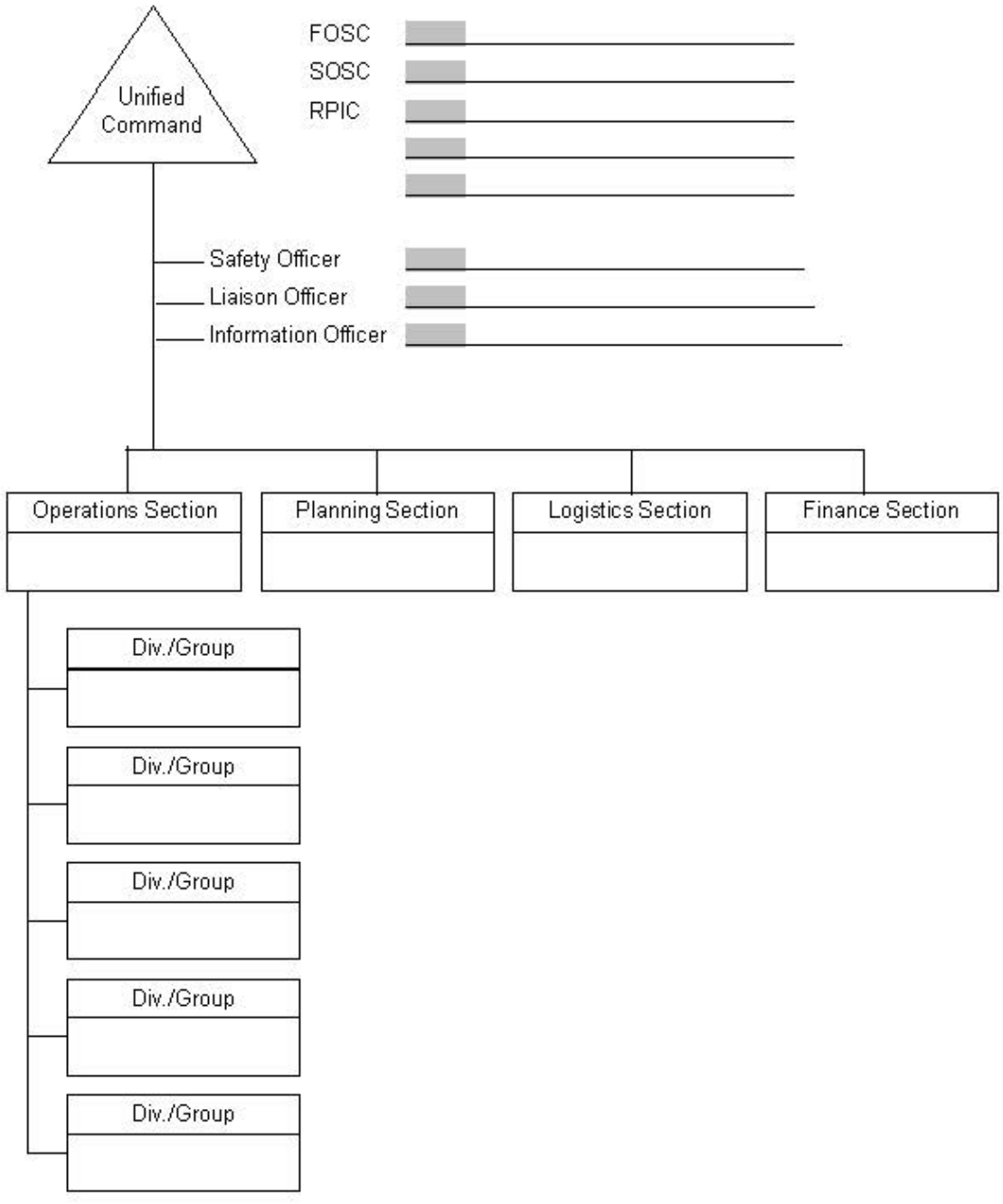
Site Safety Plans (SSPs) are required by United States Occupational Safety and Health Administration (29 CFR 1910.120(b)(4)) for all hazardous waste operations. The Site Safety Plan should address all on-site operations and hazardous as well as on-site emergency procedures.

The Site Safety Plan is typically prepared by the Safety Officer and approved by the Incident Commander. All personnel must be familiar with the contents of the Site Safety Plan and the Site Safety Plan must be updated as conditions, operations and hazards associated with the response change.

1. Incident Name █	2. Operational Period to be covered by IAP (Date/Time) From: █ To: █	IAP COVER SHEET
3. Approved by:		
FOSC	█ _____	
SOSC	█ _____	
RPIC	█ _____	
█	█ _____	
█	█ _____	
INCIDENT ACTION PLAN		
The items checked below are included in this Incident Action Plan:		
<input type="checkbox"/> ICS 202-OS (Response Objectives) <hr/>		
<input type="checkbox"/> ICS 203-OS (Organization List) – OR – ICS 207-OS (Organization Chart) <hr/>		
<input type="checkbox"/> ICS 204-OSs (Assignment Lists) One Copy each of any ICS 204-OS attachments:		
<input type="checkbox"/>	Map	
<input type="checkbox"/>	Weather forecast	
<input type="checkbox"/>	Tides	
<input type="checkbox"/>	Shoreline Cleanup Assessment Team Report for location	
<input type="checkbox"/>	Previous day's progress, problems for location	
<hr/> <input type="checkbox"/> ICS 205-OS (Communications List) <hr/>		
<input type="checkbox"/> ICS 206-OS (Medical Plan)		
<input type="checkbox"/>	█ _____	
<input type="checkbox"/>	█ _____	
<input type="checkbox"/>	█ _____	
<input type="checkbox"/>	█ _____	
<input type="checkbox"/>	█ _____	
<input type="checkbox"/>	█ _____	
4. Prepared by: █ Date/Time █		
IAP COVER SHEET June 2000		

1. Incident Name [Redacted]	2. Prepared by: (name) [Redacted] Date: [Redacted] Time: [Redacted]	INCIDENT BRIEFING ICS 201-CG
3. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines, or other graphics depicting situational and response status) [Redacted]		
4. Current Situation: [Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		
[Redacted]		

1. Incident Name [Redacted]	2. Prepared by: (name) [Redacted] Date: [Redacted] Time: [Redacted]	INCIDENT BRIEFING ICS 201-CG
5. Initial Response Objectives, Current Actions, Planned Actions		
[Redacted]	[Redacted]	
[Redacted]	[Redacted]	
[Redacted]	[Redacted]	
[Redacted]	[Redacted]	
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1. Incident Name █	2. Prepared by: (name) █ Date: █ Time: █	INCIDENT BRIEFING ICS 201-CG
3. Current Organization		
		

1. Incident Name █	2. Operational Period (Date/Time) From: █ To: █	INCIDENT OBJECTIVES ICS 202-CG
3. Objective(s) █		
4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions) █		
Approved Site Safety Plan Located at: █		
5. Prepared by: (Planning Section Chief) █		Date/Time █

SITE SAFETY PLAN

I. General

Pump Station Pipeline Spill Spill to Water Excavation Other: _____

Location: _____

Work to be performed: _____

Issuing Date: _____ Time: _____
 Temperature: _____ ° Wind Direction: _____
 Humidity: _____

II. Hazards to be Evaluated

				SPECIFIC HAZARDS				
Y	N	Y	N	Y	N			
<input type="checkbox"/>	<input type="checkbox"/>	Oxygen Deficient/Enriched	<input type="checkbox"/>	<input type="checkbox"/>	Ingestion / Skin Absorption	<input type="checkbox"/>	<input type="checkbox"/>	Crude Oil
<input type="checkbox"/>	<input type="checkbox"/>	Flammable Atmosphere (Explosion Fire)	<input type="checkbox"/>	<input type="checkbox"/>	Frostbite	<input type="checkbox"/>	<input type="checkbox"/>	Other* ()
<input type="checkbox"/>	<input type="checkbox"/>	Toxic Atmosphere: _____	<input type="checkbox"/>	<input type="checkbox"/>	Chemical/MSDS # _____ (Must be attached)			
<input type="checkbox"/>	<input type="checkbox"/>	Boat Operations	<input type="checkbox"/>	<input type="checkbox"/>	Physical Hazard _____			
<input type="checkbox"/>	<input type="checkbox"/>	Confined Space	<input type="checkbox"/>	<input type="checkbox"/>	Traffic _____			
			<input type="checkbox"/>	<input type="checkbox"/>	Vapor Cloud			

III. Testing & Monitoring (Check required items)

Tests are to be performed in the order listed.

ACCEPTABLE ENTRY CONDITIONS

Y	N		Continuous	Frequency	ACCEPTABLE ENTRY CONDITIONS		
					SPECIAL WORK PRACTICES OR PPE REQUIRED	LEAVE AREA WORK EFFORTS SHOULD BE DIRECTED AT REDUCING CONCENTRATIONS	LEAVE AREA WORK EFFORTS SHOULD BE DIRECTED AT REDUCING CONCENTRATIONS
<input type="checkbox"/>	<input type="checkbox"/>	Oxygen Level	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____	19.5 – 23.0% in air	< 19.5% or 23.0% in air	< 16.0 or ≥ 23.5% in air
<input type="checkbox"/>	<input type="checkbox"/>	LEL	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____	< 10% in air	≥ 10.0 but < 20.0% in air	≥ 20.0% in air
<input type="checkbox"/>	<input type="checkbox"/>	Hydrogen Sulfide	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____	< 10 ppm	≥ 10 but < 100 ppm	≥ 100 ppm
<input type="checkbox"/>	<input type="checkbox"/>	Benzene	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____	< 5 ppm	≥ 5 but < 10 ppm	≥ 10 ppm
<input type="checkbox"/>	<input type="checkbox"/>	Total Hydrocarbons	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____	< 300 ppm	≥ 300 but < 750 ppm	≥ 750 ppm
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____			

IV. Required Personal Protective Equipment (Check for required use)

General	Eye Prot.	Respiratory Prot.	Hearing Prot.	Gloves	Footwear	Clothing
<input type="checkbox"/> Hard Hat	<input type="checkbox"/> Safety Glasses	<input type="checkbox"/> SCBA/Air Line w/Escape	<input type="checkbox"/> Ear Plugs	<input type="checkbox"/> Leather	<input type="checkbox"/> Steel-toes	<input type="checkbox"/> FR Coveralls
<input type="checkbox"/> Safety Harness	<input type="checkbox"/> Goggles	<input type="checkbox"/> Air Line	<input type="checkbox"/> Ear Muffs	<input type="checkbox"/> Rubber	<input type="checkbox"/> Rubber	<input type="checkbox"/> Tyvek
<input type="checkbox"/> PFD	<input type="checkbox"/> Face-shield	<input type="checkbox"/> Air Purifying (Full Mask)	<input type="checkbox"/> Combination	<input type="checkbox"/> Nitrile	<input type="checkbox"/> Hip-boots	<input type="checkbox"/> Coated Tyvek
	<input type="checkbox"/> Tinted Lens	Cartridge Type: <input type="checkbox"/> OV	<input type="checkbox"/> Hepa-OVV	<input type="checkbox"/> PVC	<input type="checkbox"/> _____	<input type="checkbox"/> Saranox

Any other special PPE: _____

V. Emergency Information and Rescue Services

Emergency Contact Person: _____ Contact by: _____
 Fire Department: _____ Contact by: _____
 Ambulance: _____ Contact by: _____
 Hospital: _____ Contact by: _____
 Rescue Services: _____ Contact by: _____
 (if not provided by above)

VI. Required Safety & Rescue Equipment (on site)

<input type="checkbox"/> Lights	<input type="checkbox"/> Fall Protection	<input type="checkbox"/> First Aid Kit	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Tripod	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Ladder	<input type="checkbox"/> Retrieval Lines	<input type="checkbox"/> Resuscitator	<input type="checkbox"/> Communication Method _____			

VII. Comments or Special Work Procedures

VIII. Report All Injuries Immediately

IX. Control Measures

<ul style="list-style-type: none"> Isolation & Lockout (identify items to be locked out) 	<ul style="list-style-type: none"> Ventilation <input type="checkbox"/> Natural <input type="checkbox"/> Mechanical
<ul style="list-style-type: none"> Establish Work Zones when completed 	<ul style="list-style-type: none"> Continuous <input type="checkbox"/> No <input type="checkbox"/> Yes
<input type="checkbox"/> Hot Zone = Red Ribbon	<ul style="list-style-type: none"> Flagman / Watchman <input type="checkbox"/>
<input type="checkbox"/> Warm Zone = Yellow Ribbon	<ul style="list-style-type: none"> Confined Space – Safety Watch <input type="checkbox"/>
<input type="checkbox"/> Cold Zone = Blue Ribbon	<ul style="list-style-type: none"> Evacuation Routes – (Identify on Map)
	<input type="checkbox"/> Air Horn – Emergency
	<input type="checkbox"/> Primary Route
	<input type="checkbox"/> Secondary Route

6.0 SPILL IMPACT CONSIDERATIONS

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6.1 CRITICAL AREAS TO PROTECT

The critical areas to protect are classified as high, moderate, and low sensitivity to oil for non-coastal/inland environments. The Federal, Province/State, and Local authorities will further clarify these categories at the time of the response. The categories are defined as follows:

HIGH SENSITIVITY

- Areas which are high in productivity, abundant in many species, extremely sensitive, difficult to rehabilitate, or inhabited by threatened/endangered species.
- Areas which consist of forested areas, brush/grassy areas, wooded lake areas, freshwater marshes, wildlife sanctuaries/refuges, and vegetated river/stream banks.

MODERATE SENSITIVITY

- Areas of moderate productivity, somewhat resistant to the effects of oiling.
- Areas which consist of degraded marsh habitat, clay/silt banks with vegetated margins, and gravel/cobble beaches.

LOW SENSITIVITY

- Areas of low productivity, man-made structures, and/or high energy.
- Areas which consist of gravel, sand, or clay material, barren/rocky riverbanks and lake edges, man-made structures, and concrete/compacted earthen drainage ditches.

6.2 ENVIRONMENTAL/SOCIO-ECONOMIC SENSITIVITIES

Environmental/Socio-economic sensitivities are of extreme importance when planning a response effort. The health and safety of the public and the environment, as well as the protection of the various socio-economic sensitivities, must be promptly addressed in order to mitigate the extent of damage and minimize the cost of the clean-up effort.

It is important to protect archeological sites and heritage resources (e.g. National Parks, National Marine Conservation Areas, and National Historic Sites). Impacted archeological sites or heritage resources of an area need to be identified and the likely impacts that result from the activities should be addressed. Specific consideration should be given to access to, and general use and disturbance of areas. The assessment should consider both direct and indirect impacts, cultural protocols and strategies for minimizing impacts. Consultation with local indigenous communities should occur as part of the planning process.

The Company will explore, where appropriate, equivalent environmental protection systems, methods, devices, or technologies that maintain or may be less damaging to the character of heritage resources or archeological sites. If a release from the pipeline impacts a heritage resource, the Company will respond as outlined in Section 3.0, report to the appropriate authority prescribed by law, cleanup and restore the area as required by regulation, and conduct such sampling, analyses, or associated monitoring during and after restoration.

All environmental/socio-economic sensitivities are worthy of protection, but must be prioritized during a response effort. When making decisions on which areas to designate as collection areas and which to protect, the following sources may be consulted:

- Canadian Wildlife Services, U.S. Fish and Wildlife Service and related province/ state agencies
- Applicable Area Contingency Plans
- Other industry and private experts
- Indigenous groups

The environmental and socio-economic sensitivities in the vicinity of the Pipeline have been broken down into specific categories and identified in this Section. To further clarify the location of the sensitive areas of concern, references to published Area Contingency Plans and Environmental Sensitivity Maps are also provided in this section.

6.3 FISHERIES AND WILDLIFE PROTECTION

The Company will work with Federal, Province/State, and local agency personnel to provide labor and transportation to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill, as necessary. Oversight of the Company's wildlife preservation activities and coordination with Federal, Province/State, and Local agencies during an oil spill is the responsibility of the Incident Commander.

Protecting fish habitat (e.g. spawning and rearing grounds) is important to both consumers and commercial fisheries. Beyond typical response strategies, other options could include moving floating facilities, temporarily sinking facilities using cages designed for this purpose, temporary suspension of water intakes, or closing sluice gates to isolate the facilities from contamination.

Special consideration should be given to the protection and rehabilitation of endangered species and other wildlife and their habitat in the event of an oil spill and subsequent response. Jurisdictional authorities should be notified and worked with closely on all response/clean-up actions related to wildlife protection and rehabilitation. Laws with significant penalties are in place to ensure appropriate protection of these species.

Wildlife Rescue

The Company will work with Federal, Province/State, and Local agency personnel to provide labor and transportation to retrieve, clean, and rehabilitate wildlife affected by an oil spill, as the situation demands.

The following are items which should be considered for wildlife rescue and rehabilitation during a spill response:

- Bird relocation can be accomplished using a variety of deterrents, encouraging birds to avoid areas of spilled oil. Bird relocation can be accomplished by utilizing deterrent methods including:
 - Use of visual stimuli, such as inflatable bodies, owls, stationary figures, or helium balloons, etc.
 - Use of auditory stimuli, such as propane cannons, recorded sounds, or shell crackers.
 - Use of herding with aircraft, boats, vehicles, or people (as appropriate). Use of capture and relocation.

Search and Rescue - Points to consider

- **The Company's involvement should be limited to offering assistance as needed or requested by the agencies.**
- Prior to initiating any organized search and rescue plan, **authorization must be obtained from the appropriate Federal/State agency.**
- **Initial search and rescue efforts, if needed, should be left up to the appropriate agencies.**

They have the personnel, equipment, and training to immediately begin capturing contaminated wildlife.

- With or without authorization, it must be anticipated that volunteer citizens will aid distressed/contaminated wildlife on their own. It is important to communicate that it may be illegal to handle wildlife without express authority from appropriate agencies. Provisions should be made to support an appropriate rehabilitator; however, **no support should be given to any unauthorized volunteer rescue efforts.**
- The regulatory agencies and response personnel should be provided the name and location of a qualified rehabilitator in the event contaminated wildlife is captured.
- Resources and contacts that can assist with wildlife rescue and rehabilitation are provided in Section 2.0. This list includes:
 - Outside rehabilitation organizations
 - Local regulatory agencies
 - Other resources

6.4 STAGING AREAS

When establishing personnel and equipment staging areas for a response to a Pipeline discharge, the following criteria should be evaluated:

- Access to waterborne equipment launching facilities and/or land equipment.
- Access to open space for staging/deployment of heavy equipment and personnel.
- Access to public services utilities (electricity, potable water, public phone, restroom and washroom facilities, etc.).
- Access to the environmental and socio-economically sensitive areas which are projected for impact.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT

General descriptions of various specific response techniques that may be applied during a response effort are discussed below. Company responders are free to use all or any combination of these methods as incident conditions require, provided they meet the appropriate safety standards and other requirements relative to the situation encountered. Data was obtained from reports, manuals and pamphlets prepared by the American Petroleum Institute, Environmental Protection Agency, and the United States Coast Guard. The most effective cleanup of a product spill will result from an integrated combination of clean-up methods. Each operation should complement and assist related operations and not merely transfer spillage problems to areas where they could be more difficult to handle.

The spill should be assessed as soon as possible to determine the source, extent and location of travel. Terrain and other physical conditions downgradient of the spill site will determine the methods of control at a point in advance of the moving product. Often, the bulk of a spill can be contained at a single location or a few key locations in the immediate vicinity of the source point. When possible, the execution of this type of initial containment strategy helps confine a spill to a relatively limited area.

Spill on Land (Soil Surfaces)

• Containment Methods

Product can be trapped in ditches and gullies by earth dams. Where excavating machinery is available, dams can be bulldozed to contain lakes of product. Dams, small and large, should be effectively employed to protect priority areas such as inlets to drains, sewers, ducts and watercourses. These can be constructed of earth, sandbags, absorbents, planks or any other effective method. If time does not permit a large dam, many small ones can be made, each one holding a portion of the spill as it advances. The terrain will dictate the placement of the dams. If the spill is minor, natural dams or earth absorption will usually stop the product before it advances a significant distance. Cleanup is the main concern in such situations.

In situations where vapors from a spill present a clear and present danger to property or life (possible ignition because of passing automobiles, nearby houses, or work vehicles approaching the area), spraying the surface of the spill with dispersant will greatly reduce the release of additional vapors from the product. This method is especially adapted to gasoline spills on soil surfaces.

• Removal Methods

The recovery and removal of free product from soil surfaces is a difficult job. The best approaches at present seem to be:

- Removal with suction equipment to tank truck if concentrated in volumes large enough to be picked up. Channels can be formed to drain pools of product into storage pits. The suction equipment can then be used.
- Small pockets may have to be dipped up by hand.
- If practicable after removal of the bulk of the spill, controlled burning presents the possibility of a fast, simple, and inexpensive method of destruction of the remainder of the product. If all other options have been executed and the site is still unsafe for further activity because explosive vapors persist, the vapors may need to be intentionally ignited to prevent an accumulation sufficient to become an explosive mixture, provided the other requirements of these guidelines for controlled burning are met.

Intentional ignition to remove released product should be utilized only if all of the following conditions are met:

- Other steps and procedures have been executed and a determination has been made that this is the safest remaining method of control.
- Intentional burning will not unduly damage pipelines, adjacent property, or the environment.
- Controlled burning is permitted by government authorities. Local government authorities to be contacted may include city council, county board of commissioners, city or county fire chiefs, the county forestry commission or fire tower, and the local environmental protection agency. In seeking permission from these authorities, be prepared to convince them that adequate safety precautions have been and will be taken during the operation.
- Controlled burning is conducted with the consent of local land owners.
- Safety must always be a prime consideration when considering controlled burning of product. Sparks and heat radiation from large fires can start secondary fires and strong winds make fire control difficult. There must be no danger of the fire spreading beyond control limits. All persons must be at a safe distance from the edge of the inflammable area. Remember that all burning must be controlled burning.

Spill on Lake or Pond (Calm or Slow-Moving Water)

● Containment Methods

A lake or pond offers the best conditions for removal of product from water. Although the removal is no easy task, the lake or pond presents the favorable conditions of low or no current and low or no waves.

The movement of product on a lake or pond is influenced mainly by wind. The product will tend to concentrate on one shore, bank or inlet. Booms should be set up immediately to hold the product in the confined area in the event of a change in wind direction.

If the spill does not concentrate itself on or near a shore (no wind effect), then a sweeping action using boats and floating booms will be necessary.

The essential requirement for this operation is that it be done very slowly. The booms should be moved at not more than 40 feet per minute. Once the slick is moved to a more convenient location (near shore), the normal operations of removal should begin.

If the slick is small and thin (rainbow effect) and not near the shoreline, an absorbent boom instead of a regular boom should be used to sweep the area very slowly and absorb the slick. The product may not have to be moved to the shoreline. See Figure 6.1 for on-water recovery decision tree.

● Removal Methods

If the Containment slick is thick enough, regular suction equipment may be used first; however, in most instances, a floating skimmer should be used.

If the floating skimmer starts picking up excess water (slick becomes thin), drawing the boom closer to the bank as product is removed will also keep film of product thicker.

However, when the slick becomes too thin, the skimmer should be stopped and an absorbent applied (with a boat if necessary) to remove the final amounts. The floating skimmer (if speed is a must) or hand skimmers (if water is shallow enough) or both can be used to pick up the product-soaked absorbent. Before pumping the product-soaked absorbent with a floating skimmer, ensure that the absorbent in question can be pumped and will not harm the pump. Several types are nonabrasive to pump internals. If the floating skimmer is used first, the product-soaked absorbent/water mixture should be pumped into a tank truck.

A better method of retrieving the product-soaked absorbent is to draw it in as close to the shore as possible with the booms used to confine the product initially. The absorbent can then be hand skimmed from the water surface and placed in drums, on plastic sheets or in lined roll-off boxes. It should then be disposed of by acceptable means.

The final rainbow on the surface can be removed with additions of more absorbent.

Spill on Small to Medium Size Streams (Fast-Flowing Creeks)

- **Containment Methods**

The techniques used for product containment on fast-flowing shallow streams are quite different from the ones used on lakes, ponds, or other still bodies of water. The containment and removal processes require a calm stretch of water to allow the product to separate onto the surface of the water. If a calm stretch of water does not exist naturally, a deep slow-moving area should be created by damming. The dam can be constructed by using sandbags, planks or earth. If a dam is required, it should be situated at an accessible point where the stream has high enough banks. The dam should be constructed soundly and reinforced to support the product and water pressure.

- **Underflow dam** - The underflow dam is one method that can be used, especially on small creeks. The water is released at the bottom, of the dam using a pipe or pipes which are laid during construction of the dam. The flow rate through the pipe must be sufficient to keep the dam from overflowing. One method is to lay the pipe at an angle through the dam (while dam is being constructed) so that the height of the downstream end of the pipe will determine the height the water will rise behind the dam.
- **Overflow dam** - Another method of containment is the overflow type dam. The dam is constructed so that water flows over the dam, but a deep pool is created which slows the surface velocity of the water. Therefore, the condition of a calm stretch of water is met. The overflow dam may be used where larger flow rates (medium size creeks) of water are involved

With this type dam, a separate barrier (floating or stationary boom) must be placed across the pool created by the dam. The separate barrier arrests the surface layer of product. At the same time, the water is flowing under the barrier and over the top of the dam. The barrier should be placed at an angle of 45 % across the pool to decrease the effective water velocity beneath it. Also, it helps to concentrate the product at the bank and not all along the barrier. A second barrier should be placed approximately 10 to 15 feet downstream of the first one as a secondary back-up.

The stationary boom type barrier should be made of wood planks or other suitable material. The stationary boom should be soundly constructed and sealed against the bank. The ends of the planks can be buried in the banks of the stream and timber stakes driven into the stream bed for support as needed. The necessary length of the boom will be

approximately 1-1/2 times the width of the waterway.

The plank boom should extend six to eight inches deep into the water and about two inches or higher above the water level. If the increase in velocity under the stationary boom is causing release of trapped product, it should be moved upward slightly. At no time should barrier be immersed more than 20% of the depth of the pool at the barrier location; that is, if the pool created by damming is three feet deep, do not exceed an immersion depth of seven inches with the barrier at the position the barrier is installed.

Another method used with the underflow dam is having the pipe or pipes sized to carry only a portion of the flow needed. The pipe would be placed at the bottom of the dam and level with the creek bed. The remaining flow of the creek could be siphoned or preferably pumped around the dam from a point away from the dam and from the deepest portion of the pool. The pumping or siphoning can be controlled to maintain the desired water level at the dam. The key is the removal of water through or around the dam at the lowest point in the basin. This prevents the oil from escaping with the released water.

A floating boom can be used in place of the stationary type if the created pool's size (bank to bank) and depth will permit. Since changing the depth and/or length of a standard floating boom in a small stream is difficult, the use of the stationary type permits adjustments to be made in depth to provide for a better separation of product and water. The advantages of using a floating boom are the speed of deployment and the fact that there is not need for additional support as with the stationary boom.

- Multiple Impoundments - Since emergency built dams (either underflow or overflow) are seldom perfect, a series of dams is usually required. The first one or two will trap the bulk and the ones that are downstream will trap the last traces of product. Precautions should be taken to ensure that the foundations of emergency dams are not washed away by the released water. If earth is used to construct an overflow dam, a layer of earth-filled bags should be placed on top of the dam so erosion will not take place. See Figure 6.1 for on-water recovery decision tree.

● Removal Methods

Once the containment dams are constructed, the problem of removal of the product from the water surface should be the prime consideration. The removal must be continuous or else build-up of product behind the dams or booms might lead to product escaping the traps.

The type of removal procedures used depends largely on the amount of product being trapped in a given span of time, if the amount of product moving down the stream is of sufficient quantity, the first dam or fixed boom would quite possibly trap enough for the floating skimmer to work efficiently. The skimmer will pump the product and possibly some water to a tank truck or other holding tank. Separated water may be released from the bottom of the tank truck if it becomes necessary. The absorbents could then be used at downstream dams or booms. It is inadvisable to place an absorbent in the stream prior to or at the first dam in anticipation of the arriving product. Let the product accumulate at the first dam and use the floating skimmer to recover the product.

Disposal of gross amount of product-soaked absorbent would not then be a problem. Follow directions on use of each absorbent. Some are designed to be placed on water before product arrives; others are intended only to be placed on the product after it accumulates on the water. Plastic sheets should be used to place the product-soaked absorbent on as it is hand skimmed from the water. Alternatively, the material may be

placed in drums or lined roll-off boxes.

The containment and removal of spilled product on small to medium fast-flowing streams might require a combination of underflow or overflow dams, fixed booms, skimmers, and absorbents, to ensure a complete cleanup.

Spill on Large Streams and Rivers

• Containment Methods

The containment techniques differ considerably on large streams and rivers versus small streams. First, the smooth calm area of water necessary for product-water separation must be found along the stream or river rather than making one as with small streams. Floating booms (rather than fixed booms or dams) must be used to trap the surfaced product.

Local conditions of current and wind must be considered when selecting the site for the boom. A point with a low water velocity near the bank, sufficient depth to operate the product removal equipment, and good access are required. The fact that wind may tend to concentrate the product against one bank must be considered. A smooth, undisturbed area of water is required immediately upstream of the boom to ensure that the product has opportunity to separate out onto the surface. The boom should be positioned where the current is at a minimum. It is more effective to boom at a wide, slow position than on a narrow, fast stretch of water.

If the boom are positioned straight across a river or stream, at right angles to the flow, surface water tends to dive beneath the barrier (boom) when current velocities exceed about $\frac{1}{2}$ knot (0.8 ft./sec.). However, if the current of the entire river is $\frac{1}{2}$ knot or less, then a boom can be positioned straight across the river or large stream, but angled slightly in relation of the banks. By placing the boom at an angle to the banks, product on the surface is diverted along the boom to the side of the river.

The current velocity is usually much slower near the river bank than in the center and the product will move along the boom toward the bank for removal. A water-tight seal between the bank and the boom is essential. A secondary boom should be set up immediately downstream of the first one to capture the amounts that escape the upstream boom. A boom can be employed parallel to the river flow at the bank to form the seal with the booms used to trap the product.

Where the current velocity of the chosen site exceeds $\frac{1}{2}$ knot, the boom should be positioned in two smooth curves from a point of maximum velocity (usually the center of the river) to both banks. However, this double-boom required product to be removed from both sides of the river. To determine the appropriate angle of boom placement and support (mooring) needed to hold the booms in position, the current velocity should be measured by timing a floating object which is 80% submerged over a distance of 100 feet. A time of 60 seconds over this distance indicates a water current of approximately 1 knot.

For currents from 1 to 2.5 knots (1.7 to 4.2 ft./sec.), the more the boom will have to be angled acute to the bank. The length of the boom will have to be such to reach the center of the river. For currents between $\frac{1}{2}$ and 1 knot (0.8 and 1.7 ft./sec.), the angle of employment can be enlarged.

The major load on the boom is taken by the terminal moorings, particularly the one in the center of the river. However, intermediate moorings are also required both to maintain the smooth curve of the boom to prevent breaking of the boom and to assist with preventing skirt deflection. The intermediate moorings are preferably positioned every 25 feet and

must be adjusted to avoid the formation of indentations in the boom profile. These trap product in pockets, prevent its deflection to the bank, and also encourage diving currents. The moorings' ropes should be five times the water depth.

In certain situations, it might be advantageous to position booms to deflect the approaching spilled product to a slower moving area. Naturally, additional booms would have to be positioned around this slower moving area prior to deflecting the product to the area. This approach has been used along river which has lagoons, etc., with a very low current action. The recovery would take place in the lagoons and not along the river bank. See Figure 6.1 for on-water recovery decision tree.

- **Removal Methods**

The product collected upstream of the floating booms in a large stream or river should be removed from the water surface as it accumulates. Regular suction equipment, a floating skimmer, and/or absorbents (including absorbent booms) should be used to remove the product as appropriate to the quantity being trapped in a given span of time. If the amount moving down the stream is of sufficient quantity, the primary floating boom would possibly trap enough for the floating skimmer to work efficiently. The skimmer will pump the product and some water to a tank truck or other holding tank.

The absorbents would then be used upstream of the secondary boom to absorb the underflow from the primary boom. An absorbent boom can also be placed between the primary and secondary booms to help the other absorbents control the underflow from the primary boom.

It is best to hand skim the saturated absorbents and place on plastic sheets. However, if the absorbent used can be pumped after product absorption and speed of removal is a necessity, the floating skimmer can be used to remove the product-soaked absorbent.

The disadvantage of pumping the product-soaked absorbent to a truck is the volume that will accumulate (skimmer will pump excess water) and the disposal problems associated with the large water/product-soaked absorbent mixture.

Spill on Stream which Flows into Lake or Pond

In certain locations where streams (small and large ones) flow into lakes or ponds at relatively short distances, it is conceivable that a spill could reach the lake before containment and recovery operations are set up. If time permits for containment operations to be set up on the stream in question, it then would be handled as described above depending upon the stream size involved.

However, if product in the stream is near the lake site or if product is flowing into the lake with a significant amount yet to arrive, a different containment should be employed.

- **Containment Methods**

Product on a stream flowing into a lake should be boomed as close to the entrance as possible. The boom should be positioned on the lake at an angle to the residential stream current so as to direct the surface water to a slower moving area. The area where the product is being deflected should be enclosed by booms to contain it. An additional boom for sweeping the product to the bank will be required. This area of containment should not have a current velocity of more than 1/2 knot (0.8 ft./sec.), preferably less. See Figure 6.1 for on-water recovery decision tree.

- **Removal Methods**

The removal of product from the lake or pond's surface would be handled as described earlier.

For sizable releases, collected product will usually be pumped into tank trucks and transported to a storage facility. Tank trucks are available at several locations throughout.

Spill in Urban Areas

Oil spills in urban areas can greatly impact recreational use, human health, wildlife habitat(s), and potential beach or park closures. Manmade structures along waterways require unique protection strategies. Manmade structures could include vertical shore protection structures such as seawalls, piers, and bulkheads, as well as riprap revetments and groins, breakwaters, and jetties. Vertical structures can be constructed of concrete, wood, and corrugated metal. They usually extend below the water surface, although seawalls can have beaches or riprap in front of them. These structures are very common along developed shores, particularly in harbors, marinas, and residential areas. The range in degree of exposure to waves and currents varies widely, from very low in dead-end canals, to very high on offshore breakwaters. Boat wakes can generate wave energy in otherwise sheltered areas. Maintaining shipping or other kinds of vessel traffic through navigation channels or waterways during a spill response is a difficult consideration because there is usually economic and political pressure to re-establish normal operations as soon as possible. This consideration extends to vehicular traffic through urban areas. Deploying booms and skimmers or constructing recovery sites can conflict with such traffic for several days. Also, passage of deep-draft vessels through the waterway can suddenly change water level and flow or create wakes, causing booms to fail. For these reasons, recovery efforts must be coordinated through the Unified Command to ensure the cooperation of all parties involved.

- **Containment Methods**

Containment techniques in an urban area depend greatly on the ability to deploy equipment due to obstacles presented by the urban area. Most booming and containment techniques will work with slight modifications such as direct anchoring instead of the use of booming buoys. Often, debris and other obstacles cause gaps in containment or clog up the flow of oil in diversion booming. Vessel traffic can also cause containment to fail, due to splash over from vessel wakes.

- **Removal Methods**

Normal recovery techniques work when recovering oil in an urban area. However, recovery can be hampered by several situations. Floating debris clogging skimming equipment is the main cause for low recovery rates. Another problem for recovery in an urban area is lack of storage space. Often traffic problems or lack of access prevent storage equipment such as frac tanks and vacuum trucks from approaching the recovery zone.

Spill Under Ice

- **Containment Methods**

The traditional strategy for dealing with oil under the ice in a river or lake is to cut a slot to aid in recovery. Ice slots can be cut using chain saws, handsaws, ice augers or some form of trencher. Another effective variation of this technique is the diversionary plywood barrier method which is also discussed below. See Figure 6.1 for on-water decision tree.

- **Removal Methods**

Ice slotting is a very basic technique used to gain access to oil trapped beneath the ice. In ice slotting, a J shaped outline is sketched into the ice at a 30 degree angle to the current. The slight J hook or curve is necessary at the upstream side to provide flow towards the recovery area. In general, the slot width should be 1.5 times the thickness of the ice. Remember, a block of ice is heavy and the width of the slot must be taken into consideration so it can be safely removed or pushed under if the water beneath the ice is sufficiently deep. The length of the slot will be determined by the width of the river and strategy.

This technique is a successful strategy to implement. However, there are a few pit falls to be aware of. First, responders will fatigue rapidly if required to cut the slot or slots by hand using a chain saw or hand held saw. This can present a problem if there are not a sufficient number of Hazmat technicians available. Secondly, when cutting with chain saws, large volumes of water are kicked up by the moving chain onto the responder. This is a safety problem when the responders get wet in extreme cold weather conditions. Wearing rain gear however can reduce this problem.

A second technique is to slot the ice and use plywood to help divert oil beneath the ice to a recovery area. This technique is called the diversionary plywood barrier method. In this technique, a narrow slot is made through the ice and 4' x 8' sheets of plywood or equivalent are dropped into the slot to create a barrier and force the oil to follow along it to the collection area. This is the same principal employed when using floating boom.

The slot can be cut or drilled depending on the equipment available at the time of the response. If drilling is required, a gas powered ice auger can be used. In this scenario a series of 8" or 10" holes are drilled next to each other in the J pattern.

A chain saw can be used to connect the holes if an ice bridge exists between two auger holes. After the ice auguring is complete, plywood can be dropped into the augured slot.

Again, river ice is dirty and chipper blades on the augers may only last long enough to complete a single auger hole. This technique requires a large inventory of chipper blades. Extra auger flights can be used, which reduces down time to change blades. A real plus to slotting the ice with an ice auger is the limited exposure of responders to water. The water is generally restricted to the area around the responder's feet.

If an ice auger is not available, a chain saw can be used to cut a narrow slot. After the slot has been cut and ice removed, plywood can be inserted. When using a chainsaw that makes a 3/8" cut, a 1/8"-1/4" plywood or outdoor siding can be inserted into the slot and effectively be used to create the barrier. Again, the down side when using a large chain saws is fatigue and splash from water being kicked up by the chain. However, this problem is not as bad as cutting large slots as described above. Since only a single slot is made, the number of responders can be reduced and extra personal protective equipment in the form of rain gear can be used to minimize the water splash.

Spill on Ice

When managing an oil spill on ice special consideration must be given to several safety factors. Thickness of the ice and general accessibility of equipment must be considered when planning for on- ice recovery. Ice that is too thin to safely traverse or broken ice may prevent active recovery.

- **Containment Methods**

For ice-covered on-land or on- water spills, snow or earthen berms may be constructed to contain oil around the leak, if terrain permits. Dikes filled with sorbent materials may be used on spills in smaller streams to create a manmade dam to prevent the further migration of the oil.

Oil may become encapsulated due to melting and refreezing of the ice. Oil may then be more difficult to access and remove. See Figure 6.1 for on-water recovery decision tree.

- **Removal Methods**

Generally, on-ice recovery consists of the manual removal of the product from the spill site. If conditions permit, vacuum trucks or suction pumps may be used to remove pools of oil that may have collected. Often, product removal will be done by hand using brooms, shovels and rakes. Manually moving the oil/snow mixture into piles for collection where it is either vacuum or manually collected into storage containers.

Spill in Wetland Areas

Wetlands, which include upland and inland marshes, swamps and bogs, are highly sensitive to spills because they collect run-off from surrounding environments, and because they are home to many commercially and ecologically important species. Wetlands are very susceptible to damage and are a high priority to protect. Precautions should be taken so that the recovery effort does not cause more damage than that cause by the release.

- **Containment Methods**

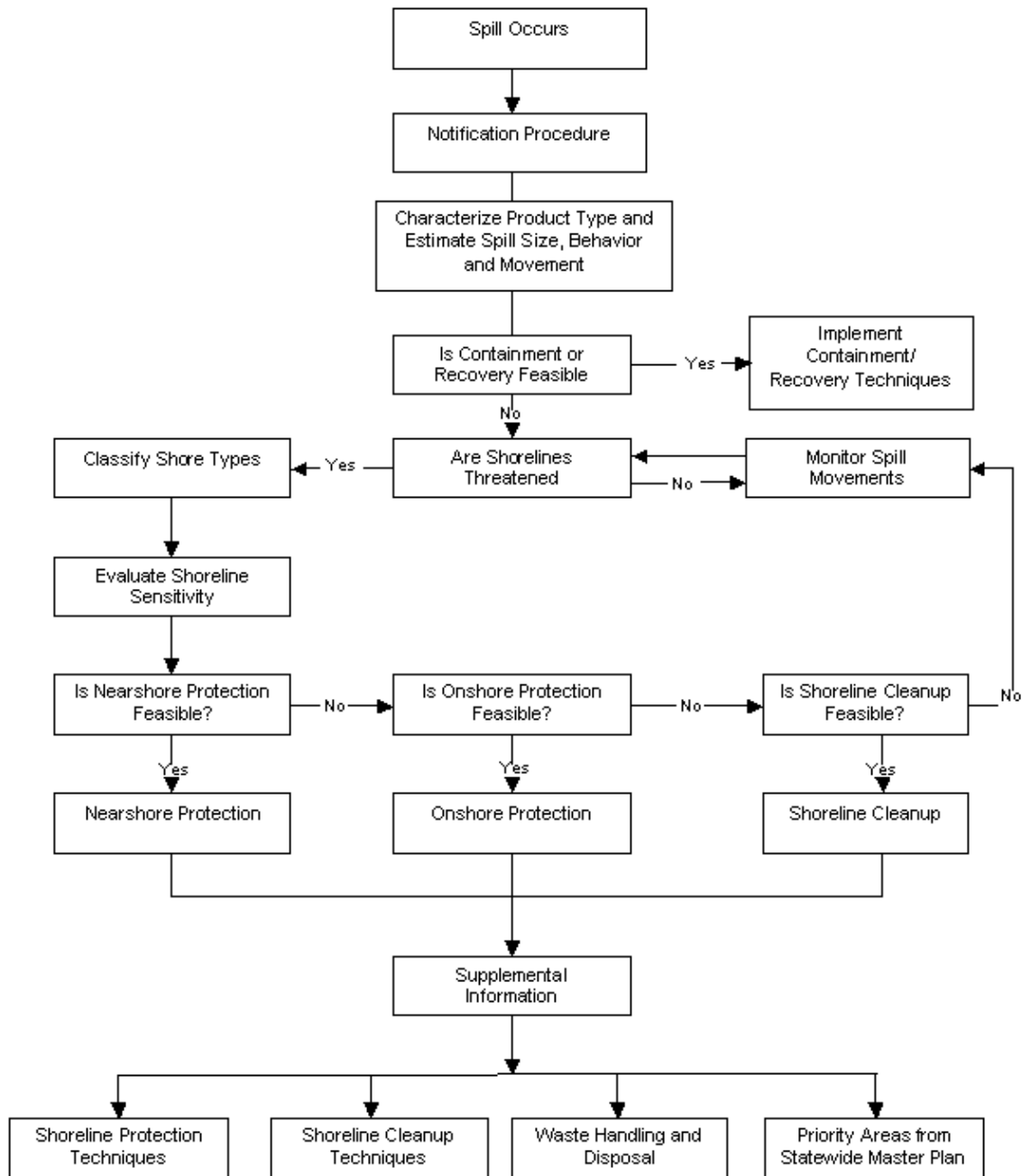
Containment booms can be strategically deployed to contain or divert the product into recovery areas where skimmers and vacuums can be used to remove the product. Berms can also be built to contain or divert the product. Consideration must be given to the damage that can be caused by holding the product in the wetland areas. Often, allowing the product to flow to natural collection areas and possibly assisting the flow by the use of high volume low pressure water pumps may be the best course of action.

- **Removal Methods**

Skimmers and vacuums can be deployed to recover contained oil. Other acceptable response techniques might include bioremediation, sorbents and in-situ burning. The use of heavy equipment is often not practical because of the damage it can cause to plant and animal life. During recovery, specially designed flat bottom shallow draft vessels and the use of plywood or boards may be used to reduce the damage caused by recovery personnel. If the water table is high and the oil will not permeate the soil, shallow trenches may be dug to collect oil for removal.

The Unified Command must balance the need to remove the product with the damage caused by active removal. Considerations for long term passive recovery should be considered.

**FIGURE 6.1
ON-WATER RESPONSE FLOWCHART**



6.6 VULNERABILITY ANALYSIS

The thorough examination of published Area Contingency Plans (ACPs) was conducted to identify sensitive areas in all the response zones.

The Environmental Sensitivity Maps located in Figure 6.2 identify sensitive areas along the Pipeline. The appropriate Area Contingency Plan maps are also included to provide more detailed information on sensitivities and possible potential response options.

6.7 ALTERNATIVE RESPONSE STRATEGIES

There are no pre-approved response options for inland spills within the United States. Any plans to use dispersants or in situ burn by the Company will be submitted to the Federal On-Scene Coordinator for Regional Response Team approval prior to such action being taken.

IN SITU BURNING

When considering the use of in situ burning the following considerations should be evaluated. In most cases, an agency application with further considerations will need to be completed before burning will be approved by the agency.

Size, Nature, and Product Spilled

- Flammability of the product. (Will the product burn?)
- Location of spill. (Distance and direction to nearest human use areas.)
- Volume of product released.
- Estimate of the surface area covered by the spill.
- How long has oil been exposed?
- Will burning cause more hazardous by-products?

Weather and Forecast

- Current weather conditions. (Rain / Heat)
- Wind speed and direction.
- 24 hour forecast.
- 48 hour forecast.

Evaluate the Response Operations

- Is there time enough to conduct burning?
- Is safety equipment available?
- Is adequate personnel available for monitoring / emergency response?
- Is mechanical recovery more intrusive than burning?

Habitats Impacted and Resources at Risk

- Have local agency / Officials been contacted.
 - Public Health
 - Land Owner / Manager
 - Local Fire Management (Fire Marshall)
 - Historic Property Specialist
 - Province / State Resource Agency
 - Aboriginal / Native American interests
- What is / will be the impact to surface water intakes and wells.
- Are endangered habitats / endangered species present?
- Is area used by Migratory Animals?
- What wildlife is present?

Burn Plan

- How much of the oil is expected to burn?
- How long will it be expected to burn?
- How will burn be ignited?
- How will burn be extinguished?
- How will burned oil residue be collected?
- What are the monitoring protocols?

DISPERSANT USE

Dispersants are not commonly used on inland spills. Working closely with Federal, Province / State and local agencies will be necessary for gaining approval to use dispersants. Since dispersants do not eliminate the oil, only break up and spread the oil throughout the water column, it is important to look at the total effect the oil will have on the environment while considering the use of dispersants.

FIGURE 6.2
ENVIRONMENTAL SENSITIVITY MAPS

Remember these maps are to be utilized as guidelines only. During a real response effort Federal, Province/State, and local agencies should be contacted to provide further assistance in the proper identification and protection of the various environmental and socio-economic sensitive areas

[Canada ESM Map 1](#)
[Canada ESM Map 2](#)
[Canada ESM Map 3](#)
[Canada ESM Map 4](#)
[Canada ESM Map 5](#)
[Canada ESM Map 6](#)
[Canada ESM Map 7](#)
[Canada ESM Map 8](#)
[Canada ESM Map 9](#)
[Canada ESM Map 10](#)
[Canada ESM Map 11](#)
[Canada ESM Map 12](#)
[Canada ESM Map 13](#)
[Canada ESM Map 14](#)
[Canada ESM Map 15](#)
[Canada ESM Map 16](#)
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[Canada ESM Map 26](#)
[Canada ESM Map 27](#)
[Canada ESM Map 28](#)
[US ESM Map 1](#)
[US ESM Map 2](#)
[US ESM Map 3](#)
[US ESM Map 4](#)
[US ESM Map 5](#)
[US ESM Map 6](#)
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[US ESM Map 38](#)
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[USL Map 3C1](#)
[USL Map 3D1](#)
[USL Map 3D2](#)
[USL Map 3D3](#)
[USL Map 3D4](#)
[USL Map 5P51](#)
[USL Map 5P53](#)
[USL Map 5P54](#)
[USL Map 5P62](#)
[USL Map 6](#)
[USL Map 6P61](#)
[USL Map 8](#)
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[USL Map 11](#)
[USL Map 12](#)
[USL Map 12A2](#)
[USL Map 12A3](#)
[USL Map 12C2](#)
[USL Map 12D2](#)
[USL Map 13](#)
[USL Map 18](#)
[USL Map 19](#)
[USL Map 24](#)
[Cushing Extension ESM 1](#)
[Cushing Extension ESM 2](#)
[Cushing Extension ESM 3](#)
[Cushing Extension ESM 4](#)
[Cushing Extension ESM 5](#)
[Cushing Extension ESM 6](#)
[Cushing Extension ESM 7](#)
[Cushing Extension ESM 8](#)
[Cushing Extension ESM 9](#)
[Cushing Extension ESM 10](#)
[Cushing Extension ESM 11](#)

FIGURE 6.3

ENDANGERED/THREATENED SPECIES LISTING

Canada

Common Name	Scientific Name
Animals	
Burrowing Owl	<i>Athene cunicularia</i>
Olive-backed Pocket Mouse	<i>Perognathus fasciatus</i>
Long-billed Curlew	<i>Numenius americanus</i>
Short-eared Owl	<i>Asio flammeus</i>
Northern Leopard Frog	<i>Rana pipiens</i>
Sprague's Pipit	<i>Anthus spragueii</i>
Plants	
Bushy cinquefoil	<i>Potentilla paradoxa</i>
Chaffweed	<i>Anagallis minima</i>
Common tickseed	<i>Coreopsis tinctoria</i>
Dillen's wood sorrel	<i>Oxalis dillenii</i>
Endolepis	<i>Atriplex suckleyi</i>
Few-flowered aster	<i>Aster pauciflorus</i>
Few-flowered salt-meadow grass	<i>Torreyochloa pallida var pauciflora</i>
Lance-leaved loosestrife	<i>Lysimachia hybrida</i>
Little-seed rice grass	<i>Oryzopsis micrantha</i>
Low townsendia	<i>Townsendia exscapa</i>
Nevada rush	<i>Juncus nevadensis</i>
Pale blue-eyed grass	<i>Sisyrinchium septentrionale</i>
Rush-pink	<i>Stephanomeria runcinata</i>
Salt-marsh sand spurry	<i>Spergularia salina</i>
Short-stalk mouse-ear chickweed	<i>Cerastium brachypodium</i>
Shrubby evening-primrose	<i>Calylophus serrulatus</i>
American pellitory	<i>Parietaria pensylvanica</i>
American lopseed	<i>Phryma leptostachya</i>
Fox sedge	Fox sedge
Honewort	<i>Cryptotaenia canadensis</i>
Rice cutgrass	<i>Leersia oryzoides</i>
Yellow water crowfoot	<i>Ranunculus flabellaris</i>
Other	
None Listed	N/A

Illinois

Common Name	Scientific Name
Animals	
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Indiana Bat	<i>Myotis sodalis</i>
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>
Eastern Massasauga	<i>Sistrurus catenatus catenatus</i>

Western Sand Darter	<i>Ammocrypta clarum</i>
Kirtland's Snake	<i>Clonophis kirtlandi</i>
Least Bittern	<i>Lxobrychus exilis</i>
Greater Prairie Chicken	<i>Tympanuchus cupido</i>
Barn Owl	<i>Tyto alba</i>
Lake Sturgeon	<i>Acipenser fulvescens</i>
Timber Rattlesnake	<i>Crotalus horridus</i>
Little Blue Heron	<i>Egretta caerulea</i>
Butterfly	<i>Ellipsaria lineolata</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Common Moorhen	<i>Gallinula chloropus</i>
Bigeye Shiner	<i>Notropis boops</i>
Yellow-crowned Night Heron	<i>Nyctanassa violacea</i>
Illinois Chorus Frog	<i>Pseudacris streckeri</i>
Pallid Sturgeon	<i>Scaphirhynchus albus</i>
Royal Catchfly	<i>Silene regia</i>
Lined Snake	<i>Tropidoclonion lineatum</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
Henslow's Sparrow <i>Ammodramus henslowii</i>	<i>Ammodramus henslowii</i>
Short-eared Owl	<i>Asio flammeus</i>
Upland Sandpiper	<i>Bartramia longicauda</i>
Northern Harrier	<i>Circus cyaneus</i>
King Rail	<i>Rallus elegans</i>
Barn Owl	<i>Tyto alba</i>
Plants	
Prairie Rose Gentian	<i>Sabatia campestris</i>
Ear-leafed Foxglove	<i>Tomanthera auriculata</i>
Sedge	<i>Carex bromoides</i>
Fibrous-rooted Sedge	<i>Carex communis</i>
Drooping Sedge	<i>Carex prasina</i>
Blazing Star	<i>Liatris scariosa var. nieuwlandii</i>
Prairie Rose Gentian	<i>Sabatia campestris</i>
Grass-leaved Lily	<i>Stenanthium gramineum</i>
Ear-leafed Foxglove	<i>Tomanthera auriculata</i>
Spring Ladies' Tresses	<i>Spiranthes vernalis</i>
Prairie Spiderwort	<i>Tradescantia bracteata</i>
Decurrent False Aster	<i>Boltonia decurrens</i>
Other	
None Listed	N/A

Kansas

Common Name	Scientific Name
Animals	
American Burying Beetle	<i>Nicrophorus americanus</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Eastern Spotted Skunk	<i>Spilogale putorius</i>
Eskimo Curlew	<i>Numenius borealis</i>
Least Tern	<i>Sterna antillarum</i>
Peregrine Falcon	<i>Falco peregrinus</i>

Piping Plover	<i>Charadrius melodus</i>
Snowy Plover	<i>Charadrius alexandrinus</i>
Western Silvery Minnow	<i>Hybognathus argyritis</i>
Chestnut Lamprey	<i>Ichthyomyzon castaneus</i>
Flathead Chub	<i>Platygobio gracilis</i>
Pallid Sturgeon	<i>Scaphirhynchus albus</i>
Sicklefin Chub	<i>Macrhybopsis meeki</i>
Silver Chub	<i>Macrhybopsis storeriana</i>
Silverband Shiner	<i>Notropis shumardi</i>
Smooth Earth Snake	<i>Virginia valeriae</i>
Sturgeon Chub	<i>Macrhybopsis gelida</i>
Topeka Shiner	<i>Notropis topeka</i>
Whooping Crane	<i>Grus americana</i>
Sharp Hornsnail	<i>Pleurocera acuta</i>
Arkansas Darter	<i>Etheostoma cragini</i>
Arkansas River Shiner	<i>Notropis girardi</i>
Arkansas River Speckled Chub	<i>Macrhybopsis tetranema</i>
Flutedshell Mussel	<i>Lasmigona costata</i>
Plants	
None Listed	N/A
Other	
None Listed	N/A

Missouri

Common Name	Scientific Name
Animals	
Indiana Bat	<i>Myotis sodalis</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Pallid Sturgeon	<i>Scaphirhynchus albus</i>
Interior Least Tern	<i>Sterna antillarum athalassos</i>
Eastern Massasauga	<i>Sistrurus catenatus catenatus</i>
Spectaclecase	<i>Cumberlandia monodonta</i>
Plants	
Running Buffalo Clover	<i>Trifolium stoloniferum</i>
Decurrent False Aster	<i>Boltonia decurrens</i>
Other	
None Listed	N/A

North Dakota

Common Name	Scientific Name
Animals	
Horned Grebe	<i>Podiceps auritus</i>
American White Pelican	<i>Pelecanus erythrorhynchos</i>
American Bittern	<i>Botaurus lentiginosus</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Ferruginous Hawk	<i>Buteo regalis</i>

Yellow Rail	<i>Coturnicops noveboracensis</i>
Willet	<i>Catoptrophorus semipalmatus</i>
Upland Sandpiper	<i>Bartramia longicauda</i>
Long-billed Curlew	<i>Numenius americanus</i>
Marbled Godwit	<i>Limosa fedoa</i>
Wilson's Phalarope	<i>Phalaropus tricolor</i>
Franklin's Gull	<i>Larus pipixcan</i>
Black Tern	<i>Chlidonias niger</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Sprague's Pipit	<i>Anthus spragueii</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Baird's Sparrow	<i>Ammodramus bairdii</i>
Nelson's Sharp-tailed Sparrow	<i>Ammodramus nelsonii</i>
Lark Bunting	<i>Calamospiza melanocorys</i>
Chestnut-collared Longspur	<i>Calcarius ornatus</i>
Canadian Toad	<i>Bufo hemiophrys</i>
Plains Spadefoot	<i>Spea bombifrons</i>
Smooth Green Snake	<i>Liochlorophis vernalis</i>
Western Hognose Snake	<i>Heterodon nasicus</i>
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>
Sturgeon Chub	<i>Macrhybopsis gelida</i>
Sicklefin Chub	<i>Macrhybopsis meeki</i>
Pearl Dace	<i>Margariscus margarita</i>
Blue Sucker	<i>Cycleptus elongatus</i>
Northern Pintail	<i>Anas acuta</i>
Canvasback	<i>Aythya valisineria</i>
Redhead	<i>Aythya americana</i>
Northern Harrier	<i>Circus cyaneus</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Prairie Falcon	<i>Falco mexicanus</i>
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>
Greater Prairie Chicken	<i>Tympanuchus cupido</i>
Greater Sage-grouse	<i>Centrocercus urophasianus</i>
Piping Plover	<i>Charadrius melodus</i>
American Avocet	<i>Recurvirostra americana</i>
Least Tern	<i>Sterna antillarum</i>
Short-eared Owl	<i>Asio flammeus</i>
Burrowing Owl	<i>Athene cunicularia</i>
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Sedge Wren	<i>Cistothorus platensis</i>
Dickcissel	<i>Spiza americana</i>
Le Conte's Sparrow	<i>Ammodramus leconteii</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Common Snapping Turtle	<i>Chelydra serpentina</i>
Short-horned Lizard	<i>Phrynosoma douglassi</i>
Northern Redbelly Snake	<i>Storeria occipitomaculata</i>
Pygmy Shrew	<i>Sorex hoyi</i>
Richardson's Ground Squirrel	<i>Spermophilus richardsonii</i>
Swift Fox	<i>Vulpes velox</i>
River Otter	<i>Lutra canadensis</i>

Black-footed Ferret	<i>Mustela nigripes</i>
Paddlefish	<i>Polyodon spathula</i>
Pallid Sturgeon	<i>Scaphirhynchus albus</i>
Silver Chub	<i>Macrhybopsis storeriana</i>
Northern Redbelly Dace	<i>Phoxinus eos</i>
Flathead Chub	<i>Platygobio gracilis</i>
Trout-perch	<i>Percopsis omiscomaycus</i>
Threeridge	<i>Amblema plicata</i>
Wabash Pigtoe	<i>Fusconaia flava</i>
Mapleleaf	<i>Quadrula quadrula</i>
Black Sandshell	<i>Ligumia recta</i>
Creek Heelsplitter	<i>Lasmigona compressa</i>
Pink Heelsplitter	<i>Potamilus alatus</i>
Whooping Crane	<i>Grus americana</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Brewer's Sparrow	<i>Spizella breweri</i>
McCown's Longspur	<i>Calcarius mccownii</i>
Smooth Softshell Turtle	<i>Apalone mutica</i>
False Map Turtle	<i>Graptemys pseudogeographica</i>
Northern Prairie Skink	<i>Eumeces septentrionalis</i>
Northern Sagebrush Lizard	<i>Sceloporus graciosus</i>
Arctic Shrew	<i>Sorex arcticus</i>
Western Small-footed Myotis	<i>Myotis ciliolabrum</i>
Long-eared Myotis	<i>Myotis evotis</i>
Long-legged Myotis	<i>Myotis volans</i>
Plains Pocket Mouse	<i>Perognathus flavescens</i>
Hispid Pocket Mouse	<i>Chaetodipus hispidus</i>
Sagebrush Vole	<i>Lemmiscus curtatus</i>
Eastern Spotted Skunk	<i>Spilogale putoris</i>
Gray Wolf	<i>Canis lupis</i>
Chestnut Lamprey	<i>Ichthyomyzon castaneus</i>
Silver Lamprey	<i>Ichthyomyzon unicuspis</i>
Central Stoneroller	<i>Campostoma anomalum</i>
Hornyhead Chub	<i>Nocomis biguttatus</i>
Pugnose Shiner	<i>Notropis anogenus</i>
Blacknose Shiner	<i>Notropis heterolepis</i>
Rosyface Shiner	<i>Notropis rubellus</i>
Finescale Dace	<i>Phoxinus neogaeus</i>
Yellow Bullhead	<i>Ameiurus natalis</i>
Flathead Catfish	<i>Pylodictis olivaris</i>
Logperch	<i>Percina caprodes</i>
River Darter	<i>Percina shumardi</i>
Pink Papershell	<i>Potamilus ohioensis</i>
Plants	
None Listed	N/A
Other	
None Listed	N/A

Nebraska

Common Name	Scientific Name
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Animals	
Eskimo Curlew	<i>Numenius borealis</i>
Whooping Crane	<i>Grus americana</i>
Interior Least Tern	<i>Sterna antillarum athalassos</i>
Bald Eagle	<i>Haliaeetus leucophalus</i>
Piping Plover	<i>Charadrius melodus</i>
Mountain Plover	<i>Charadrius montanus</i>
Black-footed Ferret	<i>Mustela nigripes</i>
Swift Fox	<i>Vulpes velox</i>
River Otter	<i>Lutra canadensis</i>
Southern Flying Squirrel	<i>Glaucomys volans</i>
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>
Pallid Sturgeon	<i>Scaphirhynchus albus</i>
Topeka Shiner	<i>Notropis topeka</i>
Sturgeon chub	<i>Macrhybopsis gelida</i>
Blacknose shiner	<i>Notropis heteropis</i>
Lake sturgeon	<i>Acipenser fulvescens</i>
Northern Redbelly Dace	<i>Phoxinus eos</i>
Finescale Dace	<i>Phoxinus neogaeus</i>
American Burying Beetle	<i>Nicrophorus americanus</i>
Massasauga	<i>Sistrurs catenatus</i>
Scaleshell Mussel	<i>Leptodea leptodon</i>
Plants	
Hayden's (blowout) penstemon	<i>Penstemon haydenii</i>
Colorado Butterfly Plant	<i>Gaura neomexicana coloradensis</i>
Saltwort	<i>Salicornia rubra</i>
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>
Ute Lady's Tresses	<i>Spiranthes diluvialis</i>
Ginseng	<i>Panax quinquefolium</i>
Small White Lady's Slipper	<i>Cypripedium candidum</i>
Other	
None Listed	N/A

South Dakota

Common Name	Scientific Name
Animals	
American Burying Beetle	<i>Nicrophorus americanus</i>
Scaleshell	<i>Leptodea leptodon</i>
Higgins Eye	<i>Lampsilis higginsii</i>
Dakota Skipper	<i>Hesperia dacotae</i>
Banded Killifish	<i>Fundulus diaphanus</i>
Blacknose Shiner	<i>Notropis heterolepis</i>
Finescale Dace	<i>Phoxinus neogaeus</i>
Longnose Sucker	<i>Catostomus catostomus</i>
Northern Redbelly Dace	<i>Phoxinus eos</i>
Pallid Sturgeon	<i>Scaphirhynchus albus</i>
Pearl Dace	<i>Margariscus margarita</i>
Sicklefin Chub	<i>Macrhybopsis meeki</i>

Sturgeon Chub	<i>Macrhybopsis gelida</i>
Topeka Shiner	<i>Notropis topeka</i>
Eastern Hognose Snake	<i>Heterodon platirhinos</i>
False Map Turtle	<i>Graptemys pseudogeographica</i>
Lined Snake	<i>Tropidoclonion lineatum</i>
American Dipper	<i>Cinclus mexicanus</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Eskimo Curlew	<i>Numenius borealis</i>
Interior Least Tern	<i>Sterna antillarum athalassos</i>
Osprey	<i>Pandion haliaetus</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Piping Plover	<i>Charadrius melodus</i>
Whooping Crane	<i>Grus americana</i>
Black-footed Ferret	<i>Mustela nigripes</i>
Gray Wolf	<i>Canis lupus</i>
River Otter	<i>Lontra canadensis</i>
Swift Fox	<i>Vulpes velox</i>
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>
Plants	
None Listed	N/A
Other	
None Listed	N/A

Oklahoma

Common Name	Scientific Name
Animals	
Mississippi Alligator	<i>Alligator mississippiensis</i>
Gray Bat	<i>Myotis grisescens</i>
Indian Bat	<i>Myotis sodalis</i>
Ozark Bat	<i>Corynorhinus townsendii ingens</i>
Ozark Cavefish	<i>Amblyopsis rosae</i>
Whooping Crane	<i>Grus americana</i>
Eskimo Curlew	<i>Numenius borealis</i>
Leopards Darter	<i>Percina pantherina</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Neosho Madtom	<i>Noturus placidus</i>
Pipping Plover	<i>Charadrius melodus</i>
Ouachita Rock Pocketbook	<i>Arkansia wheeleri</i>
Arkansas River Shiner	<i>Notropis girardi</i>
Least Tern	<i>Sterna antillarum</i>
Black-Capped Vireo	<i>Vireo atricapillus</i>
Red-Cockaded Woodpecker	<i>Picoides borealis</i>
Plants	
Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>
Other	

Note: Country and Province information is maintained separately from the plan for emergency responder use.

FIGURE 6.5

US ENVIRONMENTAL SENSITIVE AREAS						
ID	SOURCE	ORGANIZATION	Map Sheet			
[REDACTED]						

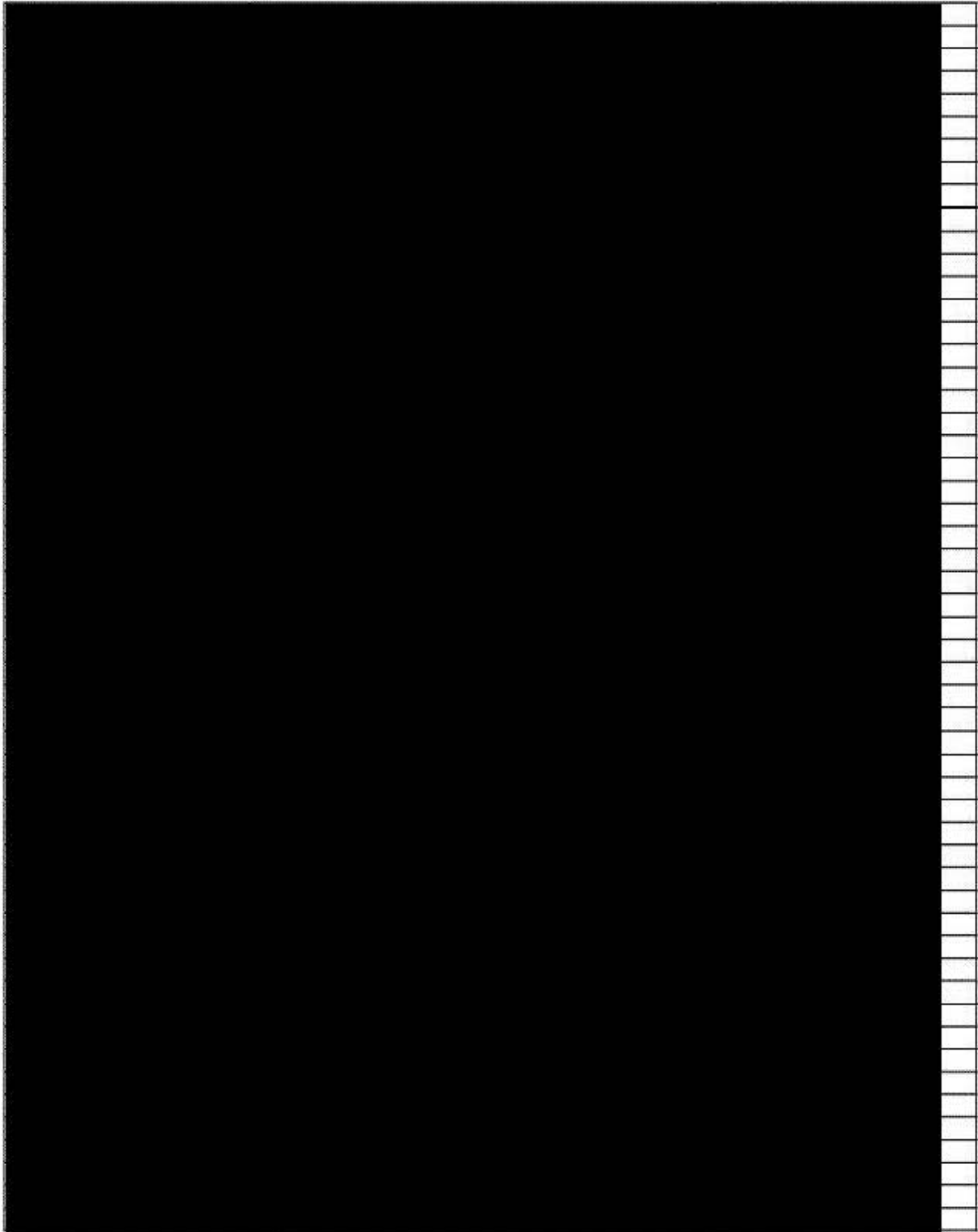
[REDACTED]



US DAMS				
DAM NAME	COUNTY	RIVER	STATE	MapSheet
[REDACTED]				
[REDACTED]				
[REDACTED]				

US LAKES		
NAME	STATE	MapSheet

US RIVERS & STREAMS			
FEATURE	NAME	STATE	MapSheet
[Redacted Content]			



CANADIAN POPULATED AREAS				
PLACE ID	PROVIDENCE	GEONAME	CONCISE	MapSheet

CANADIAN MUNICIPAL WELLS			
WATER USE	WELL USE	Sask_ID	MapSheet
[Redacted Content]			

CANADIAN LAKES		
NAME	Lake_ID	MapSheet

APPENDIX A

RESPONSE EQUIPMENT/RESOURCES

A.1 [Company Owned Response Equipment](#)

A.2 [Other Company Resources](#)

A.3 [Contract Resources](#)

A.4 [Cooperative/Mutual Aid Resources](#)

A.5 [Volunteers](#)

A.6 [Communications](#)

Figure A.1 [Company Owned Spill Response Equipment](#)

Figure A.2 [Response Resources](#)

Figure A.3 [USCG OSRO Classifications](#)

Figure A.4 [Coop Agreements/OSRO Contracts](#)

RESPONSE EQUIPMENT/RESOURCES

A.1 COMPANY OWNED RESPONSE EQUIPMENT

The Company owns and operates oil spill response equipment contained within response trailers staged throughout the pipeline system. This equipment is maintained according to manufacture's recommendations by Company and/or contracted personnel. An equipment summary detailing locations, type and amount stored in the response trailers is listed in Figure A.1. The Company also has contracts in place with Oil Spill Removal Organizations and other clean-up contractors that are capable of responding to all discharges along the Pipeline. Figure A.2 lists the contracted Oil Spill Removal Organizations.

Equipment trailers are located at the Hardisty Pump Station (Alberta), Regina Pump Station (Saskatchewan), in Valley City (North Dakota) at an external contractor site, in Brookings (South Dakota), Yankton (South Dakota), Cushing (Oklahoma) and St. Joseph (Missouri) at a TransCanada office location.

The Qualified Individual has the authority to activate other private contractors, experts, and consultants as the situation demands.

All Pipeline personnel who might be involved in an oil spill have been informed that detergents or other surfactants are prohibited from being used on an oil spill in the water and that dispersants can only be used with the approval of the Canadian Regional Environmental Emergency Team (REET) or US Regional Response Team, the interagency group composed of Federal and State agency representatives that coordinates oil spill response.

A.2 OTHER COMPANY RESOURCES

Additional Company spill response equipment and manpower resources are not available to supplement the response operation; however, third party contractors will be activated on an as needed basis.

A.3 CONTRACT RESOURCES

The resources will be secured from a Company approved contractor. Management will typically handle notification/implementation of these resources. Figure A.2 provides a quick reference to the Oil Spill Removal Organizations and details their response capability and estimated response times. **Telephone reference is provided in Figure 2.5.** (*Note: The Company will ensure that each OSRO has a comprehensive maintenance program and applicable training / drills programs in place at contract renewal.*)

A.4 COOPERATIVE/MUTUAL AID RESOURCES

The Company is a member of the following Oil Spill Cooperatives or mutual aid groups:

- Western Canadian Spill Services Ltd.
- Alberta - Area U and S Oil Spill Cooperatives
- Saskatchewan - Area 3, 6, and 4 & 5 Oil Spill Cooperatives

A.5 VOLUNTEERS

Volunteers will not be utilized by the Company for the response operations. In the U.S., all volunteers will be referred to the Federal Regional Response Team.

A.6 COMMUNICATIONS

Effective and efficient communications systems are essential for emergency response at every level. The communications system will be utilized to gather information and current

status reports as well as to provide coordination and direction to widely separated work groups involved in search, containment/diversion, repair, traffic control, public control or evacuation, and restoration.

The Company's overall Emergency Notification Chart (Figure 2.2) indicates individuals within the Company and governmental agencies who must be contacted in the event of an emergency.

Notification information for the Qualified Individuals, Alternate Qualified Individuals, emergency response contractors, and governmental agencies is located in Section 2.0 and the Response Zone Annexes.

Lines of communication between the Incident Commander, local personnel, and contractors are demonstrated in the organization charts provided in Figures 4.1 and 4.2. Communication of the overall spill response operation between the Company and the responsible government agencies will occur between the Incident Commander and the Federal On-Scene Coordinator.

Central Communications System

Prearranged communication channels are of the utmost importance in dealing with Company emergencies. The notification procedures and telephone contacts documented in Section 2.0 will be reviewed in accordance with the earlier documented updating procedures. The predetermined communications channels include the following:

- A list of emergency telephone numbers for internal management and emergency response personnel (Figures 2.2 and 2.5).
- A list of emergency telephone numbers for various external resources such as the Fire Departments, Public Officials and local agencies is provided in the Annexes.
- A list of emergency telephone numbers for contract response resources (Figure 2.5).

Communications Equipment

Field communications during a spill response will be handled via radios, telephones, cellular phones, fax machines, and computers and will be maintained by Company personnel. In the event of a Worst Case Discharge, field communications will be enhanced with contract resources as the situation demands.

Communications Type

Voice communications may be conducted over the public telephone system or Company provided two-way radio equipment.

Radios - Hand-held and vehicle-mounted radio sets are the most effective means of communication for the field response operation. The units are battery operated, multi-channelled, and have a typical range that will cover the area of the response operation. Additional radio sets and battery packs/charges will be necessary in the event of a prolonged response operation.

Telephone (Conventional) - Conventional land line telephones are the most effective means of communication for regulatory and advisory notifications during a spill response operation. Additional telephone lines can be installed in the event of a prolonged response operation. All major facilities have access to standard telephone service.

Cellular - Cellular telephones are useful during spill events giving the user the ability to travel while using the communication system.

FAX Machines - FAX machines allow for a rapid transfer of information/documentation such as status reports/updates, written notifications, and purchase orders. All administrative offices have facsimile machines.

Computers - Computers are commonly used in networks which allow access to various other locations and company personnel. Computers also speed the consolidation of information and preparation of a written report.

FIGURE A.1

COMPANY OWNED SPILL RESPONSE EQUIPMENT

COMPANY OWNED RESPONSE EQUIPMENT	
5 SPILL RESPONSE TRAILERS (ONE PER RESPONSE ZONE)	
Description	Quantity
Response boat 18.5 foot work boat with a 60 HP outboard	1
Jon boat 14 foot Safety boat with a 9.9 hp	1
34 ft Equipment trailer with 6 ft office includes equipment shelving, heat lights, power awning, rear ramp door and 1 side door. Roof rack for storage of the 14' boat and 500ft boom.	1
River Boom 6" x 6'	500 ft
Portable dam 50 ft	1
Diesel /hydraulic Skimming System with diesel power transfer pump and hoses	1
Sorbent pads	5 bales
Sorbent boom	5 bales
500 gallon portable tank	1
2,000 gallon portable tank	1
10,000 gallon portable bladder	1
Winter equipment(e.g. Chain saws, chains, pry bars, ropes,ice,augers)	varies
Bird Hazing Kit	1
20' boom Trailer	1

[Supplemental Trailer Equipment List](#)

FIGURE A.2**RESPONSE RESOURCES****Zone : Hardisty Pump Station/ Regina Pump Station**

COOPERATIVES
Western Canadian Spill Services Ltd.
Albert - Area U and S Oil Spill Cooperatives
Saskatchewan - Area 3 and 6 Oil Spill Cooperatives
National Response Corporation (OSRO, not a Cooperative)

Zone : Regina Pump Station / Haskett Pump Station**COOPERATIVES**

National Response Corporation (OSRO, not a Cooperative)

Western Canadian Spill Services Ltd.

Saskatchewan - Area 6 and 4 & 5 Oil Spill Cooperatives

Zone : North Dakota, South Dakota, Nebraska

Area : North Dakota, South Dakota, Nebraska						
OSRO Name	Contract Number	Environment Type	Facility Classification Level			
			MM	W1	W2	W3
National Response Corporation	TBD	River/Canal	X	X	X	X
		Inland	X	X	X	X
		Open Ocean	X	X	X	X
		OffShore	X	X	X	X
		Near Shore	X	X	X	X
		Great Lakes				

Zone : Kansas, Missouri, Illinois

Area : Kansas, Missouri, Illinois						
OSRO Name	Contract Number	Environment Type	Facility Classification Level			
			MM	W1	W2	W3
National Response Corporation	TBD	River/Canal	X	X	X	X
		Inland	X	X	X	X
		Open Ocean	X	X	X	X
		OffShore	X	X	X	X
		Near Shore	X	X	X	X
		Great Lakes				

Zone : Cushing Extension

Area : Cushing Extension Area						
OSRO Name	Contract Number	Environment Type	Facility Classification Level			
			MM	W1	W2	W3
National Response Corporation	TBD	River/Canal	X	X	X	X
		Inland	X	X	X	X
		Open Ocean	X	X	X	X
		OffShore				
		Near Shore	X	X	X	X
		Great Lakes	X	X	X	X

FIGURE A.3**USCG OSRO CLASSIFICATIONS**

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATION			
Classification	Resource Quantity Guidelines	Maximum Facility Response Times	Maximum Vessel Response Times
Rivers/Canals			
MM	Protective Boom: 4,000*ft EDRC:; 1,200 bbls TSC: 2,400 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W1	Protective Boom: 25,000*ft EDRC:; 1,875 bbls TSC: 3,750 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W2	Protective Boom: 25,000*ft EDRC:; 3,750 bbls TSC: 7,500 bbls	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W3	Protective Boom: 25,000*ft EDRC:; 7,500 bbls TSC: 15,000 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
Great Lakes			
MM	Protective Boom: 6,000*ft EDRC:; 1,250 bbls TSC: 2,500 bbls	All Ports: 6 hours	All Ports: 12 hours
W1	Protective Boom: 30,000*ft EDRC:; 6,250 bbls TSC: 12,500 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W2	Protective Boom: 30,000*ft EDRC:; 12,500 bbls TSC: 25,000 bbls	All Ports: 36 hours	All Ports: 42 hours
W3	Protective Boom: 30,000*ft EDRC:; 25,000 bbls TSC: 50,000 bbls	All Ports: 60 hours	All Ports: 66 hours

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATION				
Classification	Resource Quantity Guidelines		Maximum Facility Response Times	Maximum Vessel Response Times
Inland				
MM	Protective Boom: 6,000*ft EDRC:; 1,200 bbls TSC: 2,400 bbls		High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W1	Protective Boom: 30,000*ft EDRC:; 12,500 bbls TSC: 25,500 bbls		High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W2	Protective Boom: 25,000*ft EDRC:; 12,500 bbls TSC: 25,500 bbls		High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W3	Protective Boom: 25,000*ft EDRC:; 50,500 bbls TSC: 100,500 bbls		High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
Great Lakes				
MM	Protective Boom: 8,000*ft EDRC:; 1,200 bbls TSC: 2,400 bbls		High Volume Ports: 6 hours Other Location: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W1	Protective Boom: 30,000*ft EDRC:; 12,500 bbls TSC: 25,500 bbls		High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W2	Protective Boom: 30,000*ft EDRC:; 25,500 bbls TSC: 50,500 bbls		High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W3	Protective Boom: 30,000*ft EDRC:; 50,000 bbls TSC: 100,000 bbls		High Volume Ports: 54 hours Other Location: 60 hours (for open ocean, plus travel time from shore)	High Volume Ports: 60 hours Other Location: 72 hours (for open ocean, plus travel time from shore)

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATION			
Classification	Resource Quantity Guidelines	Maximum Facility Response Times	Maximum Vessel Response Times
Offshore			
MM	Protective Boom:6,000*ft EDRC:; 1,200 bbls TSC: 2,400 bbls	High Volume Ports:6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W1	Protective Boom: 15,000*ft EDRC: 12,500 bbls TSC: 25,500 bbls	High Volume Ports:24hours Other Ports: 48hours	High Volume Ports: 24 hours Other Ports: 48 hours
W2	Protective Boom: 15,000*ft EDRC: 25,000 bbls TSC: 50,000 bbls	High Volume Ports:30hours Other Ports: 36hours	High Volume Ports: 36hours Other Ports: 48hours
W3	Protective Boom: 15,000*ft EDRC: 50,000 bbls TSC: 100,000 bbls	High Volume Ports:54hours Other Ports: 60hours	High Volume Ports: 60hours Other Ports: 72hours
Open Ocean			
MM	Protective Boom: 0*ft EDRC: 1,200 bbls TSC: 2,400 bbls	High Volume Ports:6hours Other Ports: 12hours	High Volume Ports: 12hours Other Ports: 24hours
W1	Protective Boom: 0*ft EDRC: 12,500 bbls TSC: 25,000 bbls	High Volume Ports:6hours Other Ports: 12hours	High Volume Ports: 12hours Other Ports: 24hours
W2	Protective Boom: 0*ft EDRC: 25,000 bbls TSC: 50,000 bbls	High Volume Ports:30hours Other Ports: 36hours	High Volume Ports: 36hours Other Ports: 48hours
W3	Protective Boom: 0*ft EDRC: 50,000 bbls TSC: 100,000 bbls	High Volume Ports:54hours Other Ports: 60hours	High Volume Ports: 60hours Other Ports: 72hours
<ol style="list-style-type: none"> 1. Rivers/canals include bodies of water, including the Intracoastal Waterway and other bodies artificially created for navigation, confined within an inland area and having a project depth of 12 feet (3.66 meters). 2. EDRC stands for "effective daily recovery capacity," or the calculated recovery capacity of oil recovery devices determined by using a formula that takes into account limiting factors such as daylight, weather, sea state, and emulsified oil in the recovered material. 3. TSC stands for "temporary storage capacity," meaning sufficient storage capacity equal to twice the EDRC of an OSRO. Temporary storage may include inflatable bladders, rubber barges, certified barge capacity, or other temporary storage that can be utilized on scene at a spill response and which is designed and intended for the storage of flammable or combustible liquids. It does not include vessels or barges of opportunity for which no pre-arrangements have been made. Fixed shore-based storage capacity, ensured available by contract or other means, will be acceptable. <p>* In addition, 1,000 feet of containment boom plus 300 feet per skimming system.</p>			

FIGURE A.4
AGREEMENTS/CONTRACTS

[Click to view the file - NRC Packet 23 1 2009 14 31 34.pdf](#)

[Click to view the file - WCSS Packet 29 11 2008 10 23 9.pdf](#)

[Click to view the file - Alberta Area 2U Packet 29 11 2008 10 27 35.pdf](#)

[Click to view the file - Alberta Area 1S Packet 29 11 2008 10 28 3.pdf](#)

[Click to view the file - Sask Area 3 Packet 29 11 2008 10 28 27.pdf](#)

[Click to view the file - Sask Area 6 Packet 29 11 2008 10 29 12.pdf](#)

[Click to view the file - Sask Area 4and5 Packet 29 11 2008 10 29 50.pdf](#)

Decision Summary (DS-244)



To: [Redacted] **Date:** October 14, 2008
From: [Redacted] **Location:** Calgary, Alberta
Subject: NRC OSRO Resource Retainer

Decision Proposed ([Redacted] per Annum(U.S. Currency) for 3 years)

Your approval is requested for funds related to emergency response planning and preparedness. As a matter of risk mitigation and regulatory compliance, it is proposed to enter into a contractual retainer to address a number of emergency response functions during operations. This amount falls within the existing capital expenditures for emergency response for 2009.

Background

National Response Corporation (NRC) will provide Keystone with Oil Spill Response Organization (OSRO) resources. Specifically, NRC will be the overall coordinating company that has the ability to safely respond to spill related incidents along the pipeline. NRC ensures spill readiness which included supplier subcontracts, training, workshops and overall spill site coordination. NRC has the proven ability to handle spills of all sizes and is approved by the United States Coastguard.

NRC has its own equipment, spill managers and a network of related industries to ensure Keystone is prepared to respond efficiently and effectively. The retention of a contractor is mandatory for Keystone to meet regulatory requirements. Having a retainer guarantees Keystone the resources when most needed.

The contract should start on January 1, 2009 and will form part of the existing Emergency Response Plan for 2009. This type of contract was not contemplated in the original Emergency Response budget of [Redacted], but is part of the overall plan. The first year will be absorbed by the existing budget and for future years, these costs should be part of a field operations budget.

Requested by:

[Redacted Signature]	14 October 2008 Date
----------------------	-------------------------

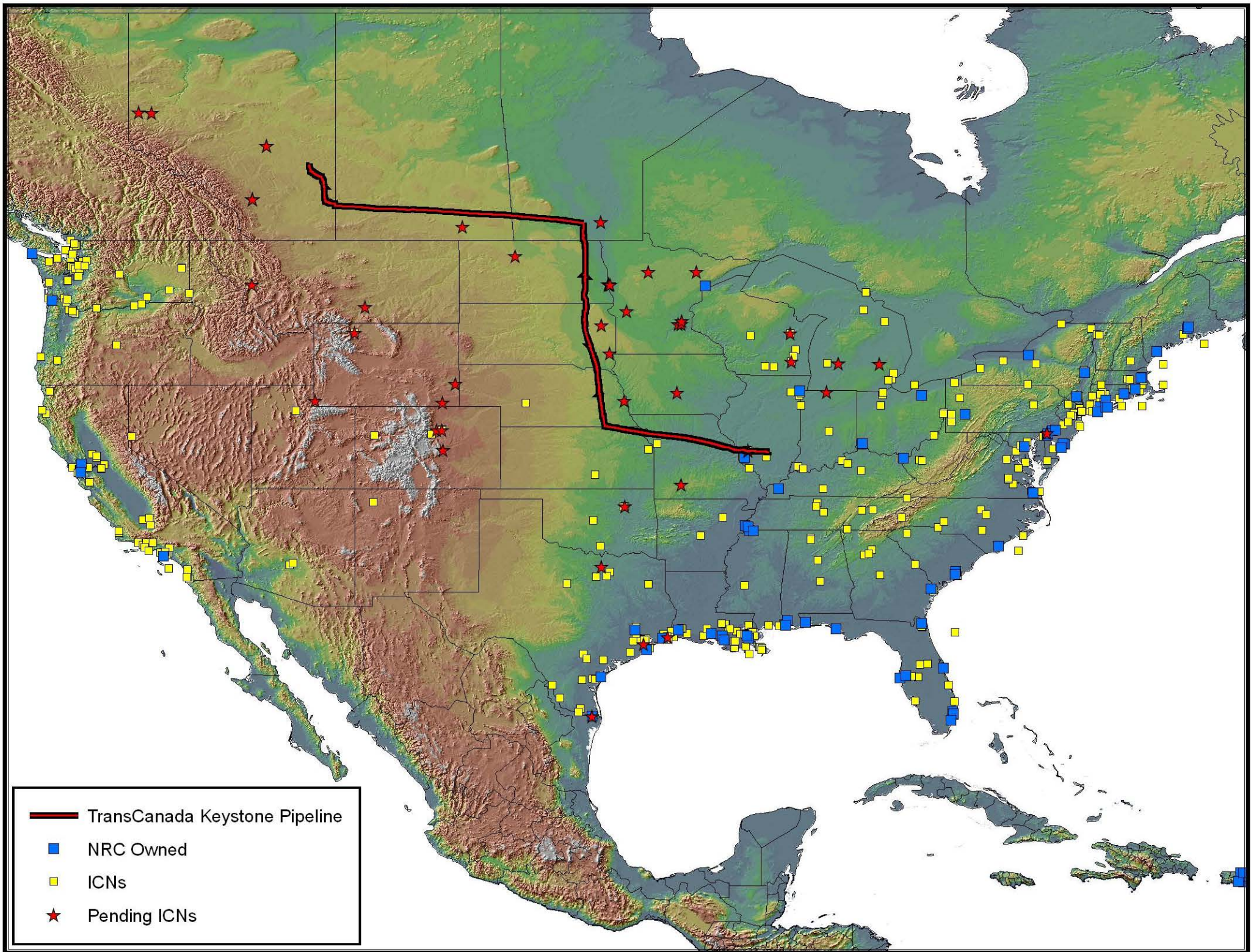
Approved by:

[Redacted Signature]	14 October 2008 Date
----------------------	-------------------------

National Response Corporation, Inc.

National Response Corporation, Inc. is an Oil Spill Response Organization contracted to conduct oil recovery for TransCanada Keystone Limited Partnership and TC Oil Pipeline Operations, Inc. National Response Corporation uses a network of associated cleanup contractors throughout North America and the world. National Response Corporation has been certified by the United States Coast Guard, as described in the Emergency Response Manual, to respond to releases along the length of the Pipeline.

For further information about National Response Corporation and a list of response equipment you can visit their website at <http://www.nrcc.com>.



- TransCanada Keystone Pipeline
- NRC Owned
- ICNs
- ★ Pending ICNs

Oil Spill Cooperative Agreement

TransCanada Keystone Limited Partnership has agreed and intends to join the Oil Spill Cooperative organizations in all areas which its pipeline crosses. Currently, the pipeline is not in operation, therefore the contracts / agreements are not in place. When contracts / agreements are completed they will replace this page of this document and will be made available for inspection.

Western Canadian Spill Services Ltd

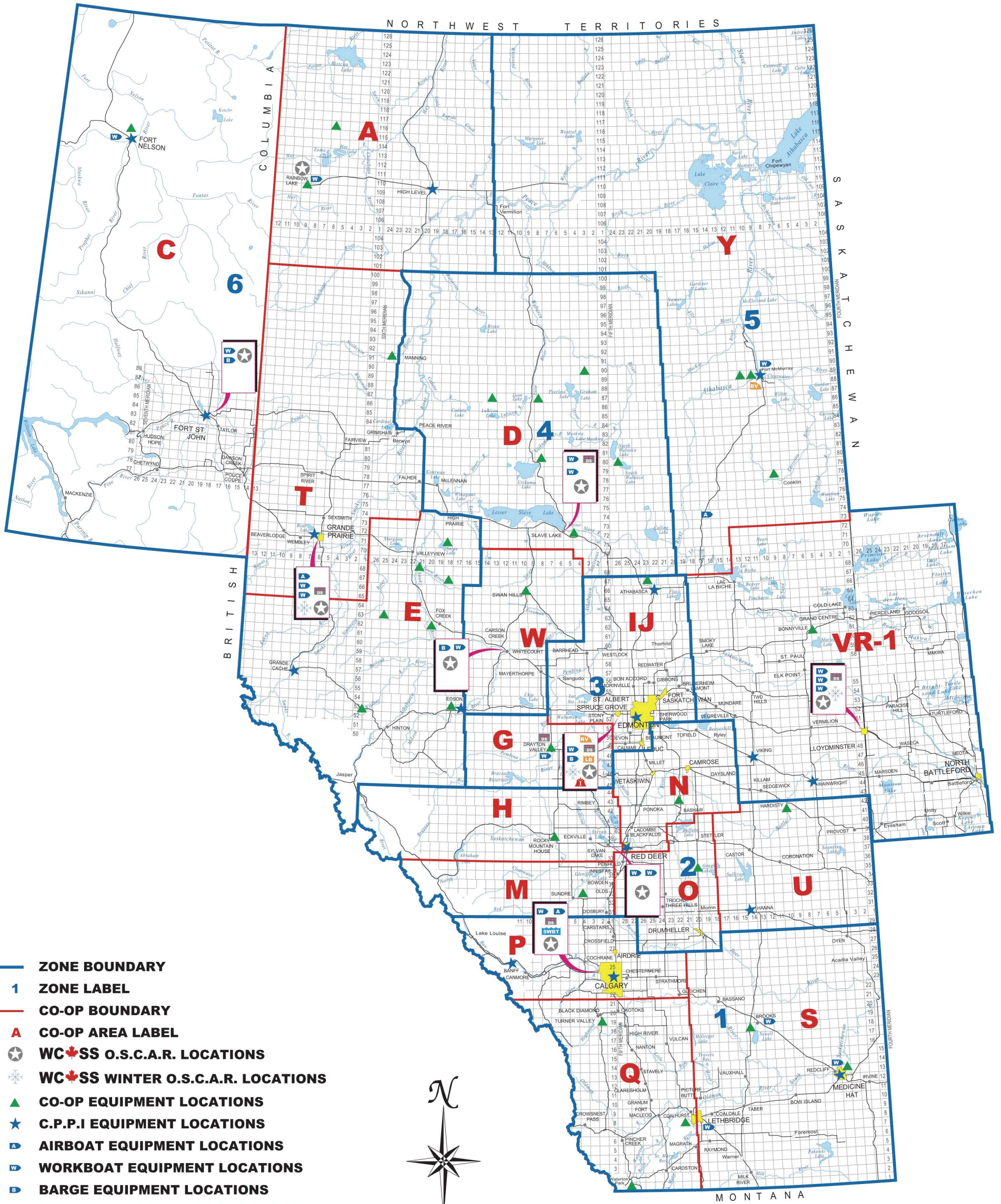
Western Canadian Spill Services Ltd. is the spill preparedness organization of the upstream petroleum industry in North East British Columbia, Alberta and Cooperative VR1 that extends into Saskatchewan. The purpose of Western Canadian Spill Services is to maintain an effective spill response capability for the upstream petroleum industry in Western Canada and to provide information and education on spill issues including spill prevention.

Through an agreement between Western Canadian Spill Services and the Canadian Petroleum Products Institute the members of the Western Canadian Spill Services in good standing can have access to the equipment owned by Canadian Petroleum Products Institute.

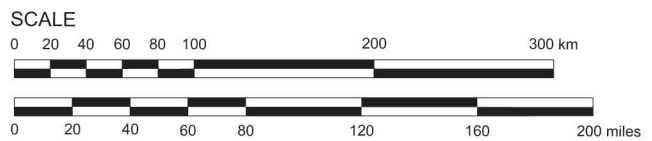
In Manitoba, the Western Canadian Spill Services contracts with Euroway Industrial Service Company Ltd, to store and maintain response equipment available for use by members of the Western Canadian Spill Services. Euroway is located in Winnipeg, Manitoba.

For further information about Western Canadian Spill Services and a list of response equipment you can visit their website at <http://www.wcss.ab.ca>. Information on the Canadian Petroleum Products Institute can be found at their website www.cppi.ca.

WC⁺SS OIL SPILL COOPERATIVE BOUNDARIES 2008



- **ZONE BOUNDARY**
- 1** **ZONE LABEL**
- **CO-OP BOUNDARY**
- A** **CO-OP AREA LABEL**
- WC⁺SS O.S.C.A.R. LOCATIONS**
- WC⁺SS WINTER O.S.C.A.R. LOCATIONS**
- CO-OP EQUIPMENT LOCATIONS**
- C.P.P.I EQUIPMENT LOCATIONS**
- AIRBOAT EQUIPMENT LOCATIONS**
- WORKBOAT EQUIPMENT LOCATIONS**
- BARGE EQUIPMENT LOCATIONS**
- DRUM SKIMMER EQUIPMENT LOCATIONS**
- BOOM VANE EQUIPMENT LOCATIONS**
- SHALLOW WATER BOOM TRAILER LOCATIONS**
- LAKE BOOM EQUIPMENT LOCATIONS**
- INCINERATOR EQUIPMENT LOCATIONS**



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CPPI/WCSS* Environmental Protection Unit (EPU) Custodian Information

Alberta	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
Athabasca	Basic	Volunteer Fire Dept. (Town)	Fire Chief Denis Mathieu	4707-50 Street T9S 3A3				
Banff	Basic	Fire Department	Deputy Jim Watt	201 Beaver Street PO Box 1260 T0L 0C0				
Calgary	Basic	ECL Transportation	Bruce Thomson Gail Sharko	7100 44 St SE T2C 2V7 (Gail) 5366-55 Street SE T2C 3G9 (trailer)				
Edmonton	Basic	ECL Transportation	Randy Johnston Gail Sharko (Calgary)	1810 66 Ave T6P 1M4				
Edson	Basic	Fire Department	Chief Allan Schram	6 Avenue 49 Street Box 6300 T7E 1T7				
Ft. McMurray	CPPI Basic . WCSS Equip. OSCAR, Skid Unit, Work Boat, Boom Vane	Eveready Industrial (TriVax Enterprises)	Brent Bakke	230A MacKay Crescent T9H 5C6				
Grande Prairie	Basic	Fire Department (cheque NOT to City)	Deputy Chief Harvey Pearson Dennis Driver, Stn. Captain	8111 Resources Road T8V 7Y2				
Hanna	Basic	Volunteer Fire Dept.	Chief David Mohl	201 1 Ave East Box 430 T0J 1P0				
High Level	Basic	Fire Department	Chief Rod Schmidt	10201-100 Ave T0H 1Z0 (FD) 9813 102 St T0H 1Z0 (town)				
Lethbridge	WCSS Equip. Muskrat, mini OSCAR, work boat	Mid-West Pump (90) Ltd.	Gerry Colburn Ed Carpenter	311 33 St N T1H 3Z6				
Medicine Hat	Basic	Fire Department	Chief Garry Mauch Deputy Allan Guest Randy Stotz	440 Maple Ave SE T1A 7S3				
Viking	Basic	Fire Department	Chief Ken Ruzicka	4920-53 Avenue T0B 4N0				

* WCSS - Western Canadian Spill Services
(see www.wcss.ab.ca for additional locations of WCSS equipment)

CPPI/WCSS* Environmental Protection Unit (EPU) Custodian Information

BC	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
Burns Lake	Basic	Lyle Sande Agencies (Chevron)	Lyle Sande Kristi McCrindle	65 Railway Ave. PO Box 619 V0J 1E0				
Campbell River	Basic	K&S Petroleum Ltd. (Chevron)	Kerry Coulson	4700 Orange Point Road PO Box 968 V9W 6Y4				
Castlegar	Basic	Fire Department	Chief Gerry Rempel Ast Chief Tony Cooper	2161 6 Ave V1N 3B2				
Cranbrook	Basic	Jepson Petroleum Ltd (Petro-Canada)	Mgr. Chris Jepson Dave Schmieder	1814 Theatre Road V1C 7G1				
Creston	Basic	R A Glennon Petroleum (Shell)	Robert Smith Randy Glennon Stacey Ostendorf	1411 Northwest Blvd RR 6 V0B 1G6				
Ft. Nelson	Basic	Fire Department	Chief Dennis Muise Asst. Chief James Childs	5404 48 Ave Bag 399 V0C 1R0				
Ft. St. John	Basic	Fire Department	Dep Chief Fred Burrows Chief Jeff Lambert Doreen Holmes	9407-100 Avenue V1J 6W1 10631-100 Street V1J 3Z5 (Town Office)				
Golden	Basic	Fire Department	Chief Shawn Tomash	1107-11 Avenue S. P.O. Box 350 V0A 1H0				
Kamloops	Basic	Petro-Canada Terminal	Stephen Demianiuk Rick Geier	2955 Tranquille Rd V2B 7W2				
Kelowna	Basic	Fire Department	Eileen Davies	2255 Enterprise Way V1Y 8B8				
Nanaimo	Basic	Nanaimo Fire Rescue	Deputy Chief Bob Simpson	Trailer: Fire Stn #2 2499 Dorman Road V9S 5T3 / 200, 575 Fitzwilliam St V9R 3B2 (BS)				
Prince George	Basic	Husky Energy Refinery	Greg Primus Bill Fraser	2542 Pulp Mill Rd PO Box 1390 V2L 4V4				
Revelstoke	Basic	Big Eddy Fuel (Shell)	Peter Humphries	733 South Highway 23 Box 1740 V0E 2S0				
Surrey (Cloverdale)	Basic	D.W.P. Distributors Limited (Chevron)	Bill Poppy	5504 176 Street Surrey, BC V3S 4C3				
Terrace	Basic	Fire Department	Chief Peter Weeber	3, 3215 Eby Street V8G 2X8				

* WCSS - Western Canadian Spill Services
(see www.wcss.ab.ca for additional locations of WCSS equipment)

CPPI/WCSS* Environmental Protection Unit (EPU) Custodian Information

BC	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
Valemount	Basic	Fire Department	Chief Rick LaLonde, Hugh Miller, Dep. Donovan Gee, Dep.	1380 5 Avenue Box 727 V0E 2Z0				
Williams Lake	Basic	TaGerra Holdings Ltd. (Chevron)	Tammi Caferra Linda Dudoski	101 25 Hodgson Road V2G 3P5				

* WCSS - Western Canadian Spill Services
(see www.wcss.ab.ca for additional locations of WCSS equipment)

CPPI/WCSS* Environmental Protection Unit (EPU) Custodian Information

Manitoba	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
Brandon	Basic	Fire Department	A/Lt. Donald Matthews	Trailer @ Fire Stn #2 637 Princess Avenue R7A 0P2 (DM)				
Dauphin	Basic	Brendonn Holdings Ltd. (Petro-Canada)	Mike Gawaziuk	Hwy. 5A West PO Box 607 R7N 2V4				
Swan River	Basic	Doak's Fuel Service (Imperial Oil)	Dale Macooh Troy Carter	PO Box 695 523-3 Avenue S R0L 1Z0				
The Pas (Town)	Basic	Fire Department	Deputy Chief Richard Paetzold Chief Ron Bourquin	81 Edwards Ave PO Box 870 R9A 1K8				
Thompson	Basic	Doak's Fuel Service (Imperial Oil)	Rob Bilawka	CN Grounds-Station Rd PO Box 309 R8N 1N1				
Winnipeg	CPPI Basic . <u>WCSS Equip.</u> OSCAR, 2 Jet Boats	Euroway Industrial Service Co. Ltd.	Gary Mittermayr	245 Transport Road Box 4, Group 582, RR 5 R2C 2Z2				

* WCSS - Western Canadian Spill Services
(see www.wcss.ab.ca for additional locations of WCSS equipment)

CPPI/WCSS* Environmental Protection Unit (EPU) Custodian Information

Saskatch.	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
La Ronge	Basic	Fire Department	Chief Ron Pratt	1222 Hildebrand Drive PO Box 5680 S0J 1L0				
North Battleford	Basic	Fire Department	Chief Mike Saunders Deputy Bryan Beach	902 104 Street PO Box 460 S9A 2Y6				
Prince Albert	Basic	Marsollier Petroleum Ltd. (Esso)	Kelly Bartel Curtis Parent	1100 6 Ave E S6V 2J9				
Regina	Basic	Envirotec Services Inc.	Lyle Clouatre (Daniel Guskjolen looks after trailer - 99 Andre Ave, Regina S4T 7N1)	804-46 Street East Saskatoon S7K 3V7 Trailer: 1910 Winnipeg Street N., Regina				
Saskatoon	Basic	Fire Department	Chief Gary Kobussen (admin office) Jim Wood (AO) (Captain Jerry Unser looks after trailer)	125 Idylwyld Dr S S7M 1L4 (admin offices) Trailer: Fire Hall 7 3550 Wanuskewin Road Saskatoon				
Swift Current	Basic	Fire Department	Chief Bob Rindahl Cathie Werbowetsky	236 Chaplin Street E S9H 5B2				
Weyburn	Basic	Fire Department	Chief Denis Pilon & Asst Murray Sabados	55-16 Street NE PO Box 370 S4H 2K6				
Yorkton	Basic	Brendonn Holdings Ltd. (Petro-Canada)	Tony Ripa & R Kuschak	24 Broadway Street W S3N 0L4				

CPPI/WCSS* Environmental Protection Unit (EPU) Custodian Information

NWT	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
Hay River	Basic	Matonabee Petroleum Ltd. (Petro-Canada)	Bill Wright	43064 MacKenzie Highway X0E 0R9				
Yellowknife	Basic	Matonabee Petroleum Ltd. (Petro-Canada)	Shawn Delaney Dalyn Chan	117 Kamlake Road Box 2697 X1A 2R1				
Yukon	CPPI Equip.	Custodian	Contact	Address	Phone	Night Phone	Fax	E-mail
Whitehorse	Basic	Dall Contracting Ltd. (Petro-Canada)	Mike Baldwin	110 Galena Rd Y1A 2W6				

* WCSS - Western Canadian Spill Services
(see www.wcss.ab.ca for additional locations of WCSS equipment)

Oil Spill Cooperative Agreement

TransCanada Keystone Limited Partnership has agreed and intends to join the Oil Spill Cooperative organizations in all areas which its pipeline crosses. Currently, the pipeline is not in operation, therefore the contracts / agreements are not in place. When contracts / agreements are completed they will replace this page of this document and will be made available for inspection.

Albert Area 2U Oil Spill Cooperative

The Province of Alberta is divided into 6 oil spill cooperative zones. Each zone is then divided into areas. The designation 2U means area U of zone 2. The TransCanada Keystone Pipeline system begins and travels south through this area. The cooperative is run by a managing committee with custodians who are responsible for storage and maintenance of the response equipment.

Through the preceding agreement TransCanada Keystone Pipeline system will have the ability to use the cooperatives equipment, if available, during an incident.

The equipment list, contact information and maps are included in this document.

Zone 2 - Coop Area U

COOP Custodian

Greg Schmidt/Trevor Bitzer

Greg's Contracting Services Ltd. Box 29 4616A 47 Street
Hardisty, AB T0B 1V0

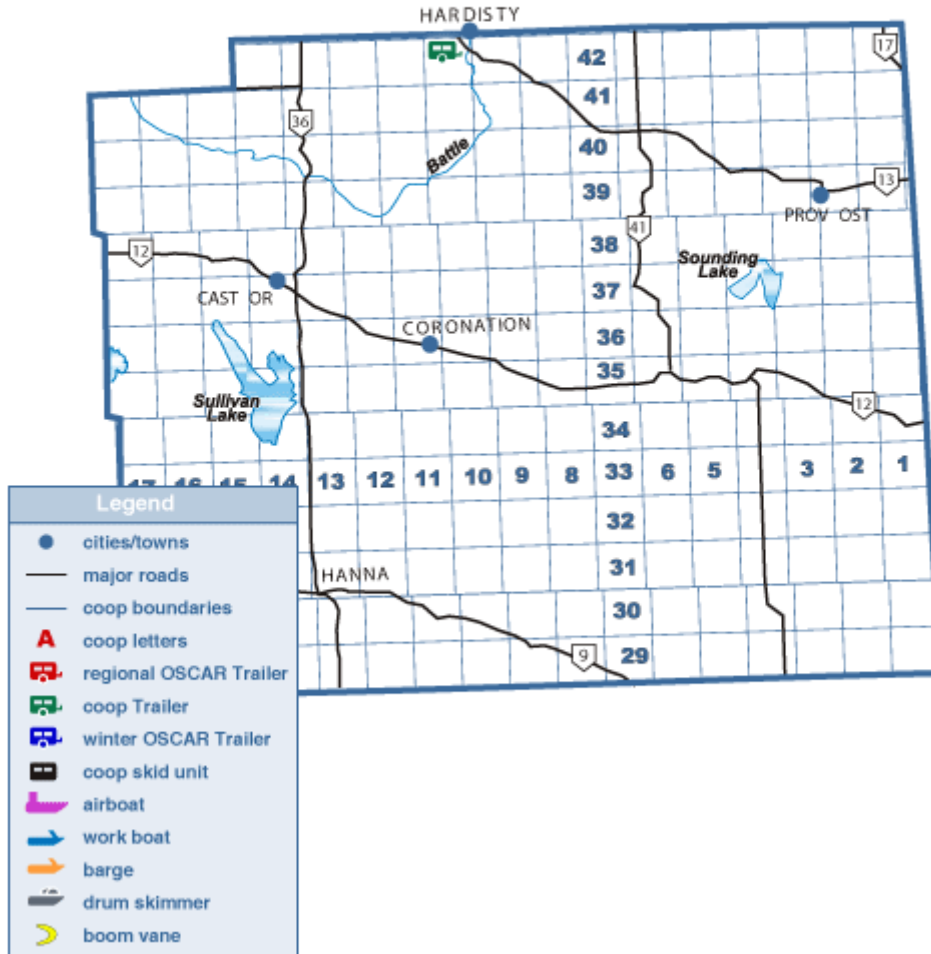
Ph : [REDACTED]
After Hours: Max Devey
[REDACTED]

Equipment Location

Greg's Contracting Services
Ltd. Box 29 4616A 47 Street
Hardisty, AB T0B 1V0

Equipment Summary

- OSCAR Trailer



Oil Spill Cooperative Agreement

TransCanada Keystone Limited Partnership has agreed and intends to join the Oil Spill Cooperative organizations in all areas which its pipeline crosses. Currently, the pipeline is not in operation, therefore the contracts / agreements are not in place. When contracts / agreements are completed they will replace this page of this document and will be made available for inspection.

Albert Area 1S Oil Spill Cooperative

The Province of Alberta is divided into 6 oil spill cooperative zones. Each zone is then divided into areas. The designation 1S means area S of zone 1. The TransCanada Keystone Pipeline system traverses the north east corner of this area. The cooperative is run by a managing committee with custodians who are responsible for storage and maintenance of the response equipment.

Through the preceding agreement TransCanada Keystone Pipeline system will have the ability to use the cooperatives equipment, if available, during an incident.

The equipment list, contact information and maps are included in this document.



Oil Spill Cooperative Agreement

TransCanada Keystone Limited Partnership has agreed and intends to join the Oil Spill Cooperative organizations in all areas which its pipeline crosses. Currently, the pipeline is not in operation, therefore the contracts / agreements are not in place. When contracts / agreements are completed they will replace this page of this document and will be made available for inspection.

Saskatchewan Area 3 Oil Spill Cooperative

The Province of Saskatchewan is divided into 5 oil spill cooperative areas. The TransCanada Keystone Pipeline travels from west to east through area 3. The cooperative is run by a steering committee with custodians who are responsible for storage and maintenance of the response equipment.

Through the preceding agreement TransCanada Keystone Pipeline system will have the ability to use the cooperatives equipment, if available, during an incident.

The equipment list, contact information and maps are included in this document.

AREA 3 Emergency Response Unit



Trailer Location:

06-08-011-18w3 Bench Oil Battery – Husky Energy Inc.

Steering Committee:

Title	Name	Office	Phone
CHAIRMAN:	Gilbert Cadrain	Husky Energy Inc.	██████
SECRETARY:	Gary Hammer	Plains Marketing	██████
TREASURER:	Garry Zinger	Focus Energy	██████
COMMITTEE:	Ron Dolter	S.I.R	██████
	Darcy Thoreson	Equipment Custodian	██████
	Dave Knipfel	Husky Energy	██████
	Jeff Seffern	Talisman Energy Inc.	██████
	Rob Forester	Crescent Point	██████
	Tim Stevenson	Penn West	██████
	Blake Barsness	Acclaim Energy	██████

Boundry Map:



AREA III ENVIRONMENTAL RESPONSE TRAILER UNIT

The following equipment is stored in a 8' x 28' tandem axle trailer c/w pintle hitch.

- ▶ PERSONAL SAFETY
- ▶ PUBLIC SAFETY
- ▶ PROPERTY
- ▶ ENVIRONMENTAL

2. ASSESS THE SPILL OCCURRENCE:

- ▶ ASSESS AND REPORT SOURCE
- ▶ ASSESS AND REPORT SPILL TYPE
 - ▶ OIL
 - ▶ SALT WATER
 - ▶ CHEMICAL
- ▶ ASSESS AND REPORT SPILL SIZE
- ▶ ASSESS SPILL AND REPORT FLOW DIRECTION AND FURTHER CONTAMINATION

3. NOTIFY IMMEDIATE SUPERVISOR:

- ▶ IDENTIFY LOCATION OF SPILL
- ▶ NOTE TIME SPILL DISCOVERED
- ▶ NOTE ADVERSE WEATHER CONDITIONS

- ▶ WEATHER
- ▶ TERRAIN
- ▶ DOWNSTREAM WATER USERS

- ▶ POTENTIAL TO STOP FLOW FROM SOURCE
- ▶ POTENTIAL TO CONTAIN SPILL FLOW
- ▶ COMMUNICATE ON SITE RESPONSE ACTION PLAN

SPILL REPORTED ? IMMEDIATE SUPERVISOR IS NOW THE INTERIM ON-SCENE COMMANDER.

1. ACTIVATE OIL SPILL CONTINGENCY PLAN

- ▶ SET THE RESPONSE UNIT INTO MOTION
- ▶ ESTABLISH THE ON-SCENE COMMANDER

AREA III MOBILIZATION TO SPILL SITE ? ON-SCENE COMMANDER

1. ESTABLISH AND MAINTAIN COMPLETE CONTROL OF THE OPERATION:

- ▶ SET UP A COMMAND POST FOR OPERATIONS
- ▶ DISPATCH FIELD STAFF TO SPILL SITE TO VERIFY THE SPILL LOCATION, THE EXTENT OF THE SPILL AND PROCEED WITH SHUT-IN PROCEDURES
- ▶ MOBILIZE THE AREA III EQUIPMENT ?(COMBINATION #1, 2, 3, 4.)
- ▶ CALL KEY PERSONNEL AND REGULATORY AGENCIES
- ▶ ORGANIZE AND ACTIVATE CONTINGENCY PLAN AS PER AREA III SPILL CONTINGENCY MANUAL FOR CONTAINMENT AND CLEANUP OF SPILL.

EMERGENCY RESPONSE TELEPHONE NUMBERS

EMERGENCY 911

COMPANY	CONTACT	PHONE
Ambulance (non-emergency)	Swift Current Cabri Gull Lake Shaunavon	██████ ██████ ██████ ██████
Air Ambulance	Saskatoon (Information)	██████ ██████
Fire Department (non-emergency)	Swift Current Cabri Shaunavon (Kevin) Gull Lake	██████ ██████ ██████ ██████
Hospitals		
Cabri Health Centre	Cabri	██████
Gull Lake Health Centre	Gull Lake	██████
S. C. Union Hospital	Swift Current	██████
Shaunavon Union Hospital	Shaunavon	██████
Royal Canadian Mounted Police	Swift Current Gull Lake Shaunavon Cabri	██████ ██████ ██████ ██████
Saskatchewan Pow Corporation Elec. Swift Current	Emergencies 24 Hour	██████ ██████
Gas		
Swift Current	24 Hour	██████
Shaunavon	24 Hour	██████
Cabri	24 Hour	██████

Website Address for Spill Cooperatives:

www.area3eru.com
<http://areatwo.sasktelhosting.net>
 /
<http://www.saskoilspill.com/>
<http://www.saskoilspill.com/main.htm>
<http://www.area6sask.com/>

INITIAL SPILL REPOSE FLOW CHART

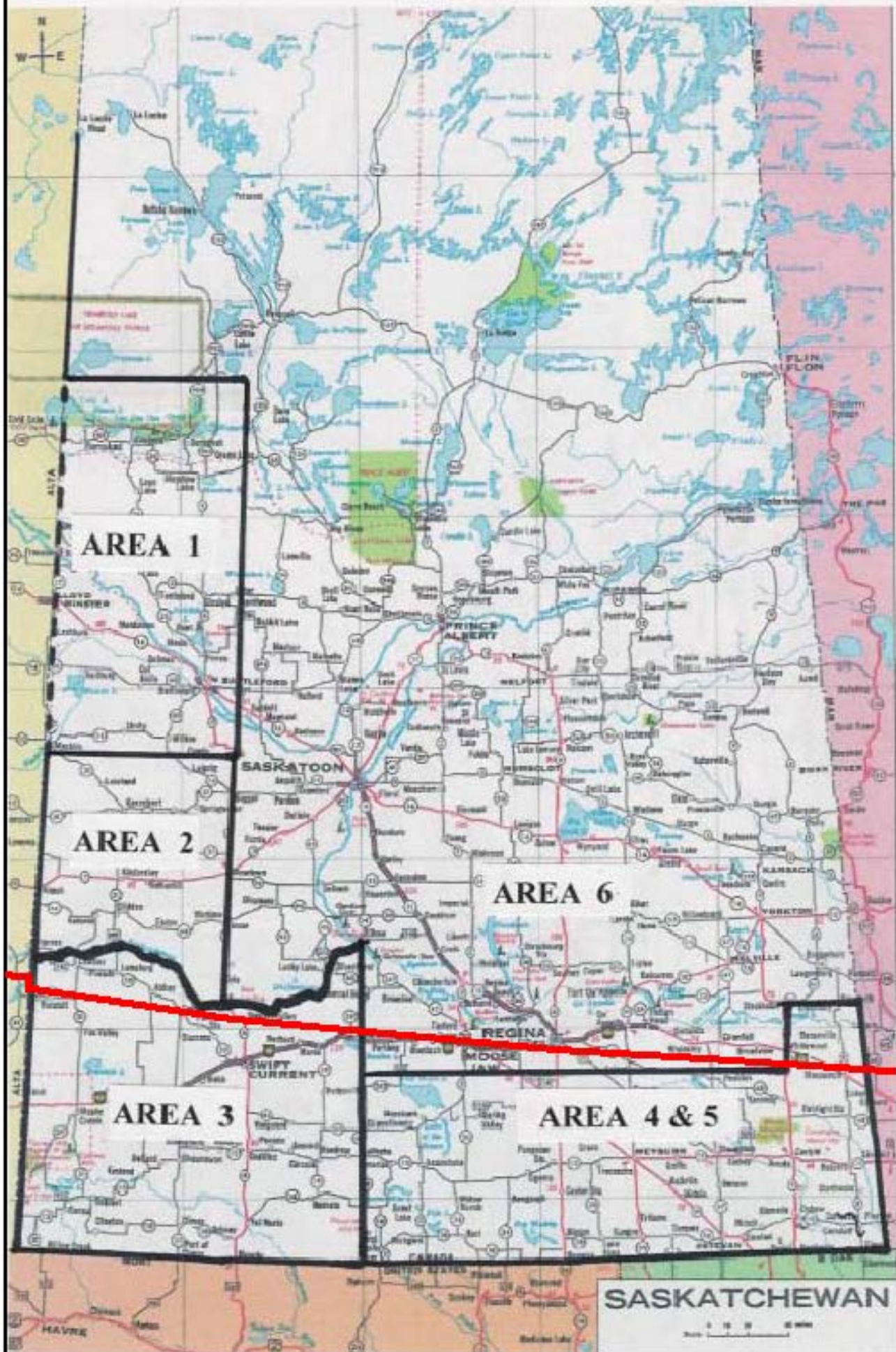
SPILL OBSERVED ? RESPONSE

1. ASSESS THE SPILL OCCURRENCE:

- ▶ ASSESS IMMEDIATE HAZARDS TO:

SASK. AREA SPILL CO-OPS BOUNDARIES

April 28, 2005



Oil Spill Cooperative Agreement

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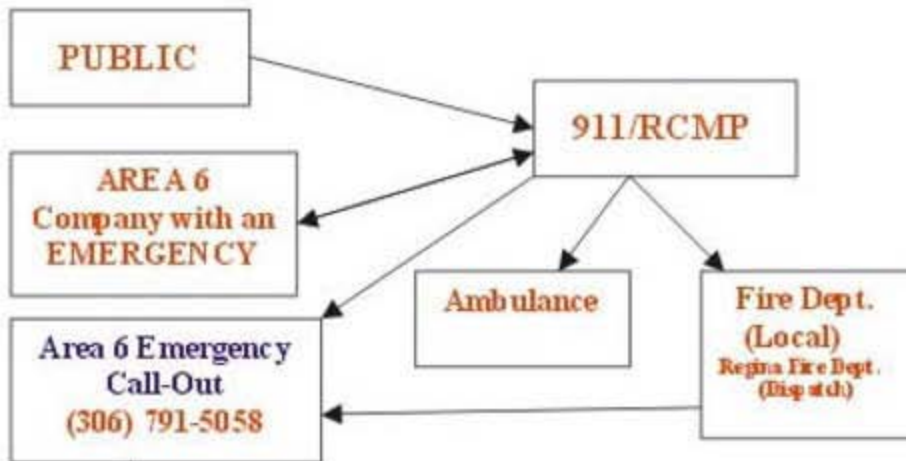
Saskatchewan Area 6 Oil Spill Cooperative

The Province of Saskatchewan is divided into 5 oil spill cooperative areas. The TransCanada Keystone Pipeline travels from west to east through the southernmost part of area 6. The cooperative is comprised of several oil companies in the area who designate their company owned response equipment to be available to other members of the area cooperative for use during an incident.

Through the preceding agreement TransCanada Keystone Pipeline system will have the ability to use the cooperatives equipment, if available, during an incident.

Contact information and Saskatchewan area map are included in this document.

AREA 6 EMERGENCY RESPONSE CO-OP CALL-OUT CHART & INSTRUCTIONS (May 2008)



Alliance Pipeline
 1-800-884 8811
 Kinder Morgan (Cochin)
 1-800-265 6000
 Co-op Refineries
 (306) 721 5372
 Spectra Energy
 1-403-838-3764
 Imperial Oil
 (24/7) (306) 757 4342

 Enbridge Pipelines
 1-877-420 8800
 Moose Jaw Asphalt
 1-306-691 7800 (ext. 0)
 Petro Canada
 (Saskatoon)
 1-306-382 1455 (ext. 0)
 Plains Midstream
 1-866-875 2554
 SaskEnergy/TransGas
 (306) 777 9800

MEMBER INSTRUCTIONS

*** THE "FIRST" COMPANY TO RECEIVE A CALL or have a PIPELINE EMERGENCY shall contact the AREA 6 EMERGENCY CALL-OUT and announce the following summary message:

"(your company) is calling on behalf of the Area 6 Emergency Response Co-op.

There is a "pipeline emergency" at the following (location).

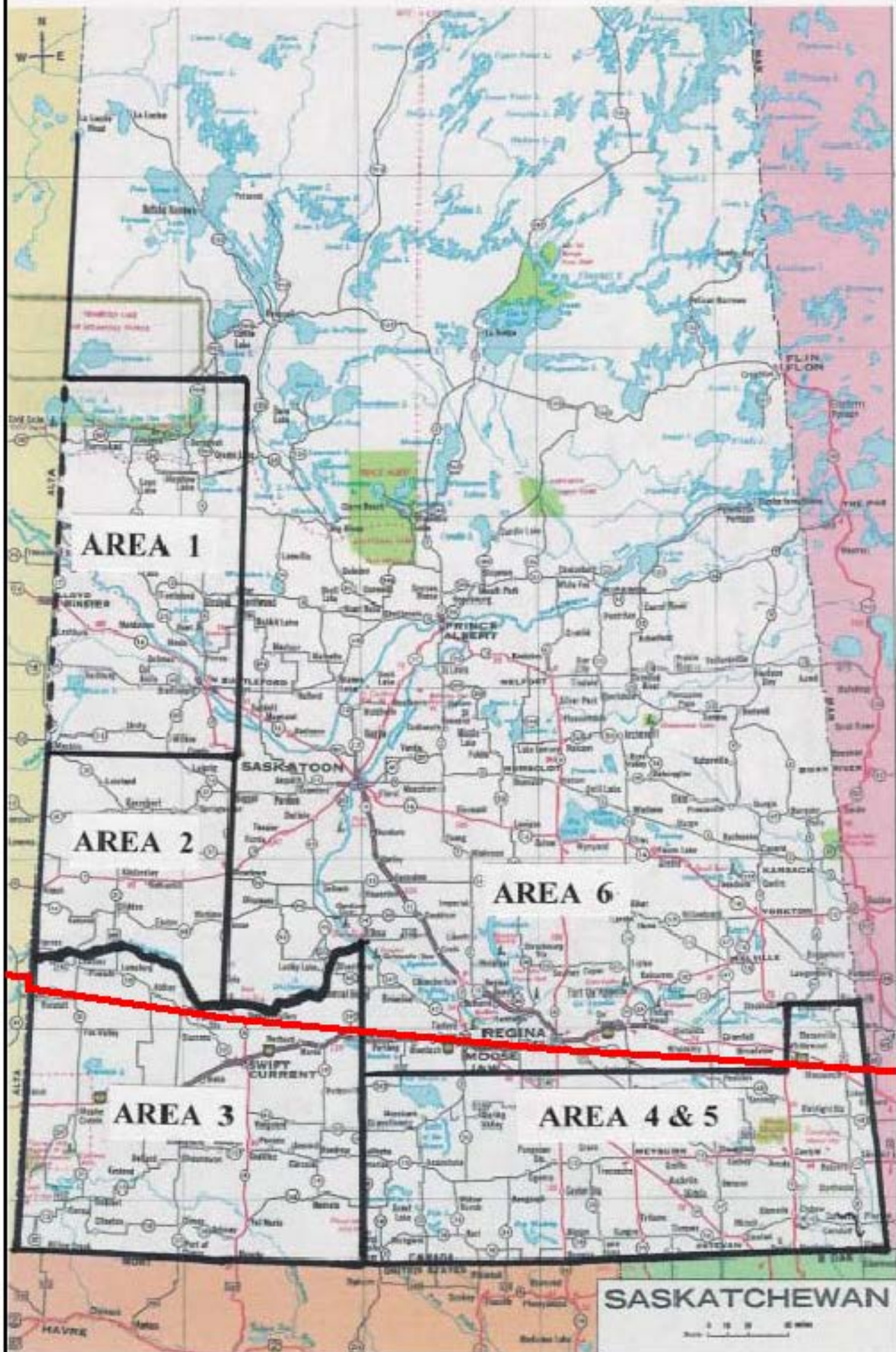
The company involved is (state name if known) or (state unknown).

Please "ACTIVATE" the Area 6 Emergency Response Co-op's "Call-Down Procedure".

SPECIAL INSTRUCTIONS: Please state if you are requesting assistance or this is for notification purposes only. Also if you require equipment, manpower or any special requests or instructions.

SASK. AREA SPILL CO-OPS BOUNDARIES

April 28, 2005



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Saskatchewan Area 4&5 Oil Spill Cooperative

The Province of Saskatchewan is divided into 5 oil spill cooperative areas. The TransCanada Keystone Pipeline travels from west to east through a small area in the north-east corner of area 4&5. The cooperative is run by a steering committee with custodians who are responsible for storage and maintenance of the response equipment.

Through the preceding agreement TransCanada Keystone Pipeline system will have the ability to use the cooperatives equipment, if available, during an incident.

The equipment location, contact information and Saskatchewan area map are included in this document.

EQUIPMENT LOCATION	DATE LAST REVISED: 08-Feb-26
OIL SPILL CONTINGENCY AREA 4&5 FIRST RESPONSE FOR EQUIPMENT/TRAILER AND LOCATION	

OIL SPILL FIRST RESPONSE

Phone: **(306) 634-6277** to notify the Oil Spill Contingency that you will need the trailer and to make arrangements to pick up the trailer.

EQUIPMENT LOCATION

Oil spill equipment is stored in a 32 foot trailer.

TRAILER LOCATION

Redigo Construction Company Limited
44 Hwy 39 East
Estevan, Saskatchewan

DRIVER QUALIFICATION AND VEHICLE RATING REQUIREMENTS

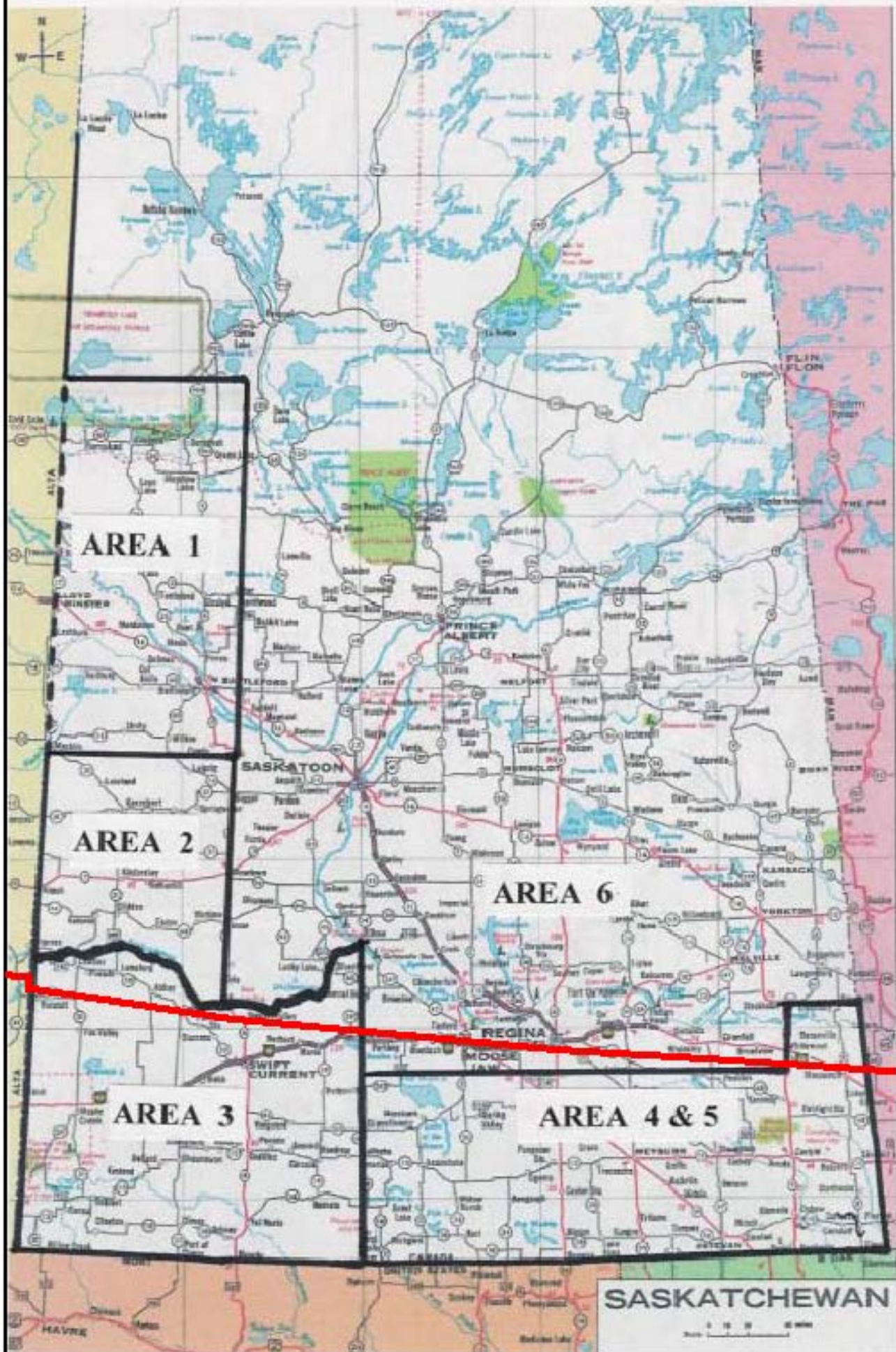
As the trailer is greater than 10,000 lb (actual weight approx. 13,000 lb), drivers must possess a minimum of a Class 1G license, as per SGI requirements. Also, vehicles must be rated accordingly. Below is a list of contractors with qualified drivers and vehicles. Any other contractors with qualified drivers and vehicles may also be used to mobilize and de-mobilize the trailer.

Murray Towing and Boosting Service, Estevan [REDACTED]
Carson Welding & Maintenance, Lampman [REDACTED]
Jerry Mainil Limited, Weyburn- [REDACTED]

The ball for the hitch is located just inside the side door.

SASK. AREA SPILL CO-OPS BOUNDARIES

April 28, 2005



APPENDIX B

WORST CASE DISCHARGE ANALYSIS AND SCENARIOS

[Introduction](#)

[Hardisty Pump Station/ Regina Pump Station](#)

[Worst Case Discharge](#)
[Planning Volume Calculations](#)

[Regina Pump Station / Haskett Pump Station](#)

[Worst Case Discharge](#)
[Planning Volume Calculations](#)

[North Dakota, South Dakota, Nebraska](#)

[Worst Case Discharge](#)
[Planning Volume Calculations](#)

[Kansas, Missouri, Illinois](#)

[Worst Case Discharge](#)
[Planning Volume Calculations](#)

[Cushing Extension](#)

[Worst Case Discharge](#)
[Planning Volume Calculations](#)

INTRODUCTION

This Appendix identifies potential causes for oil discharges and discusses the response efforts that are necessary for successful mitigation. Included in this Appendix are hypothetical scenarios for various types of spills that have the potential to occur along the system. It is anticipated that the Company will respond to spills in a consistent manner regardless of the location. Therefore, the guidelines discussed in this appendix will apply to all spills whenever possible.

United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Discharge Volume Calculation

- **Worst Case Discharge**

The largest volume (Bbls) of the following:

- *Pipeline's maximum release time (hrs), plus the maximum shutdown response time (hrs), multiplied by the maximum flow rate (bph), plus the largest line drainage volume after shutdown of the line section.*

--OR--

- *Largest foreseeable discharge for the line section is based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective action or preventive action taken.*

--OR--

- *Capacity of the single largest breakout tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system.*

Scenario Types

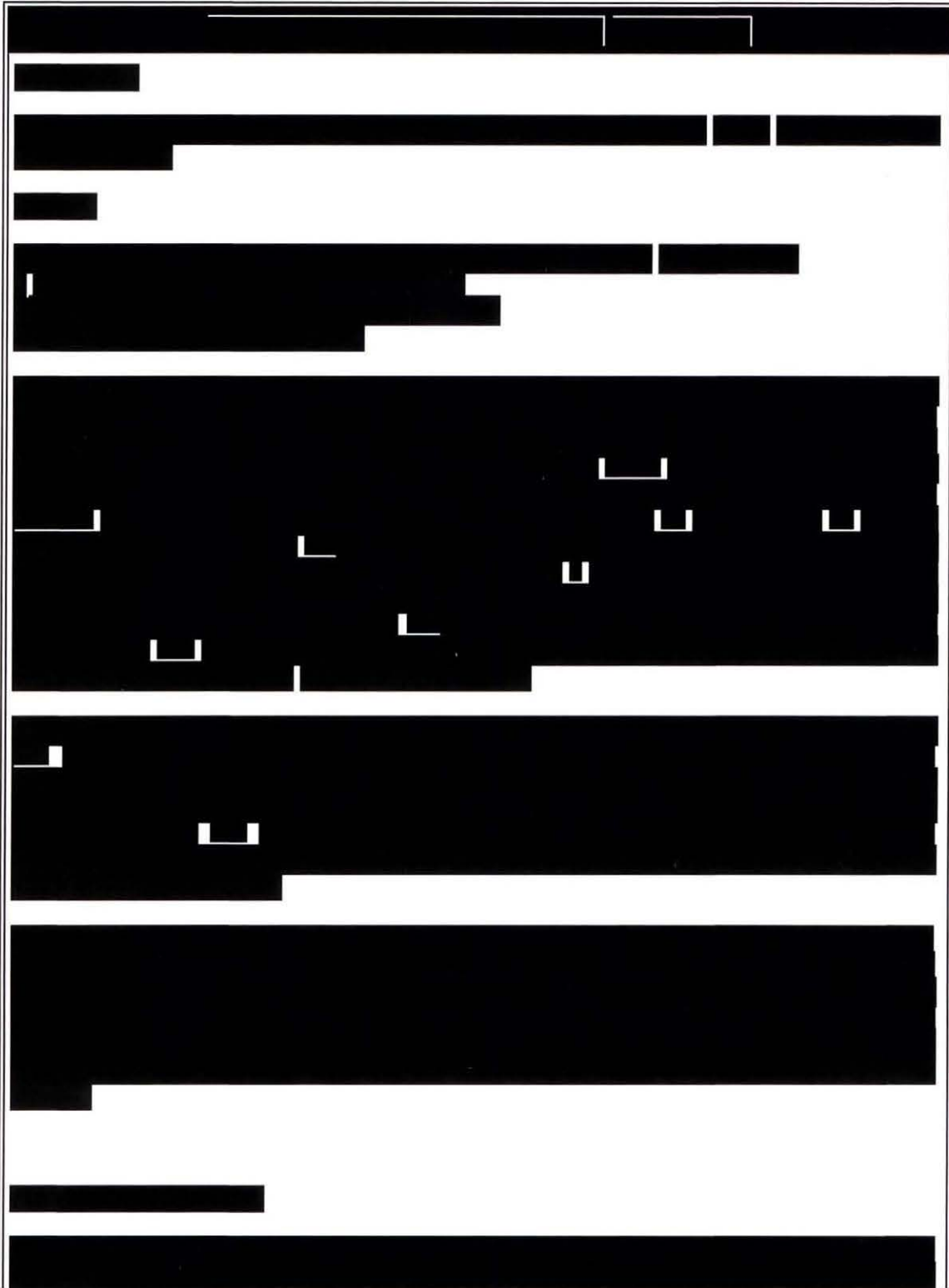
The occurrence of a Worst Case Discharge (WCD) could be the result of any number of scenarios along the pipeline system including:

- Piping rupture.
- Piping leak, under pressure and not under pressure.
- Explosion or fire.
- 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).

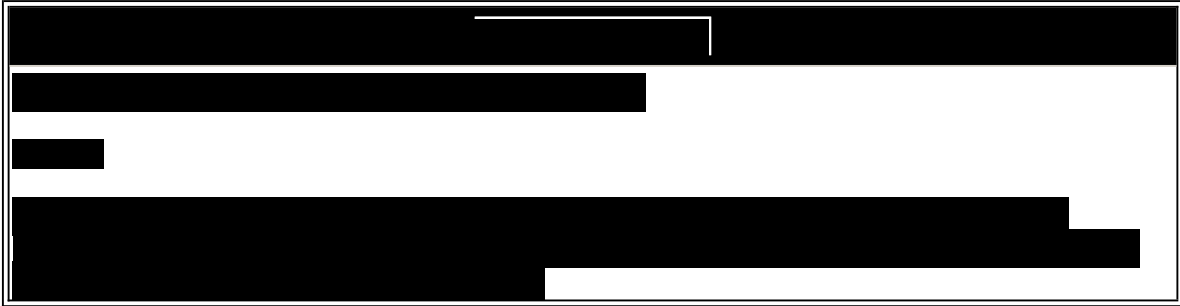
The response actions to each of these scenarios are outlined in Section 3.1 and Figure 3.1. The response resources are identified in a quick reference format in Figure 2.5. Pipeline response personnel list/telephone numbers and other internal/external resources telephone numbers are detailed in Figures 2.2 and 2.5.

RESPONSE CAPABILITY SCENARIOS

(Canada) **Hardisty Pump Station/ Regina Pump Station**





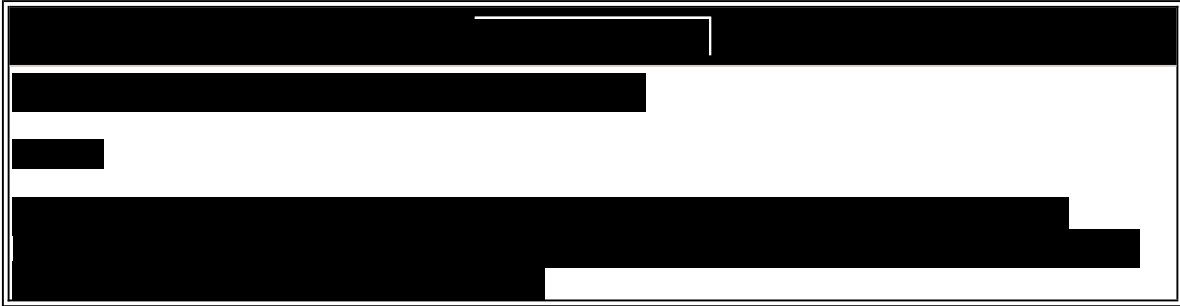


(Canada) **Hardisty Pump Station/ Regina Pump Station**

RESPONSE PLANNING VOLUME CALCULATIONS

Location Data			
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
Discharge Volumes/Calculations			
[REDACTED]			[REDACTED]
Selected Calculation Factors (Based on USCG Tables)			
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
Response Planning Volume Calculation			
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
	Tier 1	Tier 2	Tier 3
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]



(Canada) Regina Pump Station / Haskett Pump Station

RESPONSE PLANNING VOLUME CALCULATIONS

Location Data			
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
Discharge Volumes/Calculations			
[REDACTED]			[REDACTED]
Selected Calculation Factors (Based on USCG Tables)			
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
Response Planning Volume Calculation			
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]			[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

RESPONSE CAPABILITY SCENARIOS

North Dakota, South Dakota, Nebraska

Pipeline Worst Case Discharge = [REDACTED]
<p>Description</p> <p>The pipeline-based Worst Case Discharge is projected as a scenario [REDACTED] feet downstream of [REDACTED]</p>
<p>Volume</p> <p>Worst Case = (Initial Line Fill Volume - Pumping Rate Volume) x [REDACTED] = Barrels = [REDACTED]</p> <p>The Worst Case Discharge for this response zone was calculated electronically using elevation data, pipeline statistics, and designed operational levels. The first calculation completed was the volume released prior to the shutdown of the pipeline system. This volume is noted as "Pumping Rate Volume" and is equal to [REDACTED] barrels. Using the designed operational levels, the pumping rate volume is calculated by taking the pumping rate of [REDACTED] barrels per day and multiplying by the shutdown time of [REDACTED] minutes. The [REDACTED] minutes of shutdown time consists of [REDACTED] minutes of evaluation time, where the controllers decide that there is a problem and the line needs to be shut down, [REDACTED] minutes of pump station shutdown, which must be completed in a certain order to prevent damage to the system. To ensure that the volume is not underestimated, the [REDACTED] minutes of shutdown time is multiplied by the full pumping rate, [REDACTED] barrels per minute, even though, as pump stations are shut down the rate will decrease throughout the [REDACTED] minutes of shutdown.</p> <p>The second calculated number is the amount of drain down. These calculations were done at [REDACTED] foot increments throughout the length of the pipeline. This drain down volume is calculated using electronic elevation data and assumes a complete break in the pipeline. The computer program used develops elevation profiles of the pipeline and provides the volume of a release at each [REDACTED] foot point taking into account the large elevation changes in the pipeline. The combination of the pumping rate volume and the drain down volume provides the "Initial Line Fill Volume".</p> <p>In the Initial Line Fill Volume calculation the program only accounts for large elevation changes. In such, long flat portions that have smaller hills and valleys are calculated as draining fully, when common sense and subject matter studies, such as the California State Fire Marshall report of March 1993, have proven that these smaller elevation changes will prevent much of these areas from draining. Therefore, the worst case discharge has been calculated above reducing the line drainage component to 60% of the computer generated amount.</p>
<p>Response Requirement</p> <p>The Company has identified sufficient response resources, by contract or other approved means, to respond to a Worst Case Discharge to the maximum extent practicable. These</p>

response resources include:

- Resources capable of arriving at the staging area within the applicable response tier requirements for non-high volume areas (Tier 1 = 12 hours; Tier 2 = 36 hours; Tier 3 = 60 hours).
- Resources capable of oil recovery in inclement weather conditions (i.e. heavy rain, snow, ice).

Notes

- Contracted and Company owned equipment and manpower resources are detailed in Figure 2.5 and Appendix A.
- Telephone references are provided in Figures 2.2 and 2.5.

Breakout Tanks

There are no breakout tanks in the Response Zone.

Volume

If the Response Zone had breakout tank(s), a worst case discharge scenario involving breakout tankage uses the single largest volume tank in the response zone, adjusted for the size of the secondary containment system.

North Dakota, South Dakota, Nebraska

RESPONSE PLANNING VOLUME CALCULATIONS

Location Data			
Location Type			Inland/Near Shore
Port Type			Non-High Volume
WCD Product Type			Crude Oil
Product Group			3
Pipeline and Hazardous Materials Safety Administration WCD Volume (bbls)			██████
Discharge Volumes/Calculations			
Worst Case Discharge - Based on Pipeline and Hazardous Materials Safety Administration criteria (bbls)			██████
Selected Calculation Factors (Based on USCG Tables)			
Removal Capacity Planning Volume - Percent Natural Dissipation			30%
Removal Capacity Planning Volume - Percent Recovered Floating Oil			50%
Removal Capacity Planning Volume - Percent Oil Onshore			50%
Emulsification Factor			2
Tier 1 - On Water Oil Recovery Resource Mobilization Factor			15%
Tier 2 - On Water Oil Recovery Resource Mobilization Factor			25%
Tier 3 - On Water Oil Recovery Resource Mobilization Factor			40%
Response Planning Volume Calculation			
On-Water Recovery Volume (bbls)			██████
Shoreline Recovery Volume (bbls)			██████
Shoreline Cleanup Volume (bbls)			██████
	Tier 1	Tier 2	Tier 3
On-Water Recovery Cpcty (bbls/day)	██████	██████	██████
Shallow Water Resp Cpblty (bbls/day)	██████	██████	██████
Storage Capacity (bbls/day)	██████	██████	██████
On-Water Response Caps (bbls/day)	12,500	25,000	50,000
Additional Response Req'd (bbls/day)	0	0	0
Response Time (hrs)	12	36	60

RESPONSE CAPABILITY SCENARIOS

Kansas, Missouri, Illinois

Pipeline Worst Case Discharge =
<p>Description</p> <p>The pipeline-based Worst Case Discharge is projected as a scenario [REDACTED] upstream of [REDACTED]</p>
<p>Volume</p> <p>Worst Case = (Initial Line Fill Volume - Pumping Rate Volume) x [REDACTED] = Barrels = [REDACTED]</p> <p>The Worst Case Discharge for this response zone was calculated electronically using elevation data, pipeline statistics, and designed operational levels. The first calculation completed was the volume released prior to the shutdown of the pipeline system. This volume is noted as "Pumping Rate Volume" and is equal to [REDACTED] barrels. Using the designed operational levels, the pumping rate volume is calculated by taking the pumping rate of [REDACTED] barrels per day and multiplying by the shutdown time of [REDACTED] minutes. The [REDACTED] minutes of shutdown time consists of [REDACTED] minutes of evaluation time, where the controllers decide that there is a problem and the line needs to be shut down, [REDACTED] minutes of pump station shutdown, which must be completed in a certain order to prevent damage to the system. To ensure that the volume is not underestimated, the [REDACTED] minutes of shutdown time is multiplied by the full pumping rate, [REDACTED] barrels per minute, even though, as pump stations are shut down the rate will decrease throughout the [REDACTED] minutes of shutdown.</p> <p>The second calculated number is the amount of drain down. These calculations were done at [REDACTED] foot increments throughout the length of the pipeline. This drain down volume is calculated using electronic elevation data and assumes a complete break in the pipeline. The computer program used develops elevation profiles of the pipeline and provides the volume of a release at each [REDACTED] foot point taking into account the large elevation changes in the pipeline. The combination of the pumping rate volume and the drain down volume provides the "Initial Line Fill Volume".</p> <p>In the Initial Line Fill Volume calculation the program only accounts for large elevation changes. In such, long flat portions that have smaller hills and valleys are calculated as draining fully, when common sense and subject matter studies, such as the California State Fire Marshall report of March 1993, have proven that these smaller elevation changes will prevent much of these areas from draining. Therefore, the worst case discharge has been calculated above reducing the line drainage component to 60% of the computer generated amount.</p>
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response resources include:

- Resources capable of arriving at the staging area within the applicable response tier requirements for non-high volume areas (Tier 1 = 12 hours; Tier 2 = 36 hours; Tier 3 = 60 hours).
- Resources capable of oil recovery in inclement weather conditions (i.e. heavy rain, snow, ice).

Notes

- Contracted and Company owned equipment and manpower resources are detailed in Figure 2.5 and Appendix A.
- Telephone references are provided in Figures 2.2 and 2.5.

Breakout Tanks

There are no breakout tanks in the Response Zone.

Volume

If the Response Zone had breakout tank(s), a worst case discharge scenario involving breakout tankage uses the single largest volume tank in the response zone, adjusted for the size of the secondary containment system.

Kansas, Missouri, Illinois

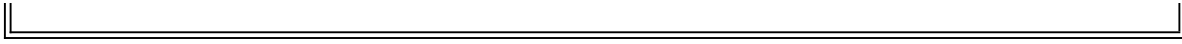
RESPONSE PLANNING VOLUME CALCULATIONS

Location Data			
Location Type			Inland/Near Shore
Port Type			High Volume
WCD Product Type			Crude Oil
Product Group			3
Pipeline and Hazardous Materials Safety Administration WCD Volume (bbls)			████████
Discharge Volumes/Calculations			
Worst Case Discharge - Based on Pipeline and Hazardous Materials Safety Administration criteria (bbls)			████████
Selected Calculation Factors (Based on USCG Tables)			
Removal Capacity Planning Volume - Percent Natural Dissipation			30%
Removal Capacity Planning Volume - Percent Recovered Floating Oil			50%
Removal Capacity Planning Volume - Percent Oil Onshore			50%
Emulsification Factor			2
Tier 1 - On Water Oil Recovery Resource Mobilization Factor			15%
Tier 2 - On Water Oil Recovery Resource Mobilization Factor			25%
Tier 3 - On Water Oil Recovery Resource Mobilization Factor			40%
Response Planning Volume Calculation			
On-Water Recovery Volume (bbls)			████████
Shoreline Recovery Volume (bbls)			████████
Shoreline Cleanup Volume (bbls)			████████
	Tier 1	Tier 2	Tier 3
On-Water Recovery Cpcty (bbls/day)	████████	████████	████████
Shallow Water Resp Cpblty (bbls/day)	████████	████████	████████
Storage Capacity (bbls/day)	████████	████████	████████
On-Water Response Caps (bbls/day)	12,500	25,000	50,000
Additional Response Req'd (bbls/day)	0	0	0
Response Time (hrs)	6	30	54

RESPONSE CAPABILITY SCENARIOS

Cushing Extension

Pipeline Worst Case Discharge =
<p>Description</p> <p>The pipeline-based Worst Case Discharge is projected as a scenario [REDACTED] downstream of Station Steele City.</p> <p>Volume</p> <p>Worst Case = (Initial Line Fill Volume - Pumping Rate Volume) x [REDACTED] = Barrels = [REDACTED]</p> <p>The Worst Case Discharge for this response zone was calculated electronically using elevation data, pipeline statistics, and designed operational levels. The first calculation completed was the volume released prior to the shutdown of the pipeline system. This volume is noted as "Pumping Rate Volume" and is equal to [REDACTED] barrels. Using the designed operational levels, the pumping rate volume is calculated by taking the pumping rate of [REDACTED] barrels per day and multiplying by the shutdown time of [REDACTED] minutes. The [REDACTED] minutes of shutdown time consists of [REDACTED] minutes of evaluation time, where the controllers decide that there is a problem and the line needs to be shut down, [REDACTED] minutes of pump station shutdown, which must be completed in a certain order to prevent damage to the system. To ensure that the volume is not underestimated, the [REDACTED] minutes of shutdown time is multiplied by the full pumping rate, [REDACTED] barrels per minute, even though, as pump stations are shut down the rate will decrease throughout the [REDACTED] minutes of shutdown.</p> <p>Response Requirement</p> <p>The Company has identified sufficient response resources, by contract or other approved means, to respond to a Worst Case Discharge to the maximum extent practicable. These response resources include:</p> <ul style="list-style-type: none"> Resources capable of arriving at the staging area within the applicable response tier requirements for non-high volume areas (Tier 1 = 12 hours; Tier 2 = 36 hours; Tier 3 = 60 hours). Resources capable of oil recovery in inclement weather conditions (i.e. heavy rain, snow, ice). <p>Notes</p> <ul style="list-style-type: none"> Contracted and Company owned equipment and manpower resources are detailed in Figure 2.5 and Appendix A. Telephone references are provided in Figures 2.2 and 2.5.



Breakout Tanks

There are no breakout tanks in the Response Zone.

Volume

If the Response Zone had breakout tank(s), a worst case discharge scenario involving breakout tankage uses the single largest volume tank in the response zone, adjusted for the size of the secondary containment system.

Cushing Extension

RESPONSE PLANNING VOLUME CALCULATIONS

Location Data			
Location Type			Inland/Near Shore
Port Type			High Volume
WCD Product Type			Crude Oil
Product Group			3
Pipeline and Hazardous Materials Safety Administration WCD Volume (bbls)			██████
Discharge Volumes/Calculations			
Worst Case Discharge - Based on Pipeline and Hazardous Materials Safety Administration criteria (bbls)			██████
Selected Calculation Factors (Based on USCG Tables)			
Removal Capacity Planning Volume - Percent Natural Dissipation			30%
Removal Capacity Planning Volume - Percent Recovered Floating Oil			50%
Removal Capacity Planning Volume - Percent Oil Onshore			50%
Emulsification Factor			2
Tier 1 - On Water Oil Recovery Resource Mobilization Factor			15%
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Tier 3 - On Water Oil Recovery Resource Mobilization Factor			40%
Response Planning Volume Calculation			
On-Water Recovery Volume (bbls)			██████
Shoreline Recovery Volume (bbls)			██████
Shoreline Cleanup Volume (bbls)			██████
	Tier 1	Tier 2	Tier 3
On-Water Recovery Cpcty (bbls/day)	██████	██████	██████
Shallow Water Resp Cpblty (bbls/day)	██████	██████	██████
Storage Capacity (bbls/day)	██████	██████	██████
On-Water Response Caps (bbls/day)	12,500	25,000	50,000
Additional Response Req'd (bbls/day)	0	0	0
Response Time (hrs)	6	30	54

APPENDIX C

EMERGENCY PRE-PLANNING

- C.1 [Release Detection](#)
- C. 2 [Leak Detection Systems](#)
- C. 3 [Discharge Prevention Systems](#)

EMERGENCY PRE-PLANNING

Leak detection and discharge prevention is accomplished through safe operating procedures and maintenance procedures outlined in the Company Operations and Maintenance (O&M) Manual. The Company Operations and Maintenance Manual is designed to meet the requirements found in Statutory Orders and Regulations /99-294 S27, National Energy Board, Operation and Maintenance Manuals, and Title 49, US Code of Federal Regulations, Part 195, Transportation of Hazardous Liquids by Pipeline.

C.1 RELEASE DETECTION

- The Keystone Console and Company Field Employees are responsible for ensuring the integrity of facilities and detecting releases.
- There are four primary types of indications that a release may be occurring:
 - An unexplained hydraulic upset condition observed in the Pipeline system operating data.
 - A consistent unexplainable Pipeline system shortage occurring over several check time periods.
 - An alarm from a Supervisory Control and Data Acquisition-based leak detection system.
 - A report of a direct observation of a release or released product received from an employee or the public.
- All indications, including supposedly direct observation, are subject to confirmation; however, the Company policy is to shut down if any doubt exists as to the integrity of the Pipeline system. The simultaneous occurrence of two or more of the indicators above greatly increases the probability that the Pipeline system has lost integrity.
- Specific guidance for response to abnormal operating conditions and determining the location of a suspected pipeline release may be found in the Company's Operations and Maintenance Manual, maintained separately.
- A form for recording conversations with an observer who reports an emergency is located in Appendix F of this Plan. Copies of this form should be kept readily accessible at telephones.
- Routine actions to be taken by Company Field Employees to ensure facility integrity and detect releases are listed as follows:
 - Keystone Console Monitors Pressures using Supervisory Control and Data Acquisition
 - Routine Station/ROW Checks Performed
 - Routine Aerial Surveillance
 - 24 Hour Emergency Reporting Phone Number Monitored

C.2 LEAK DETECTION SYSTEMS

Leak detection systems utilized along the Pipeline include:

- System-level indication is accomplished through usage of a Supervisory Control and Data Acquisition (SCADA) system. This system is capable of monitoring flow rates, pressure, metering information (delivery / receipt volumes), temperature, and valve positions. The Supervisory Control and Data Acquisition system is monitored on a 24-hour per day basis by both the centralized Pipeline Control Center and Secondary Control points.

The location of a spill caused by a catastrophic break, which may be indicative of a Worst Case Discharge, can be inferred by Supervisory Control and Data Acquisition personnel down to a Pipeline section between operating pump stations. This inference is based upon rapid and abrupt changes in operating conditions.

C.3 DISCHARGE PREVENTION SYSTEMS

Pipeline pump stations are designed in a manner that maximizes the containment of leaks on-site and deters the migration of leaks off-site. Discharge prevention is accomplished through the following measures:

- Pipelines and related structures have grounding systems to reduce the possibility of accidental ignition due to lightning.
- Discharge prevention is also accomplished through the use of general housekeeping procedures and leak inspection system.

APPENDIX D

TRAINING AND DRILLS

D.1 [Response Team Training](#)

- [Emergency Response Plan Review](#)
- [Hazardous Waste Operations and Emergency Response \(29 CFR 1910.120\)](#)
- [Incident Command System](#)
- [Training Records Maintenance](#)
- [Contractor Training](#)
- [Training Qualifications](#)

D. 2 [Response Team Exercises](#)

- [Quarterly QI Notification Exercise](#)
- [Annual Equipment Deployment Exercise](#)
- [Annual Response Team Tabletop Exercise](#)
- [Government-Initiated Unannounced Exercise](#)
- [Area Exercises](#)
- [Exercise Documentation](#)

D. 3 [Purpose of Review and Evaluation](#)

- [Outline of Review](#)
- [Detection](#)
- [Notification](#)
- [Assessment/Evaluation](#)
- [Mobilization](#)
- [Response - Strategy](#)
- [Response - Resources Used](#)
- [Response - Effectiveness](#)
- [Command Structure](#)
- [Measurement](#)
- [Government Relations](#)
- [Public Relations](#)

D.1 RESPONSE TEAM TRAINING

The Company provides training related to discharge prevention, testing and response, including measures to repair Pipeline ruptures and mitigate discharges. The training methods address oil discharges from the Pipeline from several perspectives: human health and safety, rupture control and repair operations, pollution control, and overall (crisis) management of the emergency.

The competency of each training program is closely monitored by the Training Section through observation of and/or participation in actual training sessions.

Through the various training methods described below the Company's training program is intended to ensure the following results:

That all personnel know:

- Their responsibilities under the Plan.
- The name, address and procedures for contacting the operator on a 24-hour basis.
- The name of and procedures for contacting the Qualified Individual on a 24-hour basis.

That all reporting personnel know:

- The Pipelines and Response Zone details for the affected area (Response Zones Annexes).
- The telephone number of the Federal Provincial/State and local agencies and other required notifications (Section 2.0).
- The notification process. (Section 2.0).

That all response personnel know:

- The characteristics and hazards of the oil discharged (Section 3.0 and Appendix G - MSDS).
- The conditions that is likely to worsen emergencies, including the consequences of pipeline malfunctions, 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 (Section 3.0).
- The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus (Section 3.0). Only trained persons will be utilized. Company personnel are only trained on the use of handheld Ansul 30# fire extinguisher units for small incipient fires.

Emergency Response Plan Review

All Response Team Members should review their Emergency Response Plan whenever their job position or responsibilities change under the Plan. A copy of this Plan will be available at all times to Team Members.

HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (29 CFR 1910.120)

Federal and State regulations require that Response Team Members maintain up-to-date Hazardous Waste Operations and Emergency Response training necessary to function in their assigned positions. At a minimum, team members will receive "First Responder Awareness Level" training. All personnel responding to an incident must satisfy the applicable Hazardous Waste Operations and Emergency Response training requirements of 29 CFR 1910.120.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE TRAINING REQUIREMENTS		
Responder Classification	Required Training Hours	Refresher
29CFR 1910.120(q) Emergency Response		
First Responder - Awareness Level	2-4 hrs demonstration of competency	same
First Responder - Operations Level	8 hrs	8 hrs
Hazardous Materials Technician	8 hrs	8 hrs
Hazardous Materials Specialist	24 hrs plus competency	8 hrs
Incident Commander	24 hrs plus competency in specialized areas	8 hrs
	24 hrs plus competency	
29CFR 1910.120(e) Clean Up Sites		
General Site Workers	40 hrs / 3 days on the job training	8 hrs
Occasional Workers (Limited Tasks)	24 hrs / 1 day on the job training	8 hrs
General Site Workers (Low Hazard)	24 hrs / 1 day on the job training	8 hrs
Supervisors	8 hrs supervisor training	8 hrs
* Previous work experience and/or training certified as equivalent by employer.		

Incident Command System

Response Team Members will receive Incident Command System training and may also receive supplemental training in other related general topics.

Training Records Maintenance

Emergency response training records are maintained at the Company's office. Training records for response personnel will be maintained for as long as personnel have duties in this Emergency Response Plan.

Contractor Training

The Company also recognizes that contract personnel must also have sufficient training to respond emergency response situations. The Company communicates this training need to its key contractors during contract negotiations and often specifically spells out this requirement in its contracts. The Company also tends to use well-known spill response contractors whose reputation and experience levels help ensure personnel who respond will be trained to appropriate levels.

Training Qualifications

As no formalized method of certifying training instructors has been provided by Occupational Safety and Health Administration, the Company ensures the competency of its instructors and training organizations by selecting trainers and/or organizations with professional reputations and extensive hands-on and classroom experience in their subject matter. The Company personnel with responsibility to coordinate the training program also conduct periodic informal audits of training courses selected for the Company training program to ensure their suitability for the program.

D.2 RESPONSE TEAM EXERCISES

Spill Management Team members, government agencies, contractors, and other resources must participate in response exercises required by Federal, State, or local regulations and as detailed in the "National Preparedness for Response Exercise Program (PREP) Guidelines." The Company (through the Community, Safety and Environment Department) will conduct announced drills to maintain compliance, and each plan-holder must participate in at least one exercise annually. The following table lists the triennial exercise cycle for facilities (see National Preparedness for Response Exercise Program Guidelines for full details).

TRIENNIAL CYCLE		
Total Number	Frequency	Exercise Type/Description
12	Quarterly	Qualified Individual Notification Exercise
3	Annually	Equipment Deployment Exercise (<i>Facility-owned equipment</i>)
3	Annual	Response Team Tabletop Exercise
3	Annual	Equipment Deployment Exercise (<i>facilities with Oil Spill Removal Organization-owned equipment</i>)
3	3 per Triennial Cycle	Unannounced Exercise (<i>not a separate exercise</i>) Actual response can be considered as an unannounced exercise. Credit can also be given for unannounced equipment deployment and Response Team tabletop exercises.
NOTES: 1) All Emergency Response Plan components must be exercised at least once in the Cycle.		

Quarterly QI Notification Exercise

- **Scope:** Exercise communication between Pipeline personnel and the Qualified Individual(s) and/or designated alternate(s). At least once each year, one of the notification exercises should be conducted during non-business hours.
- **Objective:** Contact must be made with a Qualified Individual or designated alternate, as identified in the Plan.
- **General:** All personnel receiving notification shall respond to the notification and verify their receipt of the notification. Personnel who do not respond should be contacted to determine whether or not they received the notification.

Annual Equipment Deployment Exercise (for operator and/or Oil Spill Removal Organization equipment)

- **Scope:** Demonstrate ability to deploy spill response equipment identified in the Emergency Response Plan.

May consist entirely of operator owned equipment, or a combination of OSRO and operator equipment.

The number of equipment deployment exercises conducted should be such that equipment and personnel assigned to each Response Zone are exercised at least one a year. If the same personnel and equipment respond to multiple zones, they need only exercise once per year. If different personnel and equipment response to various Response Zones, each must participate in an annual equipment deployment exercise.

- **Objective:** Demonstrate personnel's ability to deploy and operate response equipment. Ensure that the response equipment is in proper working order.
- **General:** The Facility may take credit for actual equipment deployment to a spill, or for training sessions, as long as the activities are properly documented.

Annual Response Team Tabletop Exercise

- **Scope:** Exercise the response team's organization, communication, and decision- making in managing a spill response. Each team identified within the Plan must conduct an annual Response Team Tabletop Exercise.
- **Objective:** Exercise the response team in a review of the following:

Knowledge of the Plan.
 Proper notifications.
 Communications system.
 Ability to access an OSRO.
 Coordination of internal spill response personnel.
 Review of the transition from a initial team to a regional team.
 Ability to effectively coordinate response activity with the National Response System (NRS) Infrastructure.
 Ability to access information in the Area Contingency Plan.

- **General:** A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve a Worst Case Discharge scenario.

Government-Initiated Unannounced Exercise

- **Scope:** Demonstrate ability to respond to a Worst Case Discharge spill event.
- **Objectives:** Designated Emergency Response Team Members should demonstrate adequate knowledge of their Emergency Response Plan and the ability to organize, communicate, coordinate, and respond in accordance with that Plan.
- **General:** Annually, the Pipeline and Hazardous Materials Safety Administration may conduct up to 20 unannounced exercises throughout the U.S. for the pipeline industry as a whole. A single owner or operator will not be required to participate in a PHMSA-initiated unannounced exercise if they have already participated in one within the previous 36 months.

Area Exercises

- **Objective:** The purpose of the area exercise is to exercise the entire response community in a particular area. An area is defined as "that geographic area for which a separate and distinct Area Contingency Plan has been prepared, as described in Oil Pollution Act 90." The response community includes the Federal, State, and local government and industry. The area exercises are designed to exercise the government and industry interface for spill response.
- **General:** The goal is to ensure that all areas of the country are exercised triennially. All of the area exercises will be developed by an exercise design team. The exercise design team is comprised of representatives from the Federal, State, and local government and industry. A lead plan holder would lead each area exercise. The lead plan holder is the organization (government or industry) that holds the primary plan that is exercised in the area exercise. The lead plan holder would have the final word on designing the scope and scenario of the exercise.

Exercise Documentation

- All exercises should be documented and maintained at the Company office; documentation should specify:
 - The type of exercise;
 - Date and time of the exercise;
 - A description of the exercise;
 - The objectives met in the exercise;
 - The components of the response plan exercised; and
 - Lessons learned.
- Exercise documentation should be kept on file for the required length of time depending on the regulating agency (three (3) years for the U.S. Coast Guard and five (5) years for the Pipeline and Hazardous Materials Safety Administration and the U.S. Environmental Protection Agency).

D.3 PURPOSE OF REVIEW AND EVALUATION

This Section provides procedures and information useful to responders for post incident/exercise review and evaluation. Post incident/exercise reviews should be conducted in a timely manner following an incident/exercise. The Plan should be evaluated to determine its usefulness during the incident/exercise and appropriate revisions should be made. All incident/exercise documentation should be included in the Plan evaluation process.

Outline of Review

Given below are items a team composed of outside people knowledgeable in spill response and key members of the response teams should examine. These questions are intended as guidelines only; many other questions are likely to be appropriate at each stage of a critique.

- ***Detection***

Was the spill detected promptly?
How was it detected? By whom?
Could it have been detected earlier? How?
Are any instruments or procedures available to consider which might aid in spill detection?

- ***Notification***

Were proper procedures followed in notifying government agencies? Were notifications prompt?
Was management notified promptly/response appropriate?
Was the Pipeline owner/operator notified promptly? If so, why, how, and who? If not, why not?

- ***Assessment/Evaluation***

Was the magnitude of the problem assessed correctly at the start?
What means were used for this assessment?
Are any guides or aids needed to assist spill evaluation?
What sources of information were available on winds and on water currents?
Is our information adequate?
Was this information useful (and used) for spill trajectory forecasts? Were such forecasts realistic?
Do we have adequate information on product properties?
Do we need additional information on changes of product properties with time, i.e., as a result of weathering and other processes?

- ***Mobilization***

What steps were taken to mobilize spill countermeasures?
What resources were used?
Was mobilization prompt?
Could it have been speeded up or should it have been?
What about mobilization of manpower resources?
Was the local spill cooperative used appropriately?
How could this be improved?
Was it appropriate to mobilize the Pipeline owner/operator resources and was this promptly initiated?
What other resources are available and have they been identified and used adequately?

- **Response - Strategy**

Is there an adequate Spill Response Plan for the location?
Is it flexible enough to cope with unexpected spill events?
Does the Plan include clear understanding of local environmental sensitivities?
What was the initial strategy for response to this spill?
Is this strategy defined in the Spill Plan?
How did the strategy evolve and change during this spill and how were these changes implemented?
What caused such changes?
Are there improvements needed? More training?

- **Response - Resources Used**

What resources were mobilized?
How were they mobilized?
How did resource utilization change with time? Why?
Were resources used effectively?

- Contractors
- Government agencies
- Company resources
- Cooperatives
- Volunteers
- Consultants
- Other (e.g., bird rescue centers)

What changes would have been useful?
Do we have adequate knowledge of resource availability?
Do we have adequate knowledge of waste disposal capabilities?

- **Response - Effectiveness**

Was containment effective and prompt?
How could it have been improved?
Should the location or the local cooperative have additional resources for containment?
Was recovery effective and prompt?
How could it have been improved?
Should the location or the local cooperative have additional resources for recovery of spilled product?
Was contaminated equipment disposed promptly and safely?
Was there adequate in-house product separation, recovery, and disposal?
How could it have been improved?
Was there adequate outside disposal resources available?

- **Command Structure**

Who was initially in charge of spill response?
What sort of organization was initially set up?
How did this change with time? Why?
What changes would have been useful?
Was there adequate surveillance?
Should there be any changes?
Were communications adequate?
What improvements are needed? Hardware, procedures, etc.
Was support from financial services adequate? Prompt?
Should there be any changes?
Is more planning needed?
Should financial procedures be developed to handle such incidents?

- **Measurement**

Was there adequate measurement or estimation of the volume of product spilled?
Was there adequate measurement or estimation of the volume of product recovered?
Was there adequate measurement or estimation of the volume of product disposed?
Should better measurement procedures be developed for either phase of operations?
If so, what would be appropriate and acceptable?

- **Government Relations**

What are the roles and effects of the various government agencies which were involved?
Was there a single focal point among the government agencies for contact?
Should there have been better focus of communications to the agencies?
Were government agencies adequately informed at all stages?
Were too many agencies involved?
Are any changes needed in procedures to manage government relations?
Examples of affected U.S. agencies (there may be others):

- U.S. Coast Guard
- Environmental Protection Agency
- National Oceanic and Atmospheric Administration
- Dept of Fish and Wildlife
- State Parks
- Harbors and Marinas
- States
- Cities
- Counties

Was there adequate agreement with the government agencies on disposal methods?
Was there adequate agreement with the government agencies on criteria for cleanup?
How was this agreement developed?
Were we too agreeable with the agencies in accepting their requests for specific action items (e.g., degree of cleanup)?
Should there be advance planning of criteria for cleanup, aimed at specific local environmentally sensitive areas? (Such criteria should probably also be designed for different types of product.)

- **Public Relations**

How were relations with the media handled?

What problems were encountered?

Are improvements needed?

How could public outcry have been reduced? Was it serious?

Would it be useful to undertake a public information effort to "educate" reporters about product and effects to it if spilled?

These areas should be investigated shortly after the incident to assure that actions taken are fresh in peoples' minds.

APPENDIX E

DISPOSAL PLAN

E.1 [Overview](#)

E. 2 [Waste Classification](#)

E. 3 [Waste Handling](#)

E. 4 [Waste Storage](#)

E. 5 [Waste Disposal](#)

Figure E. 1 [Temporary Storage Methods](#)

Figure E. 2 [Oily Waste Separation and Disposal Methods](#)

E.1 OVERVIEW

A major oil spill response would generate significant quantities of waste materials ranging from oily debris and sorbent materials to sanitation water and used batteries. All these wastes need to be classified and segregated (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed at approved disposal sites. Each of these activities demands that certain health and safety precautions be taken, which are strictly controlled by Federal and State Laws and Regulations. This Section provides an overview of the applicable State Regulations governing waste disposal, and a discussion of various waste classification, handling, transfer, storage, and disposal techniques. It is the responsibility of the Environmental Unit to manage waste disposal needs during an oil spill cleanup.

E.2 WASTE CLASSIFICATION

Oily- Liquid Wastes

Oily liquid wastes (i.e., oily water and emulsions) that would be handled, stored, and disposed during response operations are very similar to those handled during routine storage and transfer operations. The largest volume of oily liquid wastes would be produced by recovery operations (e.g., through the use of vacuum devices or skimmers). In addition, oily water and emulsions would be generated by vehicle operations (e.g., spent motor oils, lubricants, etc.), and equipment cleaning operations.

Non-Oily - Liquid Wastes

Response operations would also produce considerable quantities of non-oily liquid wastes. Water and other non-oily liquid wastes would be generated by the storage area and stormwater collection systems, equipment cleaning (i.e., water contaminated with cleaning agents), and office and field operations (i.e., sewage, construction activities).

Solid Wastes

A solid waste is defined as any discarded material provided that it is not specifically excluded under the regulations. These exclusions cover materials such as domestic sewage and mixtures of sewage discharged through a sewer system or industrial wastewater point source discharges.

A discarded material is any material which is abandoned (disposed, burned or incinerated) or accumulated, stored or treated prior to being abandoned. A discarded material is also any material recycled or any material considered inherently wastelike. Recycled material is considered solid waste when used in a manner constituting disposal, placed on land or burned for energy recovery.

A solid waste may be considered a hazardous waste. A solid waste, as defined above, may be a hazardous waste if it is not excluded from regulation and is either a listed hazardous waste or exhibits the characteristics of a hazardous waste. A solid waste exhibits the characteristics of a hazardous waste if it exceeds the thresholds established in determining the following:

1. ignitability
2. corrosivity
3. reactivity
4. toxicity

A solid waste may also become a hazardous waste if it is mixed with a listed hazardous waste or, in the case of any other waste (including mixtures), when the waste exhibits any

of the characteristics identified above.

Oily - Solid / Semi-Solid Wastes

Oily solid/semi-solid wastes that would be generated by containment and recovery operations include damaged or worn-out booms, disposable/soiled equipment, used sorbent materials, saturated soils, contaminated beach sediments, driftwood, and other debris.

Non-Oily - Solid / Semi-Solid Wastes

Non-oily solid/semi-solid wastes would be generated by emergency construction operations (e.g., scrap, wood, pipe, and wiring) and office and field operations (i.e., refuse). Vessel, vehicle, and aircraft operations also produce solid wastes.

E.3 WASTE HANDLING

A primary concern in the handling of recovered oil and oily debris is contaminating unaffected areas or recontaminating already cleaned areas. Oily wastes generated during the response operations would need to be separated by type and transferred to temporary storage areas and/or transported to incineration or disposal sites. Proper handling of oil and oily wastes is imperative to ensure personnel health and safety.

Safety Considerations

Care shall be taken to avoid or minimize direct contact with oily wastes. All personnel handling or coming into contact with oily wastes shall wear protective clothing. A barrier cream can be applied prior to putting on gloves to further reduce the possibility of oily waste absorption. Safety goggles shall be worn by personnel involved in waste handling activities where splashing might occur. Any portion of the skin exposed to oily waste should be washed with soap and water as soon as possible. Decontamination zones should be set up during response operations to ensure personnel are treated for oil exposure.

Wastes Transfer

During response operations, it may be necessary to transfer recovered oil and oily debris from one point to another several times before the oil and oily debris are ultimately recycled, incinerated or disposed at an appropriate disposal site. Depending on the location of response operations, any or all of the following transfer operations may occur:

- From portable or vessel-mounted skimmers into flexible bladder tanks, storage tanks of the skimming vessel itself, or a barge.
- Directly into the storage tank of a vacuum device.
- From a skimming vessel or flexible bladder to a barge.
- From a vacuum device storage tank to a barge.
- From a barge to a tank truck.
- From a tank truck to a processing system (e.g., oil/water separator).
- From a processing system to a recovery system and/or incinerator.
- Directly into impermeable bags that, in turn, are placed in impermeable containers.
- From containers to trucks.

There are four general classes of transfer systems that may be employed to affect oily waste transfer operations:

- **Pumps:** Rotary pumps, such as centrifugal pumps, may be used when transferring large volumes of oil, but they may not be appropriate for pumping mixtures of oil and water. The extreme shearing action of centrifugal pumps tends to emulsify oil and water, thereby increasing the viscosity of the mixture and causing low, inefficient transfer rates. The resultant emulsion would also be more difficult to separate into oil and water fractions. Lobe or "positive displacement" pumps work well on heavy, viscous oils, and do not emulsify the oil/water mixture. Double-acting piston and double acting diaphragm pumps are reciprocating pumps that may also be used to pump oily wastes.
- **Vacuum Systems:** A vacuum truck may be used to transfer viscous oils but they usually pick up a very high water/oil ratio.
- **Belt/Screw Conveyors:** Conveyors may be used to transfer oily wastes containing a large amount of debris. These systems can transfer weathered debris laden oil either horizontally or vertically for short distances (i.e., 10 feet) but are bulky and difficult to set up and operate.
- **Wheeled Vehicles:** Wheeled vehicles may be used to transfer liquid wastes or oily debris to storage or disposal sites. These vehicles have a limited transfer volume (i.e., 100 barrels) and require good site access.

E.4 WASTE STORAGE

Interim storage of recovered oil, oily and non-oily waste would be considered to be an available means of holding the wastes until a final management method is selected. In addition, the segregation of wastes according to type would facilitate the appropriate method of disposal. The storage method used would depend upon:

- The type and volume of material to be stored.
- The duration of storage.
- Access.

During an oil spill incident, the volume of oil that can be recovered and dealt with effectively depends upon the available storage capacity. Typical short-term storage options are summarized in Figure E-1. The majority of these options can be used either onshore or offshore.

If storage containers such as bags or drums are used, the container must be clearly marked with the proper Canadian Transport Dangerous Goods/United States Department of Transportation marking to indicate the type of material/waste contained and/or the ultimate disposal option.

Fuel barges may be the best option for temporary storage of oil recovered in open waters and frac tanks for inland spills. Depending on size, these vessels may be able to hold up to 6,000 barrels of oil and water and frac tanks may hold up to 500-550 barrels. The barge deck can be used as a platform for operating oil spill clean-up equipment and storing containment boom.

Steel or rubber tanks can be used to store oil recovered near the shoreline. To facilitate offloading, demulsifiers may be used to break emulsions prior to placing the recovered substance into the barges or storage tanks.

Use of any site for storage is dependent on the approval of the local authorities. The following elements affect the choice of a potential storage site:

- Geology.
- Ground water.
- Soil.
- Flooding.
- Surface water.
- Slope.
- Covered material.
- Capacity.
- Climatic factors.
- Land use.
- Toxic air emissions.
- Security.
- Access.
- Public contact.

E.5 WASTE DISPOSAL

Techniques for Disposal of Recovered Oil

Recovery, reuse, and recycling are the best choices for remediation of a spill, thereby reducing the amount of oily debris to be bermed onsite or disposed of at a solid waste landfill. Treatment is the next best alternative, but incineration and burning for energy recovery have more options within the state. There are some limitations and considerations in incinerating for disposal. Environmental quality of incineration varies with the type and age of the facility. Therefore, when incineration becomes an option during an event, local air quality authorities would be contacted for advice about efficiency and emissions of facilities within their authority. Approval of the local air authorities is a requirement for any incineration option. Landfilling is the last option. Final disposal at a solid or dangerous waste landfill is the least environmentally sound method of dealing with a waste problem such as oily debris.

Note: Prior to the disposal of ANY waste products, the Incident Commander or his designee must contact the Keystone / TransCanada Community, Safety and Environmental Department to receive direction and guidance on the proper disposal methods and procedures.

During an oil spill incident, the Company would consult with the proper regulating agency to identify the acceptable disposal methods and sites appropriately authorized to receive such wastes. The Company maintains a list of approved disposal sites that satisfy local, Province/State, and Federal

Regulations and Company requirements. This identification of suitable waste treatment and disposal sites would be prepared by the Environmental Unit in the form of an Incident Disposal Plan which must be authorized by the U.S. Coast Guard and/or the Environmental Protection Agency or National Energy Board.

An Incident Disposal Plan would include predesignated interim storage sites, segregation strategies, methods of treatment and disposal for various types of debris, and the locations/contacts of all treatment and disposal site selections. Onsite treatment/disposal is preferred.

In order to obtain the best overall Incident Disposal Plan, a combination of methods should be used. There is no template or combination of methods that can be used in every spill situation. Each incident should be reviewed carefully to ensure that an appropriate combination of disposal methods is employed.

The different types of wastes generated during response operations would require different disposal methods. To facilitate the disposal of wastes, they should be separated by type for temporary storage, transport and disposal. Figure E-2 lists some of the options that would be available to segregate oily wastes. The figure also depicts methods that may be employed to separate free and/or emulsified water from the oily liquid waste.

The following is a brief discussion of some disposal techniques available for recovered oil and oily debris.

Recycling

This technique entails removing water from the oil and blending the oil with uncontaminated oil. Recovered oil can be shipped to refineries provided that it is exempt from hazardous waste regulations. There it can be treated to remove water and debris, and then blended and sold as a commercial product.

The Company's designated Disposal Specialist is responsible for ensuring that all waste materials be disposed at an internally approved disposal site.

Incineration

This technique entails the complete destruction of the recovered oil by high temperature thermal oxidation reactions. There are licensed incineration facilities as well as portable incinerators that may be brought to a spill site. Incineration may require the approval of the local Air Pollution Control Authority. Factors to consider when selecting an appropriate site for onsite incineration would include:

- Proximity to recovery locations.
- Access to recovery locations.
- Adequate fire control.
- Approval of the local air pollution control authorities.

In Situ Burning / Open Burning

Burning techniques entail igniting oil or oiled debris and allowing it to burn under ambient conditions. These disposal techniques are subject to restrictions and permit requirements established by federal, province/state and local laws. They would not be used to burn Polychlorinated biphenyls, waste oil containing more

than 1,000 parts per million of halogenated solvents, or other substances regulated by the Environmental Protection Agency or Environment Canada. Permission for in situ burning may be difficult to obtain when the burn takes place near populated areas.

As a general rule, in situ burning would be appropriate only when atmospheric conditions will allow the smoke to rise several hundred feet and rapidly dissipate. Smoke from burning oil will normally rise until its temperature drops to equal the ambient temperature. Afterwards, it will travel in a horizontal direction under the influence of prevailing winds.

Landfill Disposal

This technique entails burying the recovered oil in an approved landfill in accordance with regulatory procedures. Landfill disposal of free liquids is prohibited by Federal Law in the United States.

With local health department approval, non-burnable debris which consists of oiled plastics, gravel and oiled seaweed, kelp, and other organic material may be transported to a licensed, lined, approved municipal or private landfill and disposed of in accordance with the landfill guidelines and regulations. Landfill designation would be planned only for those wastes that have been found to be unacceptable by each of the other disposal options (e.g., waste reduction, recycling, energy recovery). Wastes would be disposed only at Company-approved disposal facilities. The Disposal Specialist is responsible for ensuring that all waste materials are disposed at a Company internally approved disposal site. Disposal at a non-approved facility would require approval by the Disposal Specialist prior to sending any waste to such a facility.

FIGURE E-1
TEMPORARY STORAGE METHODS

CONTAINER	ONSHORE	OFFSHORE	SOLIDS	LIQUIDS	NOTES
Barrels	x	x	x	x	May require handling devices. Covered and clearly marked.
Tank Trucks	x	x		x	Consider road access. Barge-mounted offshore.
Dump/Flat Bed Trucks-Roll-offs	x		x		May require impermeable liner and cover. Consider flammability of vapors at mufflers.
Barges		x	x	x	Liquids only in tanks. Consider venting of tanks.
Oil Storage Tanks	x	x		x	Consider problems of large volumes of water in oil.
Bladders	x	x		x	May require special hoses or pumps for oil transfer.
Frac Tanks	x			x	Consider road access.

FIGURE E-2

OILY WASTE SEPARATION AND DISPOSAL METHODS

TYPE OF MATERIAL	SEPARATION METHODS	DISPOSAL METHODS
LIQUIDS		
Non-emulsified oils	Gravity separation of free water	Incineration Use of recovered oil as refinery/production facility feedstock
Emulsified oils	Emulsion broken to release water by: <ul style="list-style-type: none"> • heat treatment • emulsion breaking chemicals • mixing with sand • centrifuge • filter/belt press 	Use of recovered oil as refinery/production facility feedstock
SOLIDS		
Oil mixed with sand and soil	Collection of liquid oil leaching from sand during temporary storage Extraction of oil from sand by washing with water or solvent Removal of solid oils by sieving	Incineration Use of recovered oil as refinery/production facility feedstock Direct disposal Stabilization with inorganic material Degradation through land farming or composting
Oil mixed with cobbles or pebbles	Screening Collection of liquid oil leaching from materials during temporary storage Extraction of oil from materials by washing with water or solvent	Incineration Direct Disposal Use of recovered oil as refinery/production facility feedstock
Oil mixed with wood and sorbents	Screening Collection of liquid oil leaching from debris during temporary storage Flushing of oil from debris with water	Incineration Direct disposal Degradation through land farming or composting for oil mixed with seaweed or natural sorbents

APPENDIX F

MISCELLANEOUS FORMS

Forms and Exercise Documentation File Maintenance Procedures

- Forms and exercise documentation records should be maintained in a separate file in the Facility's office filing system.
- These files must be available for presentation upon request by regulatory agency personnel.

F 7000-1

[Click to view the file - PlanFiles/PlanContent/TRANSCANADAPLAN/PHMSA F 7000-1 30 10 2008 9 8 46%2Epdf](#)

Date: _____

NRC Incident No. # _____

**PHMSA F 7000-1 Accident Report –
Hazardous Liquid Pipeline Systems Form**

Date: _____

NRC Incident No. # _____

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed \$25,000 for each violation Form Approved for each day that such violation persists except that the maximum civil penalty shall not exceed \$500,000 as provided in 49 USC 60122 OMB No. 2137-0047



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

ACCIDENT REPORT – HAZARDOUS LIQUID PIPELINE SYSTEMS

Report Date _____

No. _____
(DOT Use Only)

INSTRUCTIONS

Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the Office Of Pipeline Safety Web Page at <http://ops.dot.gov>.

PART A – GENERAL REPORT INFORMATION

Check: Original Report Supplemental Report Final Report

1. a. Operator's OPS 5-digit Identification Number (if known) / / / / /
- b. If Operator does not own the pipeline, enter Owner's OPS 5-digit Identification Number (if known) / / / / /
- c. Name of Operator _____
- d. Operator street address _____
- e. Operator address _____
City, County, State and Zip Code

IMPORTANT: IF THE SPILL IS SMALL, THAT IS, THE AMOUNT IS AT LEAST 5 GALLONS BUT IS LESS THAN 5 BARRELS, COMPLETE THIS PAGE ONLY, UNLESS THE SPILL IS TO WATER AS DESCRIBED IN 49 CFR §195.52(A)(4) OR IS OTHERWISE REPORTABLE UNDER §195.50 AS REVISED IN CY 2001.

2. Time and date of the accident
/ / / / / / / / / / / / / / / /
hr. month day year
3. Location of accident
(If offshore, do not complete a through d. See Part C.1)
a. Latitude: _____ Longitude: _____
(if not available, see instructions for how to provide specific location)
b. _____
City, and County or Parish
c. _____
State and Zip Code
d. Mile post/valve station or survey station no.
(whichever gives more accurate location)

4. Telephone report
/ / / / / / / / / / / / / / / /
NRC Report Number month day year

5. Losses (Estimated)
Public/Community Losses reimbursed by operator:
Public/private property damage \$ _____
Cost of emergency response phase \$ _____
Cost of environmental remediation \$ _____
Other Costs \$ _____
(describe) _____
Operator Losses:
Value of product lost \$ _____
Value of operator property damage \$ _____
Other Costs \$ _____
(describe) _____
Total Costs \$ _____

6. Commodity Spilled Yes No
(If Yes, complete Parts a through c where applicable)
a. Name of commodity spilled _____
b. Classification of commodity spilled:
 HVLs /other flammable or toxic fluid which is a gas at ambient conditions
 CO₂ or other non-flammable, non-toxic fluid which is a gas at ambient conditions
 Gasoline, diesel, fuel oil or other petroleum product which is a liquid at ambient conditions
 Crude oil

- a. Estimated amount of commodity involved :
 Barrels
 Gallons (check only if spill is less than one barrel)
Amounts:
Spilled : _____
Recovered: _____

CAUSES FOR SMALL SPILLS ONLY (5 gallons to under 5 barrels) : (For large spills [5 barrels or greater] see Part H)

- Corrosion Natural Forces Excavation Damage Other Outside Force Damage
 Material and/or Weld Failures Equipment Incorrect Operation Other

PART B – PREPARER AND AUTHORIZED SIGNATURE

(type or print) Preparer's Name and Title Area Code and Telephone Number

Preparer's E-mail Address Area Code and Facsimile Number

Authorized Signature (type or print) Name and Title Date Area Code and Telephone Number

PART C – ORIGIN OF THE ACCIDENT (Check all that apply)

- 1. Additional location information
 - a. Line segment name or ID _____
 - b. Accident on Federal land other than Outer Continental Shelf Yes No
 - c. Is pipeline interstate? Yes No

- Offshore: Yes No (completed if offshore)
- d. Area _____ Block # _____
- State / / / or Outer Continental Shelf

- 2. Location of system involved (check all that apply)
 - Operator's Property
 - Pipeline Right of Way
 - High Consequence Area (HCA)? Describe HCA _____

- 3. Part of system involved in accident
 - Above Ground Storage Tank
 - Cavern or other below ground storage facility
 - Pump/meter station; terminal/tank farm piping and equipment, including sumps
 - Other Specify: _____

- Onshore pipeline, including valve sites
- Offshore pipeline, including platforms

If failure occurred on Pipeline, complete items a - g:

- 4. Failure occurred on

<input type="radio"/> Body of Pipe	<input type="radio"/> Pipe Seam	<input type="radio"/> Scraper Trap
<input type="radio"/> Pump	<input type="radio"/> Sump	<input type="radio"/> Joint
<input type="radio"/> Component	<input type="radio"/> Valve	<input type="radio"/> Metering Facility
<input type="radio"/> Repair Sleeve	<input type="radio"/> Welded Fitting	<input type="radio"/> Bolted Fitting
<input type="radio"/> Girth Weld		

Year the component that failed was installed: / / / / /

- 5. Maximum operating pressure (MOP)
 - a. Estimated pressure at point and time of accident: _____ PSIG
 - b. MOP at time of accident: _____ PSIG
 - c. Did an over pressurization occur relating to the accident? Yes No

- a. Type of leak or rupture
 - O Leak: Pinhole Connection Failure (complete sec. H5)
 - Puncture, diameter (inches) _____
 - O Rupture: Circumferential – Separation
 - Longitudinal – Tear/Crack, length (inches) _____
 - Propagation Length, total, both sides (feet) _____
 - ON/A
 - O Other _____

- b. Type of block valve used for isolation of immediate section:
 - Upstream: Manual Automatic Remote Control
 - Check Valve
 - Downstream: Manual Automatic Remote Control
 - Check Valve

- c. Length of segment isolated _____ ft
- d. Distance between valves _____ ft

- e. Is segment configured for internal inspection tools? Yes No
- f. Had there been an in-line inspection device run at the point of failure? Yes No Don't Know
 - Not Possible due to physical constraints in the system

- g. If Yes, type of device run (check all that apply)

<input type="checkbox"/> High Resolution Magnetic Flux tool	Year run: _____
<input type="checkbox"/> Low Resolution Magnetic Flux tool	Year run: _____
<input type="checkbox"/> UT tool	Year run: _____
<input type="checkbox"/> Geometry tool	Year run: _____
<input type="checkbox"/> Caliper tool	Year run: _____
<input type="checkbox"/> Crack tool	Year run: _____
<input type="checkbox"/> Hard Spot tool	Year run: _____
<input type="checkbox"/> Other tool	Year run: _____

PART D – MATERIAL SPECIFICATION

- 1. Nominal pipe size (NPS) _____ in.
- 2. Wall thickness _____ in.
- 3. Specification _____ SMYS / / / / /
- 4. Seam type _____
- 5. Valve type _____
- 6. Manufactured by _____ in year / / / / /

PART E – ENVIRONMENT

- 1. Area of accident

<input type="radio"/> Under pavement	<input type="radio"/> In open ditch
<input type="radio"/> Underground	<input type="radio"/> Above ground
<input type="radio"/> Inside/under building	<input type="radio"/> Under water
	<input type="radio"/> Other _____
- 2. Depth of cover: _____ inches

PART F – CONSEQUENCES

- 1. Consequences (check and complete all that apply)

a.	Fatalities	Injuries
Number of operator employees:	_____	_____
Contractor employees working for operator:	_____	_____
General public:	_____	_____
Totals:	_____	_____

- b. Was pipeline/segment shutdown due to leak? Yes No
- If Yes, how long? _____ days _____ hours _____ minutes

- c. Product ignited Yes No
- d. Explosion Yes No
- e. Evacuation (general public only) _____ people
- Reason for Evacuation:
 - Precautionary by company
 - Evacuation required or initiated by public official
- f. Elapsed time until area was made safe: _____ / _____ / _____ hr. _____ / _____ / _____ min.

- 2. Environmental Impact
 - a. Wildlife Impact:

Fish/aquatic	<input type="radio"/> Yes <input type="radio"/> No
Birds	<input type="radio"/> Yes <input type="radio"/> No
Terrestrial	<input type="radio"/> Yes <input type="radio"/> No
 - b. Soil Contamination Yes No
 - If Yes, estimated number of cubic yards: _____
 - c. Long term impact assessment performed: Yes No
 - d. Anticipated remediation Yes No
 - If Yes, check all that apply: Surface water Groundwater Soil Vegetation Wildlife

- e. Water Contamination: Yes No (If Yes, provide the following)
- Amount in water _____ barrels

Ocean/Seawater	<input type="radio"/> No <input type="radio"/> Yes
Surface	<input type="radio"/> No <input type="radio"/> Yes
Groundwater	<input type="radio"/> No <input type="radio"/> Yes
Drinking water	<input type="radio"/> No <input type="radio"/> Yes (If Yes, check below.)
	<input type="radio"/> Private well <input type="radio"/> Public water intake

PART G – LEAK DETECTION INFORMATION

1. Computer based leak detection capability in place? Yes No
2. Was the release initially detected by? (check one): CPM/SCADA-based system with leak detection
 Static shut-in test or other pressure or leak test
 Local operating personnel, procedures or equipment
 Remote operating personnel, including controllers
 Air patrol or ground surveillance
 A third party Other (specify) _____
3. Estimated leak duration days ____ hours ____

PART H – APPARENT CAUSE *Important: There are 25 numbered causes in this Part H. Check the box corresponding to the primary cause of the accident. Check one circle in each of the supplemental categories corresponding to the cause you indicate. See the instructions for guidance.*

- | | | | |
|--|---|--|--|
| <p>H1 – CORROSION</p> <p>1. <input type="checkbox"/> External Corrosion</p> <p>2. <input type="checkbox"/> Internal Corrosion</p> <p>(Complete items a – e where applicable.)</p> | <p>a. Pipe Coating</p> <p><input type="radio"/> Bare <input type="radio"/> Localized Pitting</p> <p><input type="radio"/> Coated <input type="radio"/> General Corrosion</p> <p><input type="radio"/> Other _____</p> | <p>b. Visual Examination</p> <p><input type="radio"/> General Corrosion</p> <p><input type="radio"/> Other _____</p> | <p>c. Cause of Corrosion</p> <p><input type="radio"/> Galvanic <input type="radio"/> Atmospheric</p> <p><input type="radio"/> Stray Current <input type="radio"/> Microbiological</p> <p><input type="radio"/> Cathodic Protection Disrupted</p> <p><input type="radio"/> Stress Corrosion Cracking</p> <p><input type="radio"/> Selective Seam Corrosion</p> <p><input type="radio"/> Other _____</p> |
|--|---|--|--|
- d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering accident?
 No Yes, Year Protection Started: / / / / /
- e. Was pipe previously damaged in the area of corrosion?
 No Yes ⇒ Estimated time prior to accident: / / / years / / / months Unknown

- H2 – NATURAL FORCES**
3. Earth Movement ⇒ Earthquake Subsidence Landslide Other _____
4. Lightning
5. Heavy Rains/Floods ⇒ Washouts Flotation Mudslide Scouring Other _____
6. Temperature ⇒ Thermal stress Frost heave Frozen components Other _____
7. High Winds

H3 – EXCAVATION DAMAGE

8. Operator Excavation Damage (including their contractors/Not Third Party)
9. Third Party (complete a-f)
- a. Excavator group
- General Public Government Excavator other than Operator/subcontractor
- b. Type:
- Road Work Pipeline Water Electric Sewer Phone/Cable
- Landowner-not farming related Farming Railroad
- Other liquid or gas transmission pipeline operator or their contractor
- Nautical Operations Other _____
- c. Excavation was: Open Trench Sub-strata (boring, directional drilling, etc...)
- d. Excavation was an ongoing activity (Month or longer) Yes No If Yes, Date of last contact / / / / /
- e. Did operator get prior notification of excavation activity?
- Yes; Date received: / / / mo. / / / day / / / / / yr. No
- Notification received from: One Call System Excavator Contractor Landowner
- f. Was pipeline marked as result of location request for excavation? No Yes (If Yes, check applicable items i - iv)
- i. Temporary markings: Flags Stakes Paint
- ii. Permanent markings:
- iii. Marks were (check one): Accurate Not Accurate
- iv. Were marks made within required time? Yes No

H4 – OTHER OUTSIDE FORCE DAMAGE

10. Fire/Explosion as primary cause of failure ⇒ Fire/Explosion cause: Man made Natural
11. Car, truck or other vehicle not relating to excavation activity damaging pipe
12. Rupture of Previously Damaged Pipe
13. Vandalism

Preliminary Incident Report

[Click to view the file - PlanFiles/PlanContent/TRANSCANADAPLAN/Preliminary Incident Report 22 1 2009 13 30 47%2Epdf](#)

date

Transportation Safety Board of Canada
Place du Centre, 4th Floor
200 Promenade du Portage
Hull, Québec
K1A 1K8

Attention: Mr. Larry Gales, P. Eng.

Dear Sir:

Re: Preliminary Incident Report involving [event type](#) on the TransCanada PipeLines Limited (“TransCanada”) [Canadian Mainline](#) at [Station/MLV Location](#), near [Town, Province](#), on [date of occurrence](#)

Further to our verbal report of [date](#) to Board Staff Member Mr. [x](#), the following is TransCanada's Preliminary Incident Report in accordance with the requirements of Section 52 of the National Energy Board's Onshore Pipeline Regulations and Section 5 of the Transportation Safety Board Regulations.

- (a) describe the incident, including the events leading up to and following the incident;
- (b) list all relevant agencies contacted and persons affected by the incident;
- (c) summarize any losses or impacts to people (e.g., injury, fatalities), environment (e.g., terrain, habitats, animals), production (e.g., interruption or reduction in service), and property;

If this were a gas release incident, use the following canned statement:

The environmental impact of this gas release is related to greenhouse gas emissions to atmosphere. This incident resulted in a maximum emission of _____ kt of methane which corresponds to _____ kt of CO₂ equivalents. The gas released from this incident will be included in our annual green house gas emission report to Statistics Canada.

Aside: Following is the formula for calculating kilotonnes of methane and kilotonnes of CO₂:

$$\frac{10^3 \text{ m}^3 \times 0.71}{1000} = \text{kt Methane}$$

$$\text{kt Methane} \times 21 = \text{kt CO}_2 \text{ equivalents}$$

- (d) identify any unsafe acts or conditions contributing to or causing the incident;
- (e) provide details on any emergency response,
- (f) state any corrective actions taken or planned to be taken to minimize the effects of the incident.

Yours very truly,
TransCanada PipeLines Ltd.

Original signed

R.P. Lancée, P. Eng.
Senior Regulatory Compliance Specialist

- cc: (appropriate Regional Director)
(appropriate Compliance Manager)
(appropriate Area Manager)
- | | |
|--------------|--|
| J. Baggs | (all reports) |
| K. Black | (all reports) |
| D. King | (all reports) |
| B. McConaghy | (if safety, health or environment related) |
| G. Scaman | (all reports) |
| J. Scott | (Legal review) |
| D. Wishart | (all reports) |

Incident & Issue Tracking No. _____

Detailed Incident Report

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Yours very truly,
TransCanada PipeLines Limited

Original signed

R.P. Lancée, P. Eng.
Senior Regulatory Compliance Specialist

cc: (appropriate Regional Director)
(appropriate Compliance Manager)
(appropriate Area Manager)

J. Baggs	(all reports)
K. Black	(all reports)
D. King	(all reports)
B. McConaghy	(if safety, health or environment related)
G. Scaman	(all reports)
J. Scott	(legal review)
D. Wishart	(all reports)

Incident & Issue Tracking No. _____

DRAFT

Unauthorized Activity

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450 - 1st Street S.W
Calgary, Alberta, Canada T2P 5H1
tel 403.920-7069
fax 403.920-2319
E-mail roel_lancee@transcanada.com

Date

National Energy Board
444 Seventh Avenue S.W.
Calgary, Alberta
T2P 0X8

Attention: Ms. Claudine Dutil-Berry, Secretary

Dear Madame:

Re: Unauthorized event type at TransCanada PipeLines Limited (“TransCanada”) Canadian Mainline Station/MLV Location, near Town, Province, on date of occurrence

TransCanada PipeLines Limited (“TransCanada”) files this Incident Report to report unauthorized mechanical excavation activities pursuant to the reporting requirements of Section 13 of the National Energy Board’s Pipeline Crossing Regulations Part II.

Board Staff Member _____ was initially notified of the unauthorized _____ on date of notification.

- a.) Date of Occurrence
- b.) Location of occurrence (Legal Land Description, MLV, mileage post, etc)
- c.) Indicate whether the activity involved mechanical excavation
- d.) Location of pipeline markers with respect to the unauthorized activity
- e.) Indicate whether a permit was issued by pipeline company (yes or no)
- f.) Name of landowner or facility owner, address and contact information (phone, fax, e-mail if applicable)

- g.) Name of excavator or contractor, address and contact information (phone, fax, e-mail if applicable)
- h.) Name of Pipeline company representative dealing with violation and contact information (phone, fax, e-mail if applicable)
- i.) Concerns the pipeline company may have regarding the safety of the pipeline as a result of the construction or installation or of the excavation
- j.) Any action the company intends to take or has taken

Mr. _____ met with Mr. _____ on date and discussed the requirements of notifying Info-Excavation prior to undertaking any mechanical excavation activities within the province and of having a Company Representative present to locate the pipeline and monitor the excavation when excavating on or within 30-metres of the TQM pipeline Right-of-Way. Mr. _____ provided Mr. _____ with a copy of the Integrated Public Awareness Package to remind him of their discussions.

Yours very truly,
TransCanada PipeLines Limited

R.P. Lancée, P. Eng.
Senior Regulatory Compliance Specialist

cc: (appropriate Regional Director)
(appropriate Compliance Manager)
(appropriate Area Manager)
(appropriate Land Representative)
J. Baggs
K. Black
D. King
B. McConaghy
G. Scaman
J. Scott
D. Wishart

cc: S. Berthelet National Energy Board

Incident & Issue Tracking No. _____

South Dakota Supplemental Emergency Response and Equipment Statement

[Click to view the file - PlanFiles/PlanContent/TRANSCANADAPLAN/Sup for SD 19 10 2009 15 35 10%2Epdf](#)

1.1 SUPPLEMENTAL EMERGENCY RESPONSE AND EQUIPEMENT STAEMENT

The purpose of this is to fulfill the South Dakota Department of Environment and Natural Resources request for additional information regarding TransCanada – Keystone Pipeline's ability to respond to a spill specifically in South Dakota

- Detail description of company owned assets is found in appropriately marked Appendix A: RESPONSE EQUIPMENT/RESOURCES. Additional information is linked to Appendix F. The trailer for the Keystone Response Zone 3, North Dakota, South Dakota, and Nebraska is appropriately located in Yankton, South Dakota.
- Keystone Pipeline's primary contractor, National Response Corporation, is strategically aligned with Coteau Environmental based in Watertown, SD. Currently, no other National Response Corporation assets or Sub-Contractors reside inside of South Dakota borders.
- Keystone Pipeline fully expects to have the required assets for a spill within the four (4) hour time frame previously stated in the Response Plan.

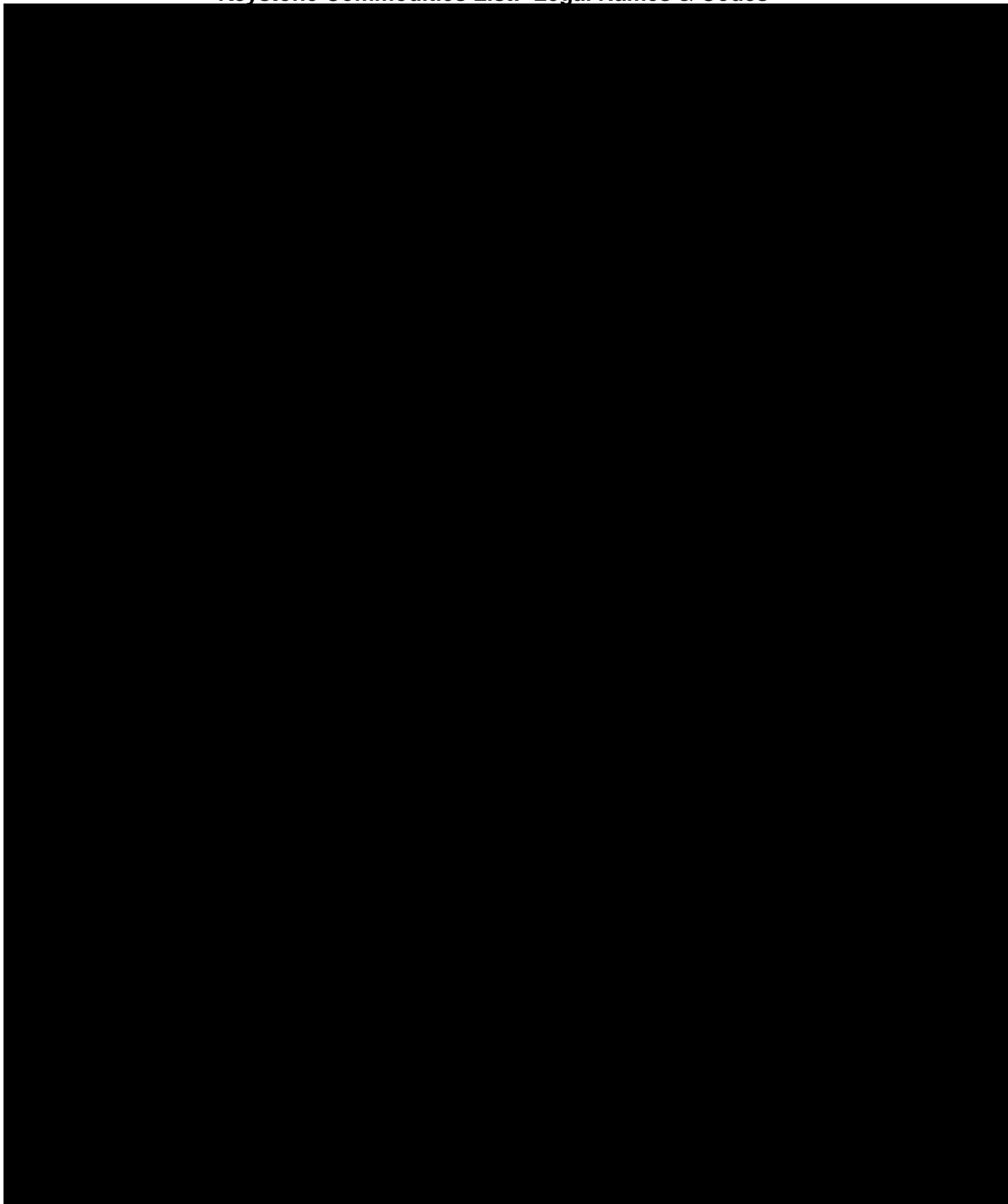
APPENDIX G

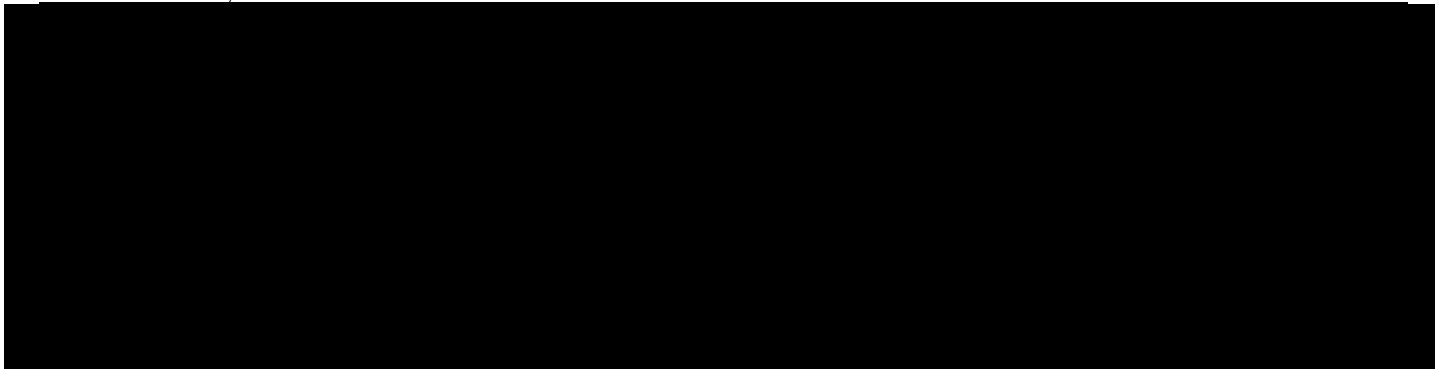
MATERIAL SAFETY DATA SHEET(S)

Keystone Commodities - Legal Names & Codes/Acronyms

[Click to view the file - Keystone Commodities - Legal Names
Codes Synonyms 27 11 2012 8 5 48.pdf](#)

Keystone Commodities List: Legal Names & Codes





Alberta Common Synthetic (ACS): Husky Oil Operations Limited

[Click to view the file - Alberta Common Synthetic - Husky Oil Operations Ltd 13 2 2012 17 6 49.pdf](#)

Albian Heavy Synthetic Crude (Dec2008) - Shell Canada

[Click to view the file - Albian Heavy Synthetic Crude \(Jan2012\) - Shell Canada Ltd 27 11 2012 7 41 14.pdf](#)

Albian Muskeg River Heavy (AMH) Shell Canada Limited

[Click to view the file - Albian Muskeg River Heavy \(Feb2011\) - Shell Canada 2 2 2012 18 22 22.PDF](#)

Albian Resid Blend Shell Canada Limited

[Click to view the file - Albian Resid Blend \(Nov2010\) - Shell Canada 3 2 2012 9 28 26.PDF](#)

Albian Vacuum Gasoil Blend

[Click to view the file - Albian Vacuum Gasoil Blend \(Nov2010\) - Shell
Canada 3 2 2012 9 28 59.PDF](#)

Canadian Heavy Oil - BP Canada Energy Trading Co

[Click to view the file - Canadian Heavy Oil - BP Canada Energy Trading Co 26 11 2012 13 8 43.pdf](#)

Crude Oil, Sour: Phillips 66 Company

[Click to view the file - Crude Oil Sour \(May2012\) - Phillips 66 Company 27 11 2012 7 44 28.pdf](#)

Crude Oil Sweet (Canada) Conoco Phillips Canada Limited

[Click to view the file - Crude Oil Sweet \(May2012\) - Phillips 66 Company 27 11 2012 12 16 59.pdf](#)

Dilbit: MEG Energy

[Click to view the file - Dilbit \(AWB\) \(Aug2011\) - MEG Energy Corp 27 11 2012 7 45 29.pdf](#)

Diluted Bitumen Nexen Canada Inc

[Click to view the file - Diluted Bitumen \(June2011\) - Nexen Canada 3 2 2012 9 29 35.pdf](#)

Heavy Crude Oil/Diluent Mix - Cenovus Energy Inc.

[Click to view the file - Heavy Crude Oil Diluent Mix - Cenovus Energy Inc 12 4 2011 14 28 52.pdf](#)

Heavy Crude Oil_Diluent Mix (Christina Lake_Foster Creek) - Encana Corporation

[Click to view the file - Heavy Crude Oil Diluent Mix \(Christina Lake Foster Creek\) - Encana Corporation 11 9 2009 17 27 58.pdf](#)

Horizon Sweet Light Oil Canadian Natural Resources Ltd

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MacKay River MSDS - CDN 02 08 20

[Click to view the file - Suncor MKH \(Oct2012\) - Suncor Energy Inc 29 11 2012 14 0 12.pdf](#)

MacKay River MSDS - US

[Click to view the file - MacKay River MSDS - US 11 9 2009 17 28 31 29 11 2012 13 59 25.pdf](#)

Petroleum Crude Oil (Sour) Gibson Energy ULC

[Click to view the file - Petroleum Crude Oil \(Sour\) - Gibson Energy Limited 2 2 2012 18 18 56.pdf](#)

Petroleum Crude Oil (Sour): Husky Oil

[Click to view the file - Petroleum Crude Oil \(Sour\) - Husky Oil Operations Limited 27 11 2012 7 47 1.pdf](#)

Petroleum Crude Oil Sweet (Feb 2012) - BP Canada Energy Co

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Petroleum Heavy Crude Oil: Canadian Natural Resources Ltd.

[Click to view the file - Petroleum Heavy Crude Oil - Canadian Natural Resources Ltd 20 12 2011 17 6 58.pdf](#)

Premium Albian Synthetic Crude Shell Canada Limited

[Click to view the file - Premium Albian Synthetic Crude \(Nov2010\) - Shell Canada 3 2 2012 9 30 28.PDF](#)

Product Gas Oil (OSZ MSDS)

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PSC Nexen Inc.

[Click to view the file - PSC \(Aug2011\) - Nexen Inc 27 11 2012 7 47 48.pdf](#)

Sales Oil: Statoil

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Seal Heavy Crude Oil Shell Canada Limited

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Shell Synthetic Blend Shell Canada Limited

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Sour Produced Gas, Sour Produced Water, Sour Crude Oil Shell Canada Limited

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Suncor OSA - Suncor Energy Inc

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Suncor OSB

[Click to view the file - Suncor OSB 11 9 2009 17 29 35.pdf](#)

Suncor OSC

[Click to view the file - Suncor OSC 11 9 2009 17 29 54.pdf](#)

Suncor OSH

[Click to view the file - Suncor OSH 11 9 2009 17 30 8.pdf](#)

Surmont Phase 1 Synbit Sales Oil (Canada) - ConocoPhillips

[Click to view the file - Surmont Phase 1 Synbit Sales Oil \(Canada\) - ConocoPhillips 11 9 2009 17 30 23.pdf](#)

Syncrude Sweet Blend Crude Oil - Syncrude

[Click to view the file - Syncrude Sweet Blend Crude Oil - Syncrude 11 9 2009 17 31 14.pdf](#)

Synthetic Crude Oil - Husky Oil Operations Limited

[Click to view the file - Synthetic Crude Oil - Husky Oil Operations Ltd 27 11 2012 7 49 27.pdf](#)

Western Canadian Select (WCS) - Husky Energy

[Click to view the file - Western Canadian Select \(WCS\) - Husky Energy 11 9 2009 17 31 55.pdf](#)

APPENDIX H

BASICS OF OIL SPILL RESPONSE

- H.1 [Dikes, Berms and Dams](#)
[Figure H.1 Culvert Blocking](#)
- H.2 [Deflection Boom](#)
[Figure H.2 Deflective Booming Technique\(Single Boom method\)](#)
[Figure H.3 Deflective Booming Technique\(Single Boom method\)](#)
[Figure H.4 Deflective Booming Technique\(Cascade method\)](#)
- H.3 [Containment Boom](#)
[Figure H.5 Containment Booming \(Catenary method\)](#)
- H.4 [Diversion Boom](#)
[Figure H.6 Open Chevron Boom Technique](#)
[Figure H.7 Closed Chevron Boom Technique](#)
- H.5 [Shoreline Recovery](#)
- H.6 [Ice Operations](#)
[Figure H.8 Ice Slotting Technique](#)
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[Figure H.10 Close up view of Deflective Board](#)

H.1 DIKES, BERMS AND DAMS

Dikes, berms, and dams are land-based tactics, with the objective of containing spilled oil and limiting spreading of oil slicks, thus minimizing impacts to the environment. Dikes, berms and dams are embankment structures built-up from the existing terrain, placed to contain and accumulate oil for recovery. These barriers can serve to:

- Contain and stabilize a contaminated area.
- Contain or divert oil on water or oil that has potential to migrate.
- Create cells for recovery.
- Use natural depressions to act as containment areas for recovery.

The tactic may be deployed in association with a recovery tactic, such as Shoreline Recovery or On-land Recovery. Dikes, berms, and dams are most effective when placed before oil arrives. Dikes, berms, and dams can also be used to exclude oil from a sensitive area, which is covered in the Beach Berms and Exclusion Dams tactic. The tactic can also be used in conjunction with an excavation tactic to enhance containment volumes (see Pits, Trenches, and Slots).

The general strategy is to:

1. Identify the location and trajectory of the spill or potential spill.
2. Plan a deployment configuration that best supports the operating environment and available resources.
3. Mobilize to the location and deploy response resources.
4. Construct the containment structure and ensure it does not leak.
5. Consider the need to remove any water-bottom that may collect beneath the oil inside the structure.
6. Monitor the containment structure on an appropriate basis.
7. If oil collects in the structure, utilize an appropriate recovery system for removal.

Tactic Description

This tactic involves building an embankment perpendicular to the flow of the oil slick or around a contaminated area. Dike, berm, and dam structures can be constructed with a wide variety of materials including: soil, gravel, snow, sand bags, oil boom, timbers and logs. Selection of the construction material depends on the operating environment, location, available materials, and whether the structure is to be temporary or permanent. The containment area should be lined with an impermeable membrane, such as plastic sheeting, to keep oil and oily water from leaking or migrating into the soil. The structure may include a method to regulate flow, such as a weir or spill way. Dikes, berms, and dams can be built by manual labor or with earth-moving equipment depending on the location and available resources.

Deployment Configurations

BERMS

A containment berm can be constructed of available materials such as earth, gravel, or snow. Use earth-moving equipment or manual labor to construct the berm. Form the materials into a horseshoe shape ahead of the flow of oil. Use plastic sheeting to line the walls of a soil berm to prevent oil penetration. Sandbags filled with sand or other heavy material also make excellent containment barriers.

DAMS

An underflow dam can be used when there is too much water flow to allow for a complete blockage of a drainage channel. The dam is built of earth, gravel, or other barriers such as sandbags or plywood sheets. Wherever possible, line the upstream side of the dam with plastic sheeting to prevent erosion and penetration of oil into the dam material.

Underflow dams use inclined culverts or pipes to move water downstream while leaving the spill contained behind the dam. The capacity of the pipe(s) should exceed the stream flow rate. It may be necessary to use pumps to remove water behind a dike. Valves or culvert plugs can also be used to control flow rate.

Pipes must be placed on the upstream side of the dam, with the elevated end on the downstream side. Make sure that the upstream end of the pipe is submerged and below the oil/water interface. The height of the elevated downstream end of the pipe will determine the water level behind the dam.

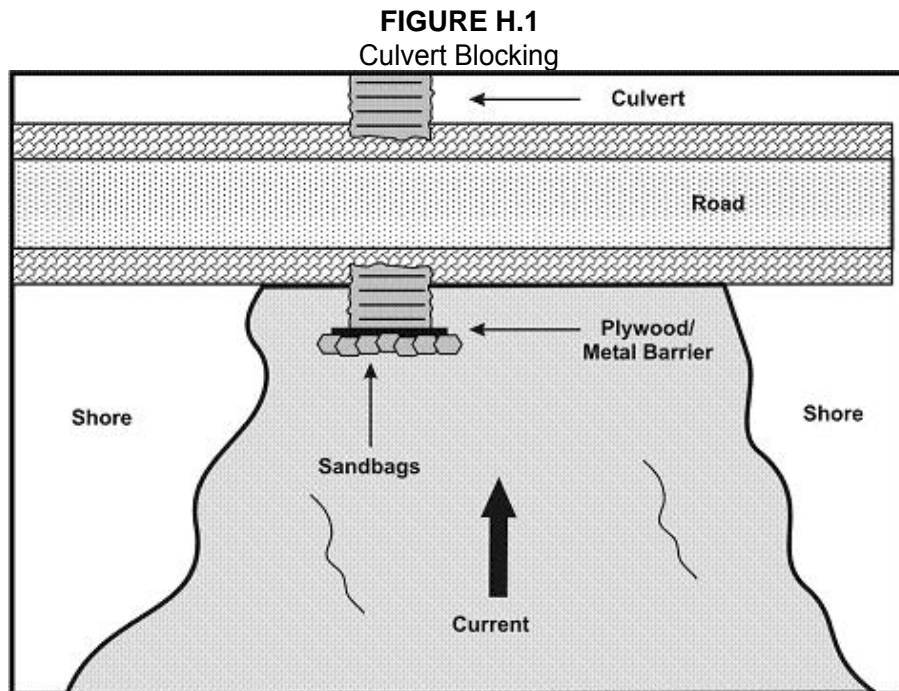
EXISTING ROADS

Roadways that are built up above the terrain can be used as dikes. However, road construction usually allows for natural drainage through culverts or bridges. These drainage structures must be controlled to turn the road into a barrier.

CULVERT BLOCKING

A culvert can be blocked using sheet metal, plywood barriers, or inflatable culvert plugs. Use a full block only when the culvert will be blocked for the entire cleanup operation, if the oil floating on the water will not contaminate additional soil or tundra, and if blocking the water flow will not threaten the road. Otherwise, an adjustable weir or culvert plug should be used.

Plywood and/or sandbags can also be used as culvert blocks, but are more labor-intensive and pose a higher potential for injury. A wood block may require a headwall with kickers oriented to support the boards or plywood. Place the blocking materials over the upstream end of the culvert. Plastic sheeting over the outside of the block will prevent oil penetration.



EARTH MOVING EQUIPMENT

A bulldozer, road grader, or front-end loader drives around the spill with its blade angled towards the spill, pushing earth or snow into a berm. Once the perimeter has been covered with an initial berm, shore-up areas as necessary.

SNOW

Because of the absorbent quality of snow, it makes an excellent berm for both containment and recovery. A snow berm can be strengthened by spraying it with a fine water mist that forms an ice layer on top of the snow. A snow berm is built around the areas of heaviest oiling to contain oil or diesel spilled to tundra and/or ice in winter.

MESH FENCE

Plastic mesh fencing may be used to quickly construct an underflow dam system. The mesh fencing is placed across the drainage and held in place with stakes. Absorbent boom, oil boom, plywood, or even dry dead grass can be placed on the upstream side of the fencing. Running water will find its way under the barrier fence, but oil floating on top of the water will be trapped. The advantages of this system are that it is lightweight and mobile.

H.2 DEFLECTION BOOM

Objective & Strategy

The objective is to direct spilled oil away from a location to be protected or simply to change the course of the slick. “Deflection” is used to describe the tactic where oil is redirected away from an area but not recovered.

Tactic Description

The boom is placed at an optimum angle to the oil trajectory, using the movement of the current to carry oil along the boom and then releasing it into the current again with a new trajectory. The angle is chosen to prevent oil from entraining beneath the boom skirt. Boom may be held in place by anchors, vessels, or a boom control device.

Deflection Boom may be used to temporarily avoid impacts to a sensitive area, but there is no recovery associated with the tactic, thus no oil is removed from the environment.

The general strategy is to:

1. Identify the location and trajectory of the spill or potential spill.
2. Identify, prioritize, and select sensitive areas to be protected from impact.
3. Select a deployment configuration that best supports the operating environment and available resources.
4. Mobilize to the location and deploy the tactic.
5. Place boom using secured anchor systems, mooring points, vessels, boom control devices, etc.
6. Monitor and adjust the boom on an appropriate basis.

BOOM ANGLE

Select the appropriate boom angle to keep oil from entraining under the boom. Where currents exceed 3 knots the boom must be almost parallel to the current to prevent entrainment. In currents exceeding 3 knots, a cascade of boom arrays may be used; the first boom array will slow the velocity of the slick allowing subsequent arrays to deflect the oil.

ANCHOR SYSTEMS

Boom is secured in place using standard anchoring systems. Anchor sizes vary depending on the boom type and the operating equipment.

DEPLOYMENT CONFIGURATIONS

Single Boom

Boom is deployed from a site at an optimum angle to the current and anchored to deflect the oil away from a location. Figures H.2 and H.3 illustrate two single boom deflection techniques.

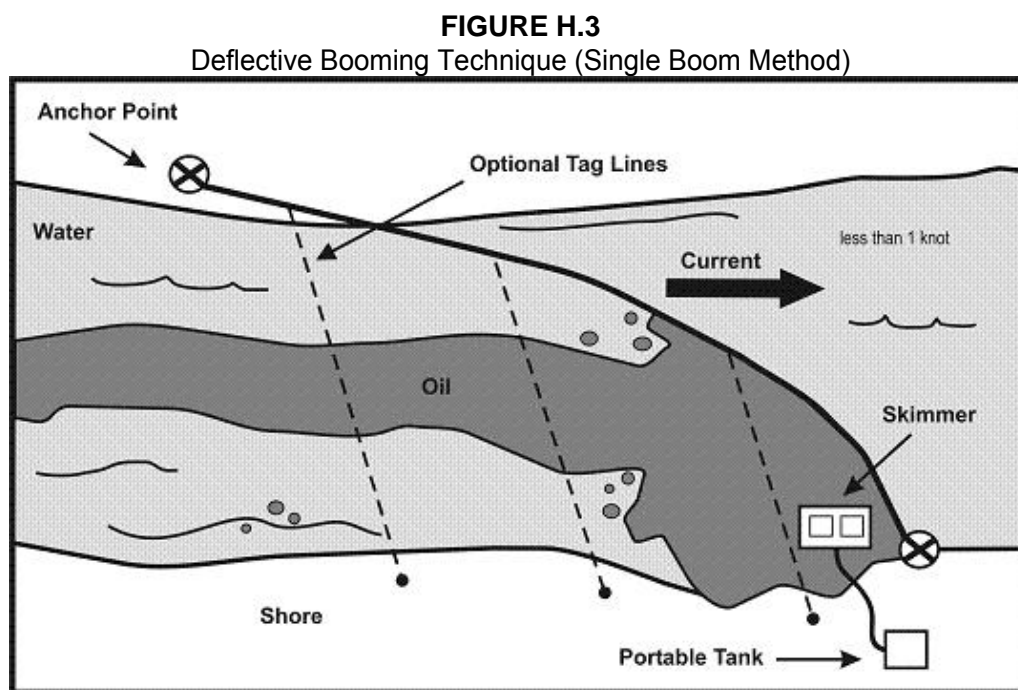
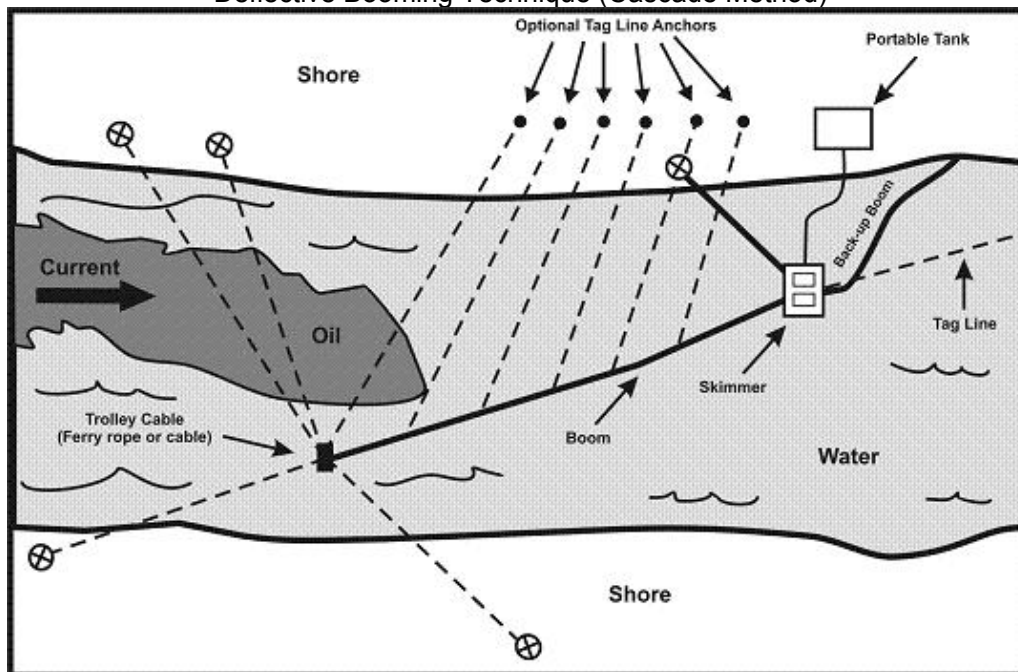


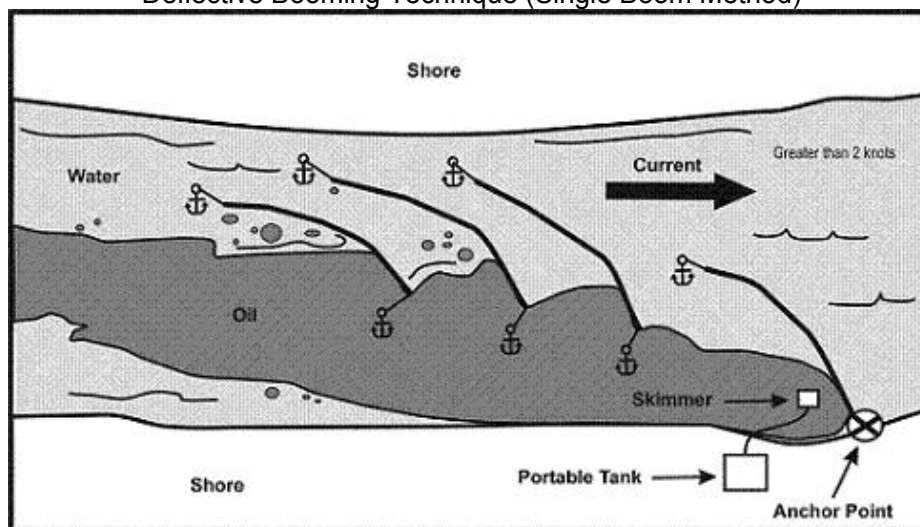
FIGURE H.4
Deflective Booming Technique (Cascade Method)



Cascade

Several booms are deployed in a cascade configuration when a single boom cannot be used because of fast current or because it is necessary to leave openings in the boom for vessel traffic, etc. This configuration can be used in strong currents where it may be impossible to effectively deploy one continuous section of boom. Shorter sections of boom used in a cascade deployment are easier to handle in faster water, thereby increasing efficiency. Additional equipment may be required to set and maintain this system as compared to the single boom configuration.

FIGURE H.2
Deflective Booming Technique (Single Boom Method)



H.3 CONTAINMENT BOOM

Objective & Strategy

Containment booming is a fixed-boom tactic. The objective is to corral spilled oil on the water, usually near the source, thus minimizing spreading and impacts to the environment. It is usually deployed with Shoreline Recovery.

This tactic can be deployed for oil spill migrating downstream or downhill to water or through water.

The general strategy is to:

1. Identify the location and trajectory of the spill or potential spill.
2. Select a deployment configuration that best supports the operating environment and available resources.
3. Mobilize to the location and deploy the tactic.
4. Place boom, using secure anchor system or mooring points.
5. Monitor the boom on an appropriate basis.
6. If oil collects in the boom, utilize an appropriate recovery tactic to remove it.

Tactic Description

Containment boom systems are comprised of the appropriate oil boom for containment and concentration, and anchoring systems to hold the boom in place.

Containment boom systems are not recommended for the fast water environment because of the high probability of fixed-boom failure and the difficulty of anchoring in this environment.

Containment boom systems are not recommended for the broken ice environment, because of the high probability of fixed-boom failure and loss due to ice encounters.

Anchoring systems are often deployed first and then the boom is set from one anchor to the adjacent anchor. Boom can be placed from shoreline to shoreline.

A second layer of containment boom, outside the primary boom, has two advantages:

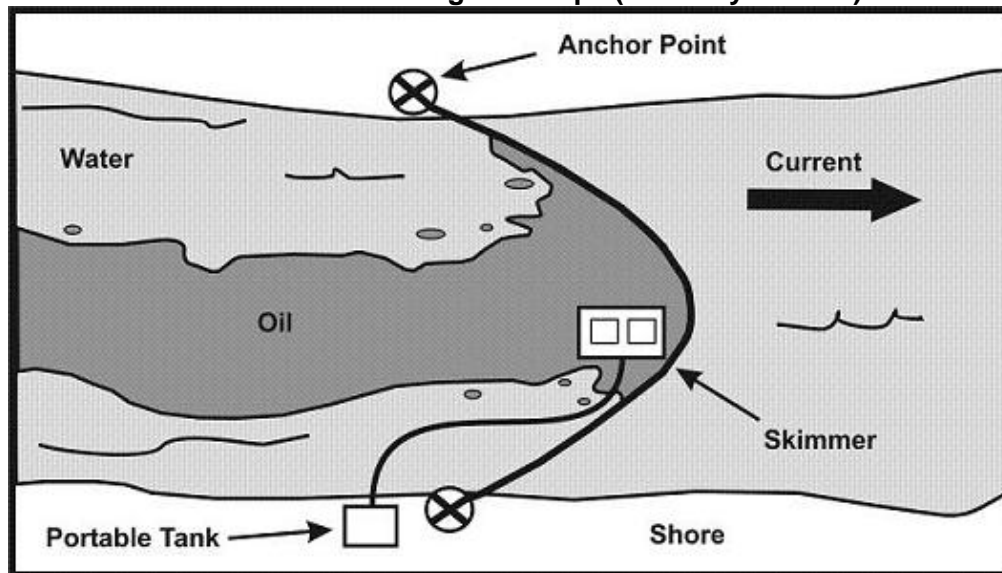
1. It breaks the sea chop and reduces its impact on the primary boom,
2. It may capture oil that has escaped if the primary boom fails.

Figure H.5 illustrates a simple containment booming technique.

Deployment Considerations

- It is often advisable to “line” the containment boom with sorbent materials (passive recovery) to recover the sheen and reduce decontamination costs.
- If the oil slick is moving, due to wind or current, consider containment at the source and ahead of the leading edge.
- If spill is moving in excess of 1 knot consider the Diversion Boom Tactic.
- Anchor systems must be selected based on the maximum stress that might be expected to occur on the boom array, considering stronger currents and winds than when the anchor is set.
- Site conditions will influence deployment configuration options.
- Combinations of Containment Boom and Diversion Boom tactics are often used together to optimize success.

FIGURE H.5
Containment Booming Technique(Catenary Method)



H.4 DIVERSION BOOM

Objective & Strategy

The objective is to redirect the spilled oil from one location or direction of travel to a specific site for recovery. For the purposes of maintaining consistent and clear terms, diversion is always associated with oil recovery, in contrast with the term deflection, which is used to describe the tactic where oil is redirected away from an area but not recovered.

Tactic Description

The Diversion Boom tactic is for water-born spills where there is some current, usually from 0.5 to 3.0 knots. The boom is placed at an optimum angle to the oil trajectory, using the movement of the current to carry oil along the boom to a recovery location. The angle is chosen to prevent oil from entraining beneath the boom skirt. Oil can be diverted to a shoreline or away from a shoreline or shoal waters. This tactic is always associated with a Shoreline Recovery. Figures H.6 and H.7 illustrate two diversionary booming techniques. These techniques are the Open Chevron and the Closed Chevron technique respectively.

FIGURE H.6
Open Chevron Booming Technique

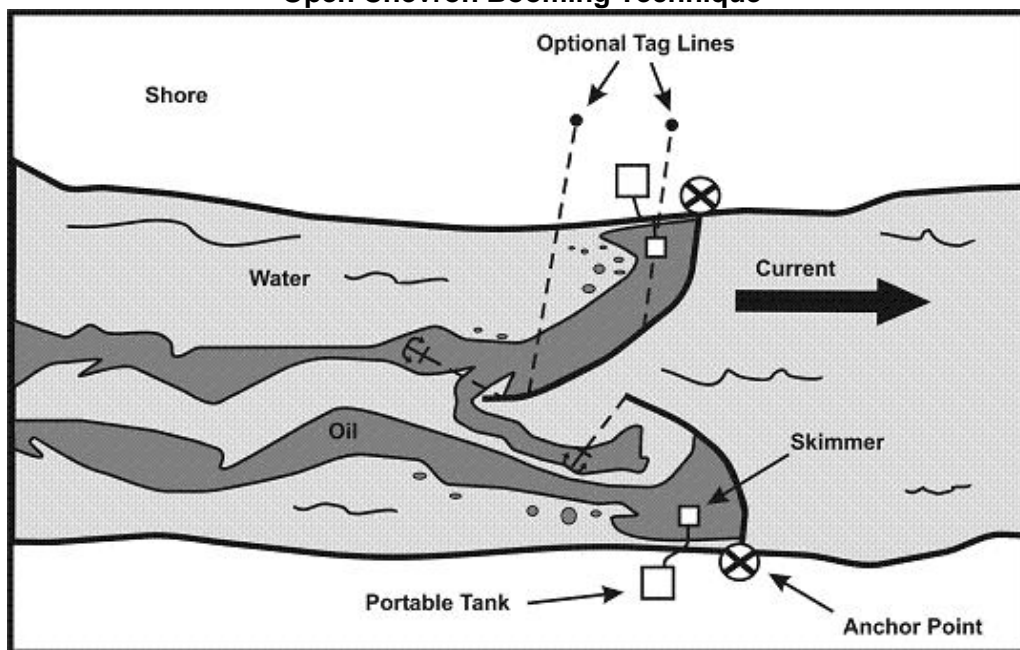
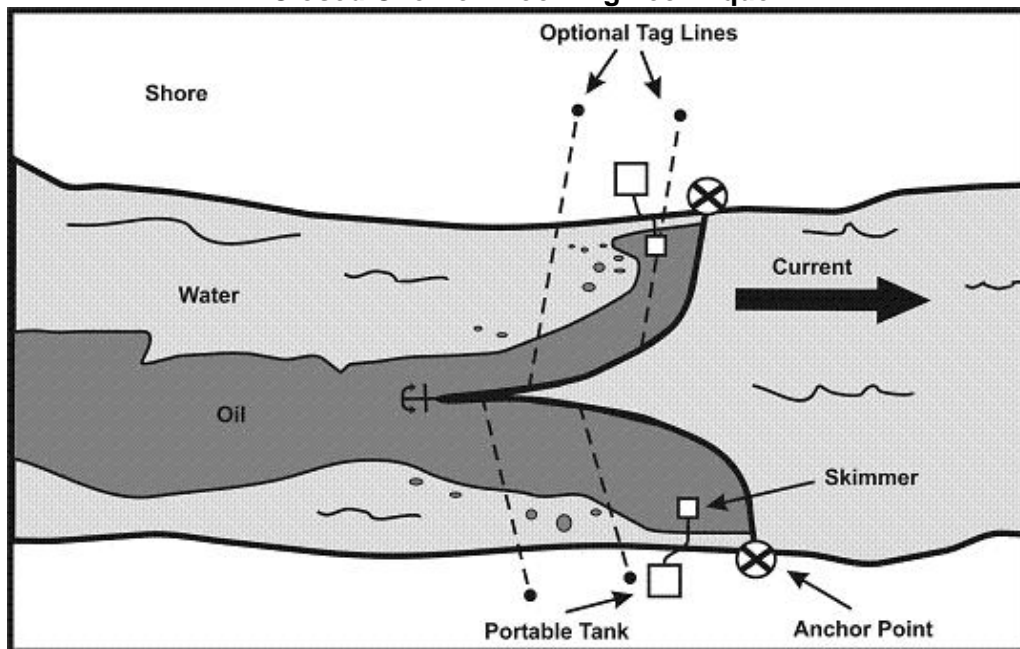


FIGURE H.7
Closed Chevron Booming Technique



ANCHOR SYSTEMS

Boom is secured in place using standard anchoring systems. Anchor sizes vary depending on the boom type and the operating environment.

Boom Angle

Select the appropriate boom angle to keep oil from entraining under the boom. Note that the angle relative to the current decreases rapidly as the current increases. Where currents exceed 3 knots the boom must be almost parallel to the current to prevent entrainment. In currents exceeding 3 knots, a cascade of boom arrays may be used; the first boom array will slow the velocity of the slick allowing subsequent arrays to deflect the oil.

Single Boom

A basic diversion technique is to divert oil from a current to a recovery site along a shoreline. The recovery site is chosen where there is minimal current and a suitable recovery system can be deployed. The boom is then anchored at the site and deployed at an optimum angle to the current and secured/anchored to divert the oil to the shoreline for recovery.

H.5 SHORELINE RECOVERY

Objective & Strategy

The objective is to remove spilled oil that has been diverted to a designated recovery site accessible from the shore.

Shoreline Recovery is usually deployed as part of another tactic, such as Diversion Boom strategy. When deployed in conjunction with another tactic, fewer personnel may be required.

The general strategy is to:

1. Identify the primary recovery site.
2. Assess site conditions and access routes.
3. Determine the appropriate recovery and storage systems based on oil type, access, and deployment restrictions.
4. Mobilize and deploy equipment to recover and temporarily store the oil from the recovery site.
5. Take precautions to minimize contamination of the shoreline at the collection site.
6. Man and monitor the system as appropriate.
7. Store and transfer recovered oil and oily water according to an approved waste management plan.

Tactic Description

Shoreline recovery systems can be deployed from land access routes (beaches, all-terrain vehicles), or water access. Access to the recovery site and the oil type will influence/dictate the options of equipment to be used.

SKIMMING SYSTEMS

Shoreline recovery requires at least one portable skimming system to remove spilled oil. The typical portable skimming system includes:

- Skimmer with pump and power pack
- Hose (suction and discharge with fittings)
- Oil transfer and decanting pump(s)
- Repair kit (tools and extra parts)

There are many models of skimmers to choose from, but they all fall into three types:

- **Weir skimmers** draw liquid from the surface by creating a sump in the water into which oil and water pour. The captured liquid is pumped from the sump to storage. Weir skimmers can recover oil at high rates, but they can also recover more water than oil, especially when the oil is in thin layers on the surface of the water. This creates the need to separate the water from the oil and decant it back into the environment. Otherwise, the recovered water takes available storage volume. Weir skimmers are best employed where oil has been concentrated into thick pools or where there are very large volumes of oil and recovered liquid storage capacity.
- **Oleophilic skimmers** pick up oil that adheres to a collection surface, leaving most of the water behind. The oil is then scraped from the collection surface and pumped to a storage device. Oleophilic skimmers do not recover oil as fast as weir skimmers, but they have the advantage of recovering very little water. Oleophilic skimmers may be used where oil is very thin on the surface. Oleophilic skimmers are a good choice where liquid storage capacity is limited.
- **Suction skimmers** use a vacuum to lift oil from the surface of the water. These skimmers require a vacuum pump or air conveyor system. Like weir skimmers, suction skimmers may also collect large amounts of water if not properly operated. Most suction skimmers are truck mounted and work best at sites with road access.

Primary Oil Storage Devices

Primary oil storage devices for shoreline recovery can be portable tanks, bladders, or truck-mounted tanks on the shoreline. If access is not restricted, larger systems can be used and deployed by heavy lifting equipment. If the site is accessible by road, vacuum trucks may be used for oil recovery, storage, and transport.

Recovery Location

Selection of a shoreline recovery location is critical to the success of this tactic. A recovery site should be in calm water with minimal currents. The site must have enough level ground to set up and operate a power pack and portable tanks. Sites with road access are preferred, but if not available, the site must have some other suitable access. Shelter, food and water for the response crew must also be considered in selecting a site.

H.6 ICE OPERATIONS

Objective & Strategy

Much like that of diversion booming, the objective is to redirect the spilled oil from one location or direction of travel to a specific site for recovery. With a layer of ice preventing the use of booming equipment, other response strategies must be employed.

Tactic Description

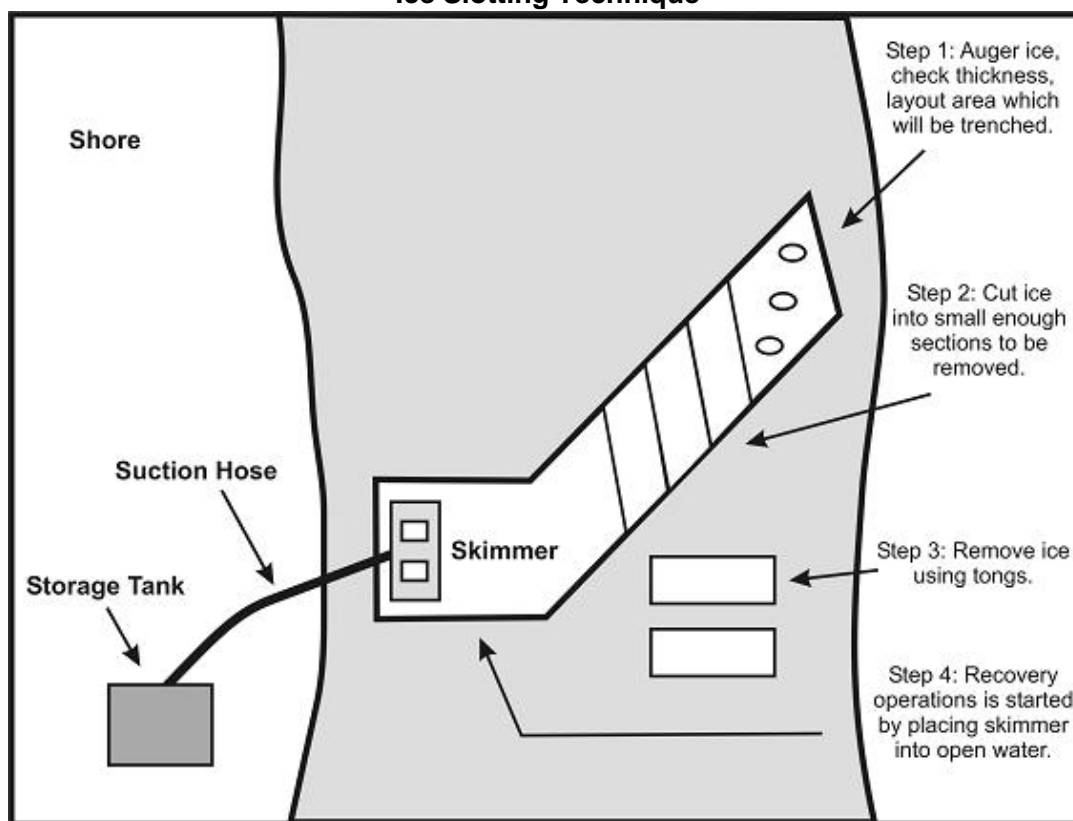
ICE SLOTTING

Ice slotting (Figure H.8) may be used in cases where the ice is thick enough to support the response equipment and personnel. Consideration for the weakening and cracking of the ice must be taken when conducting ice slotting operations.

Slotting Angle

The slot should be angled at approximately 30 degrees to the river's edge. The slotting needs to be wide enough to place a skimming system into the water to recover the oil. The lead end of the slot should have a slight curve which parallels the river current to allow the current to push the oil towards the recovery area.

FIGURE H.8
Ice Slotting Technique



DEFLECTION BOARDS

In place of using booming equipment it may be possible to use flat boards, such as plywood, to divert the oil under the ice into a recovery area, which has been cut out. To use this form of diversion, the depth of the water under the ice and the speed of the current ice must be considered. The angle in which the boards are placed is derived much like that of deflection booming. In any current above 3 knots, a series of cascading boards should be considered. Also, the depth of the water must be considered. The stronger the current the deeper the boards must be placed to prevent entrainment. If the water is not deep enough to place the boards to prevent entrainment, ice slotting methods may be required. Figure H.9 illustrates the overall method of using deflective boards. Figure H.10 illustrates a close up of the deflective board response method.

FIGURE H.9
Deflective Boards Recovery Strategy

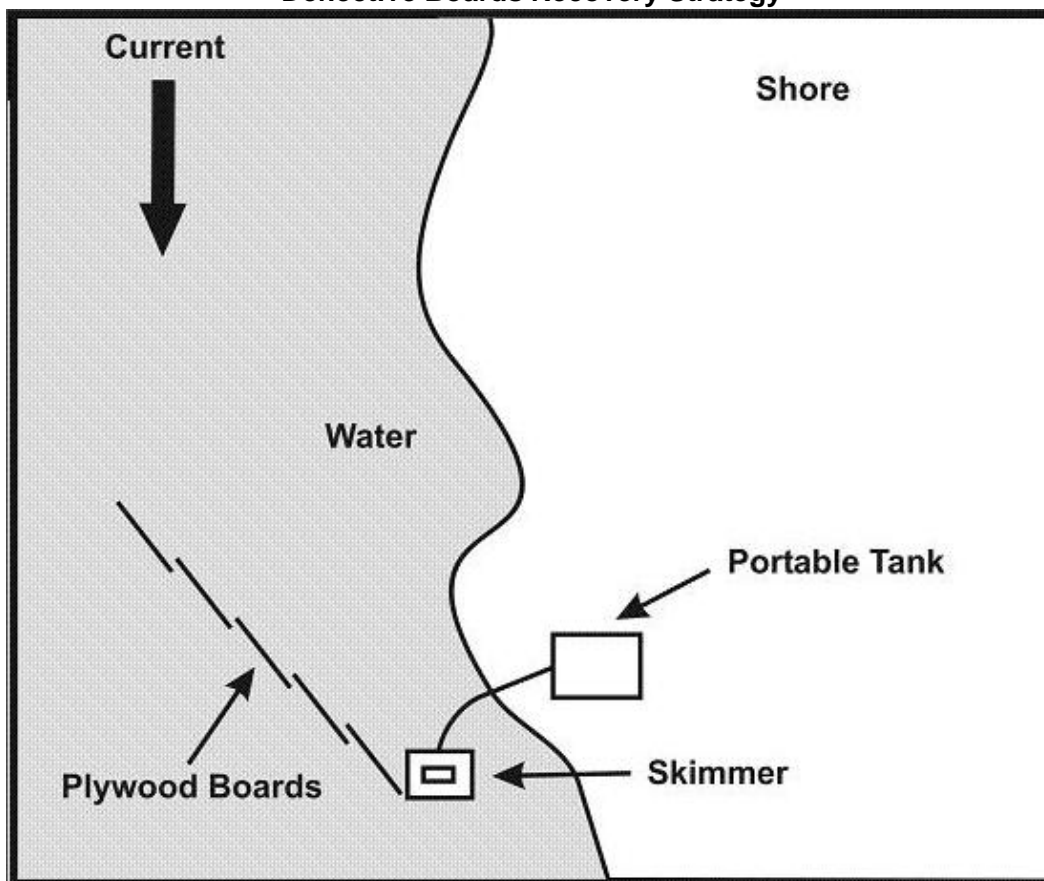
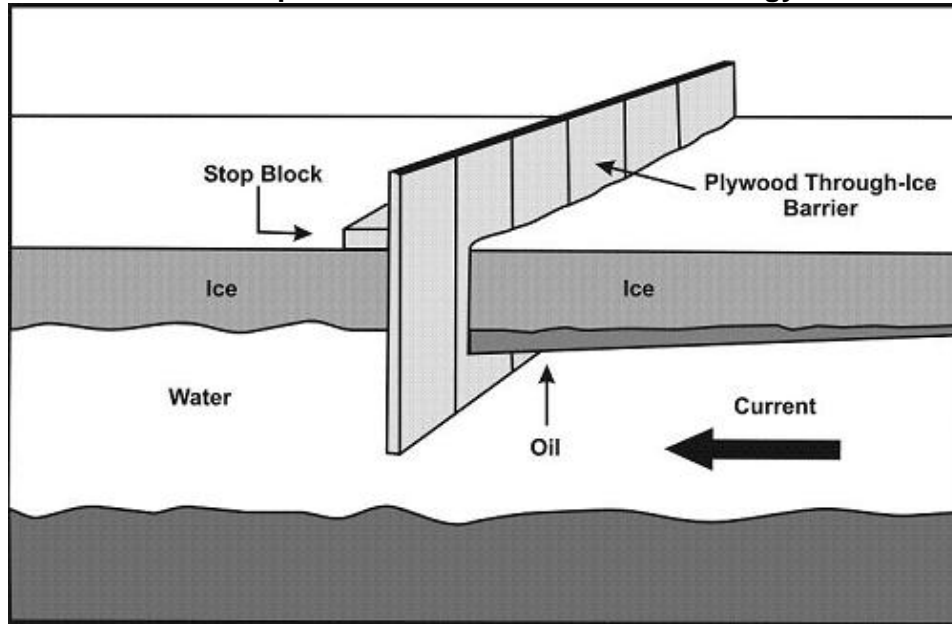


FIGURE H.10
Close up view of the Deflective Board Strategy



APPENDIX I

MEDIA RELATIONS

- I.1 [Introduction](#)
 - I.2 [Dealing with Agencies, the Media and the Public](#)
 - I.3 [The Public Wants to Know](#)
 - I.4 [Target Audiences](#)
 - I.5 [Media Statements](#)
 - I.6 [Holding Statements](#)
 - I.7 [Media Advisories](#)
 - I.8 [Press Releases](#)
 - I.9 [News Conferences](#)
 - I.10 [Media Center](#)
 - I.11 [Post Incident Public Affairs](#)
- Figure I.1 [Media Holding Statement](#)
- Figure I.2 [Procedures and Considerations](#)
- Figure I.3 [Layout for Press Conference](#)

I.1 INTRODUCTION

Goals:

- Provide a coordinated communications response to ensure appropriate information is disseminated in an accurate and timely manner
- Communicate concisely the nature of the emergency, the steps being taken to address it and the effectiveness of those measures
- Control the communications environment as much as possible in an effort to protect the reputation of the Company

I.2 DEALING WITH AGENCIES, THE MEDIA AND THE PUBLIC

Only official Company spokespersons are authorized to release incident information. Receptionists and others may receive calls or be required to take messages. They should take the following information from each caller and give reporters the media line number: 1-800-608-7859.

- Name
- Media outlet-publication, TV/radio station and market they are serving
- Time of call
- Nature of request
- Phone and fax number(s)
- E-mail address

Deadline

The Company's goal is to prioritize and return media calls as soon as possible knowing that a reporter working on a breaking news story will attempt to fill the information void. The Company will want to be the ones to fill that void. It may not be possible to return all phone calls. Reporters might also be directed to other sources such as our website or instructed to call back at a specific time.

Objectives During Emergencies

- Provide as much relevant information as possible about how the Company is responding to the incident to build and maintain stakeholder and media trust
- Present an accurate, compassionate and up-to-date account of the crisis
- Balance the resolution of the technical emergency while managing human issues

- Maintain an accurate record of what is happening and actions being taken to respond to the crisis
- Present a positive and accurate perception of the Company
- Identify factual and interpretative errors and develop a strategy to respond
- Bring positive developments to the forefront quickly
- Prepare spokespersons to deliver the message
- Communicate the policies, attitudes and actions of the Company to convey that the organization has a plan in place to deal with the crisis
- Maintain credibility in the communication process by ensuring consistency in the message and the information being disseminated

I.3 THE PUBLIC WANTS TO KNOW

- Does the Company care?
- Does the Company have a plan in place?
- Is Company's priority to keep people and the environment safe?
- Is the Company doing everything possible to address the situation?

It is the job of the Public Information Officer or Company spokesperson to convey to the audiences and to assist Executive Management to convey that the answer to all these questions is a resounding "**Absolutely.**"

I.4 TARGET AUDIENCES

Each emergency is unique and requires careful judgment to determine which audiences to target and which audiences have priority. Given the media's pervasive and instant capability to relay information and impact public opinion, it is clearly the key audience for Company's communications strategy and actions.

The following list indicates the audiences who should be considered when developing the key messages that will be communicated by the media.

Internal

- Employees and Employees' families
- Affiliated Companies/Businesses

External (Local, Regional, National, and International)

- | | |
|---------------------------------------|--------------------------|
| ▪ Media | ▪ Shareholders |
| ▪ Environmental Community | ▪ Securities Exchanges |
| ▪ Impacted Communities/General Public | ▪ Analysts |
| ▪ Contractors | ▪ Neighboring Businesses |
| ▪ Site Investigators | ▪ Regulators |
| ▪ Industry Associations | ▪ Governmental Entities |
| ▪ Elected Officials | ▪ General Public |
| ▪ Vendors | ▪ Bankers |

When responding, always prepare for the worst possible scenario. It is important to recognize that no two incidents will be the same. The Company must remain flexible and adapt a response to meet the unique characteristics of the current situation.

I.5 MEDIA STATEMENTS

Three types of media statements for communicating information can be generated:

1. **Holding Statement**
2. Media Advisory
3. Press Release

I.6 HOLDING STATEMENTS

A holding statement should be prepared **immediately** to reduce media frustration and quickly establish a channel of communication. Immediate action will help to fill the information void with accurate details. The holding statement is the response to any inquiries made to the Company prior to a press release being issued. The holding statement should contain the following:

- Nature of incident
- Time and date of incident
- Location of incident
- Impact of the incident (e.g., any people involved? Injuries? Damage?)
- Report fatalities only if cleared by the Public Information Officer and Legal and only after the family has been notified.

- It is OK to say "no information is available" on any given topic if the information is not yet known
- Status of emergency crews – en route or on the scene
- When to expect an update

Not Release

- Fatalities unless cleared by the Public Information Officer and Legal Officer.
- Names of injured or deceased.
- Nature of injuries.
- Any Company communication or Company record.
- Any opinion as to the cause of the incident.
- Hazardous Materials involved.

Holding Statement Template

DATE:(YY/MM/DD) _____ TIME: _____ AM

PM

MY NAME IS: _____ MY JOB TITLE IS: _____

This is the information I can give you so far:

At (time) _____ AM PM, on _____

(date), a(n) (fire, explosion, gas release, spill – specify) occurred at (Company's name) _____'s _____ location, located _____ kilometers (east/west/north/south) _____ of (nearest town or city) _____.

Presently, (number of personnel) _____ Company employees or Contract personnel, are (O.K., not injured, are being treated for injuries, etc. – specify).

Note: The names and condition of the injured can only be released after they have been released by the proper authorities.

The (plant / pipeline / office, etc. – specify) _____

_____ has been shut down and isolated.

Company staff have activated the Emergency Response Plan and are directing emergency response procedures to protect the Public, our employees and the environment.

The cause of the (fire, explosion, gas release, spill, etc. – specify) _____ is not yet known and no estimate of damage is available. Further information will be released as it becomes available.

I.7 MEDIA ADVISORIES

A media advisory should be issued immediately after the holding statement has been finalized. Essentially, the holding statement is the media advisory; the only difference is that the media advisory is issued externally. The Public Information Officer has overall responsibility for ensuring this advisory is issued externally.

I.8 PRESS RELEASES

Press releases will be prepared and issued by External Communications, working with the Public Information Officer. If deemed appropriate, a release would be issued as soon possible following the distribution of a holding statement and/or a media advisory. Subsequent news releases should be issued as new information becomes available.

They should include the following details:

- Time, date and location of the release
- Spokesperson name and contact number
- Summary of holding statement information
- Current status of the incident
- Status of the investigation
- Concern for public health and safety, safety of responders and environmental impact
- Involvement of authorities and outside responders
- Time of next update or news conference, if warranted
- Refer to media specific web site, if available

Consider using other tools for the media when appropriate:

- Fact Sheets
- Backgrounders
- Visuals (e.g., maps, etc.)

I.9 NEWS CONFERENCES

A number of factors will determine the need for a news conference, including:

- The level of media interest the story has generated;
- The need to make technical experts available to journalists to explain complex details such as nature of a substance released, environmental impact, public health threats, etc.;
- A significant change in the status of the situation; or
- The investigation is complete and the results are ready for release.

Strategy

- If possible, hold press conferences at a location removed from Company property
- Give media some type of guideline for the timing (i.e., there will NOT be a briefing before a given time)
- Determine who will open the news conference and what the ground rules will be (e.g., time limits, etc.)
- Determine who will make statements and whether there will be a question period
- It is appropriate to outline the ground rules for those attending the press conference before the conference formally begins
- Prepare opening statement and review potential questions with key spokesperson. Any new information released during the press conference should be cleared with the Public Information Officer (if PIO is not a member of the External Communications team at this point in the cycle, all information will be reviewed and approved by the External Communications team).

Note: Media should never be left unattended on Company property. If necessary, arrange for media escorts. Also, arrange for any Security personnel or law enforcement as deemed necessary.

News Conference Checklist

- Check with Public Information Officer (and spokesperson) to select the best time for the conference. (Arrange for Technical Advisor to be present.) Keep in mind demands of the news cycle. Late morning and early afternoon are typically best for electronic media. Late afternoon will better serve the print media and might facilitate a "live shot" by electronic media
- Stage the conference at a local hotel or hall. Keep in mind accommodations for cameras, reporters, technical staff, parking for live or satellite trucks and cable

run for television crews

- Distribute media advisory of time and location, including directions and parking information
- Compile list of media who have indicated they will attend. If possible, determine if there is a particular area of interest
- Invite outside officials, as appropriate
- Compile background information that may serve as a resource for reporters

I.10 MEDIA CENTER

The need to establish a media center will be determined by the Public Information Officer (only if the PIO is a member of the External Communications team). The level of media interest in the story will be a key factor in determining if a media center is needed.

If a media center is established appropriate news organizations will be notified by way of fax and e-mail distribution. Access to the media center should be confined only to credentialed "working press." Arrange for Security personnel or law enforcement as deemed necessary.

Media Center Checklist

- Work Tables and Chairs
- External telephone lines (might not be possible if center is located in the field)
- Radio
- Television/VCR
- Podium with microphone and audio distribution (mult box)
- Extension cords
- Blank audio and videotapes
- Copier/Fax machine
- Laptop computer and printer
- If the center is in the field, you might need a generator to provide power
- Car battery adapter for PC
- Cell phone car adapter
- Power generator (if remote location)

Supplies

- The Company letterhead
- Pens and pencils
- Background material
- Past press releases
- Fact sheets
- Maps
- Refreshments

I.11 POST INCIDENT PUBLIC AFFAIRS

Once the incident is concluded, the Public Information Officer should prepare one final press release, possibly in the form of a chronology, to describe the incident and the subsequent response. The media may also be looking for any follow-up information as to the cause of the incident, people involved, long term effects on the company, costs associated with the incident, etc. These requests will have to be considered on a case-by-case basis. All releases should be reviewed by the Legal Officer and approved by the Incident Commander (or a higher authority) prior to being released.

FIGURE I.1**MEDIA HOLDING STATEMENT**

The following statement is an example of how to address reporters when you need more time to gather facts before speaking to them.

Open:

Hi _____, I'm _____, and I am the spokesperson for _____.

I am in the process of gathering more facts for you regarding _____.

I know you want accurate information, so I will need _____ (how much time) to get these facts confirmed.

Basic Facts: (if confirmed)

I can tell you...Who: (Background -- optional at this point)

When:

Where:

What:

Priority:

"A preliminary investigation into the _____ has already begun. That is all the information I have for you at this time.

Holding Statement:

We could meet back here (or via phone) at _____ o'clock.

Meantime, let me get your business card, cell phone, etc...

Questions & Offers: (Optional)

What is your deadline?

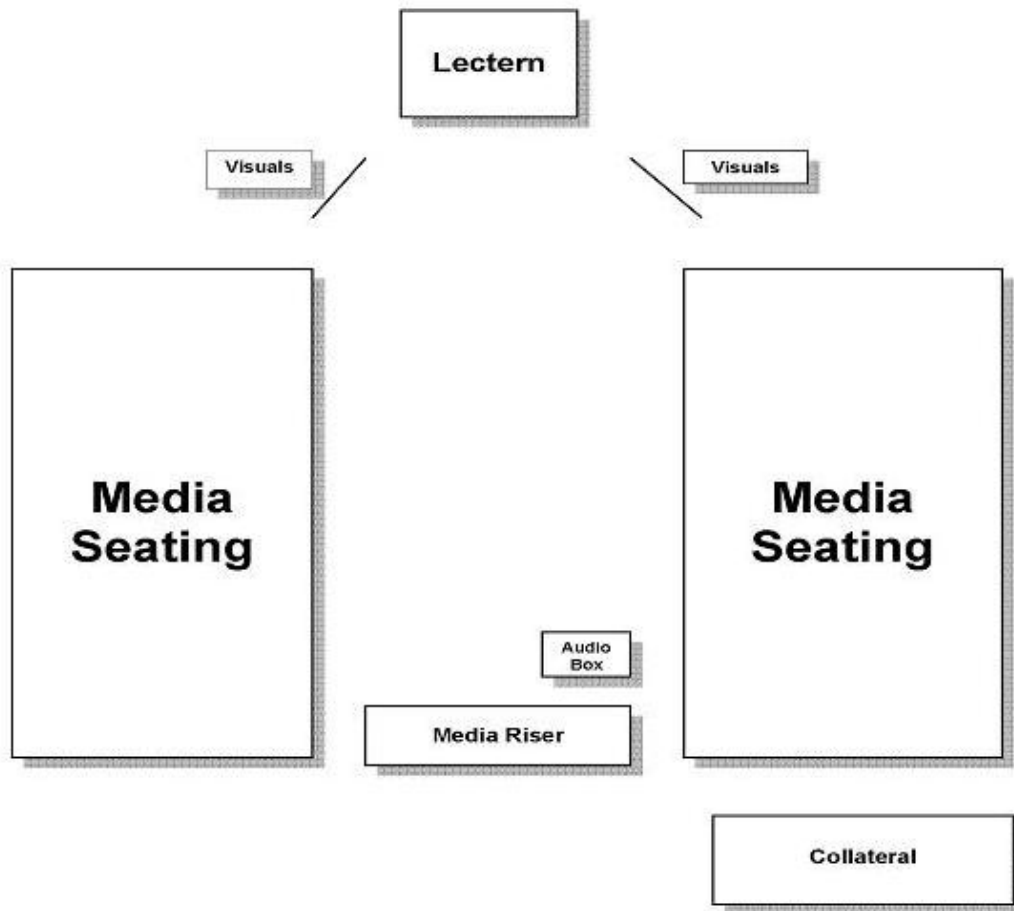
I can give you our web address for more information on our Company.

I can provide our public affairs contact and number (or provide your business card):

FIGURE I.2

PROCEDURES AND CONSIDERATIONS	
Identify Your Audience <ul style="list-style-type: none"> • Employees • Clients • Local Media • National / International Media • Special Interest Groups • Stakeholders • Agencies / Public Officials • Industry Associations • Suppliers • Competitors 	Identify Key Message(s) <ul style="list-style-type: none"> • People / Safety • Environment • Property • Potential Impacts of Incident • Basis for Company's Position / Action(s) • Business Continuity
Prepare Official Company Statement <ul style="list-style-type: none"> • Facility / Personnel Fact Sheet(s) • Issues Applicable to Identified Audience • No Speculation of Any Kind • Confidentiality Issues • Express Care and Concern • Do Not Accept Liability or Offer Compensation • Include Photos / Video • Must be Reviewed and Approved by Incident Commander and Legal Officer 	Identify Communications Methods <ul style="list-style-type: none"> • Media Advisory • Toll-free Telephone • Web-Site • Press Release • Telephone Interviews • Personal Interviews • Press Briefings (Alone or Jointly?) • Holding Statement
Determine Support Requirements <ul style="list-style-type: none"> • Personnel • Equipment • Physical Space • Photos, Videos, Charts, Graphs, Maps 	Determine Frequency of Communications <ul style="list-style-type: none"> • Times per Shift • Daily • Corporate IC's Discretion • Maintain Awareness of Audience Deadlines / Schedules • Obtain Corporate IC's Approval
Identify Spokesperson(s) if Applicable <ul style="list-style-type: none"> • Ensure Understanding of Incident • Ensure Familiarity With Expected Audience • Ensure Understanding of Confidentiality / Privacy Issues • Brief on Anticipated Questions and Answers • Ensure Equal Treatment of All Audience Members • Establish Conference Duration • Do Not Underestimate the Impact of Television Reports • Coordinate Responses if Joint Conference • Be Positive • Be-Supportive of Agencies, Investigators, and Responders 	Monitor Audience Reaction to and Perception of Message <ul style="list-style-type: none"> • Hostile Press • Special Interest Groups • Public Outrage or Increased Demands • Attempts to Place Blame • Distribution of Disinformation
Revise/Update Message <ul style="list-style-type: none"> • Answer Earlier Questions • Provide Additional Facts • Address Previous and New Concerns • Adjust Position as suitable or Necessary but Do Not Appear to "Flip-Flop" or Waiver • Maintain Awareness of Audience Deadlines / Schedules • Must be Reviewed and Approved by Incident Commander and Legal Officer 	

FIGURE I.3
LAYOUT FOR PRESS CONFERENCE



REGULATORY CROSS REFERENCE

[DOT/PHMSA 49 CFR Part 194 Cross Reference](#)

[ONSHORE PIPELINE REGULATION, 1999 SOR/99-294](#)

[Annex A to Can/CSA-Z-731-03](#)

DOT/PHMSA 49 CFR PART 194		
§ 194.105	BRIEF DESCRIPTION	LOCATION in PLAN
(a)	... determine the worst case discharge ... provide methodology, including calculations, used to arrive at the volume.	App B
(b)	The worst case discharge is the largest volume, in barrels, of the following:	-----
(b)(1)	... maximum release time in hours, plus the maximum shutdown response time in hours, multiplied by the maximum flow rate expressed in barrels per hour, plus the largest line drainage volume after shutdown of the line section (s) ...; or	App B
(b)(2)	The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels, based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or	App B
(b)(3)	If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.	App B
(b)(4)	Operators may claim prevention credits for breakout tank secondary containment and other specific spill prevention measures as follows:...	App B
§ 194.107	BRIEF DESCRIPTION	LOCATION in PLAN
(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.	App A
(b)	An operator must certify in the plan ... reviewed NCP and each applicable ACP...	Foreword
(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...	§ 4.0
(b)(1)(ii)	Establish provisions to ensure the protection of safety at the response site; and	§ 4.0 (Command), § 5.0
(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...	§ 6.7, App. E
(b)(2)	As 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;	§ 3, App B
(b)(2)(ii)	Identify environmentally and economically sensitive areas;	§ 6.0
(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; and	§4.0
(b)(2)(iv)	Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals.	§ 6.8
(c)	Each response plan must include:	----
(c)(1)	A core plan consisting of ...	----
(c)(1)(i)	An information summary as required in § 194.113,	Fig 1.1
(c)(1)(ii)	Immediate notification procedures,	§ 2.0

(c)(1)(iii)	Spill detection and mitigation procedures,	§ 3.0
(c)(1)(iv)	The name, address, and telephone number of the oil spill response organization, if appropriate,	Fig 2.5, App A
(c)(1)(v)	Response activities and response resources,	§ 3.0, App A
(c)(1)(vi)	Names and telephone numbers of Federal, State, and local agencies which the operator expects to have pollution control responsibilities or support,	Fig 2.5
(c)(1)(vii)	Training procedures,	App D
§ 194.107	BRIEF DESCRIPTION	LOCATION in PLAN
(c)(1)(viii)	Equipment testing,	App D.2
(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.	App D.2
(c)(1)(x)	Plan review and update procedures;	§ 1.4
(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.	Annexes
(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.	§ 4.0
§ 194.111	BRIEF DESCRIPTION	LOCATION in PLAN
(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.	Foreword Distribution List
(b)	Each operator shall provide a copy of its response plan to each qualified individual	Foreword Distribution List
§ 194.113	BRIEF DESCRIPTION	LOCATION in PLAN
(a)	The information summary for the core plan, required by § 194.107, must include:	----
(a)(1)	The name and address of the operator.	Fig 1.1
(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).	Fig 1.1, Response Zone Annexes
(b)	The information summary for the response zone appendix, required in § 194.107, must include:	----
(b)(1)	The information summary for the core plan.	Fig 1.1
(b)(2)	The names or titles and 24-hour telephone numbers of the qualified individual (s) and at least one alternate qualified individual(s);	Fig 1.1, Fig 2.2

(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.	Fig 1.1, Response Zone Annexes
(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.	Fig 1.1
(b)(5)	The basis for the operator's determination of significant and substantial harm.	Foreword
(b)(6)	The type of oil and volume of the worst case discharge.	App B
§ 194.115	BRIEF DESCRIPTION	LOCATION in PLAN
(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.	App A
(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.	App A
§ 194.117	BRIEF DESCRIPTION	LOCATION in PLAN
(a)	Each operator shall conduct training to ensure that:	----
(a)(1)	All personnel know --	----
(a)(1)(i)	Their responsibilities under the response plan	
(a)(1)(ii)	The name and address of, and the procedure for contacting, the operator on a 24-hour basis	§ 4.0
(a)(1)(iii)	The name of, and procedures for contacting, the qualified individual on a 24-hour basis	§ 2.0, Fig 2.2
(a)(2)	Reporting personnel know --	----
(a)(2)(i)	The content of the information summary of the response plan.	Fig 1.1
(a)(2)(ii)	The toll-free telephone number of the National Response Center	Fig 2.5
(a)(2)(iii)	The notification process	§ 2.0, Fig 2.5
(a)(3)	Personnel engaged in response activities know --	----
(a)(3)(i)	The characteristics and hazards of the oil discharged	Fig 3.2, App G
(a)(3)(ii)	The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.	§ 3.0
(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	§ 3.0
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus	§ 3.0
(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	App D.1
(b)(1)	Records for operator personnel must be maintained at the operator's headquarters	App D.1
(b)(2)	Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator.	App D.1
(b)(3)	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 ...	App D.1

§ 194.119	BRIEF DESCRIPTION	LOCATION in PLAN
(a)	Each owner shall submit two copies...	Distribution
(b)	...PHMSA will notify the operator of any alleged deficiencies...	-----
(c)	The operator...may petition PHMSA for reconsideration within 30 days...	-----
(d)	...PHMSA will approve the Response Plan...	-----
(e)	...The operator may submit a certification to PHMSA...that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to record, to the maximum extent practicable, to a worst case discharge...	Foreword (Operator's Statement)
(f)	...PHMSA may require an operator to provide a copy of the response plan to the OSC...	-----
§ 194.121	BRIEF DESCRIPTION	LOCATION in PLAN
(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 follows:	§ 1.4
(a)(1)	For substantial harm plans, an operator shall resubmit every 5 years from the last approval date.	§ 1.4
(a)(2)	For significant and substantial harm plans, an operator shall resubmit every 5 years from the last approval date.	§ 1.4
(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...	§ 1.4
(b)(1)	An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by the previously approved plan;	§ 1.4
(b)(2)	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;	§ 1.4
(b)(3)	The type of oil transported, if the type affects the required response resources, such as a change from crude oil to gasoline;	§ 1.4
(b)(4)	The name of the spill removal organization;	§ 1.4
(b)(5)	Emergency response procedures;	§ 1.4
(b)(6)	The qualified individual;	§ 1.4
(b)(7)	A change in the NCP or an ACP that has significant impact on the equipment appropriate for response activities; and	§ 1.4
(b)(8)	Any other information relating to circumstances that may affect full implementation of the plan.	§ 1.4
(c)	If PHMSA determines that a change to a response plan does not meet the requirements of this part, PHMSA will notify the operator of any alleged deficiencies, and provide operator...opportunity to correct deficiencies.	-----
(d)	An operator who disagrees with a determination that proposed revisions to a plan are deficient may petition PHMSA for reconsideration, within 30 days from the date of receipt of PHMSA's notice...	-----

SOR/99-294		
S 32-34	BRIEF DESCRIPTION	LOCATION in PLAN
-----	Directions for Use of Manual;	§ 1.0
-----	Emergency Preparedness and Response Policy;	§ 3.0
-----	Description of Initial Responses to Incident Calls;	§ 3.1
-----	Management of Threat Information;	§ 3.1
-----	Definitions and Levels of Emergencies;	§ 3.1
-----	Corporate and Operational Chains of Command;	§ 4.0
-----	Internal and External Contact Lists;	Fig. 2.2, 2.5
-----	External Communication Information (e.g. media outlets);	
-----	Description of General and Site Specific Emergency Response Procedures;	§ 3.0
-----	Roles and Responsibilities (e.g. checklist of duties);	§ 4.0
-----	Site-Specific Emergency Information (e.g. control points);	
-----	Lists of Persons in Emergency Planning Zones (or on separate file);	Fig. 2.2
-----	Environmental or Other Areas Requiring Special Consideration or Protection;	§ 6.0
-----	Detailed Product Information (e.g. MSDS);	App. G
-----	Description and Location of Response Equipment;	App. A
-----	Internal and External Reporting Requirements;	§ 2.0
-----	Area Maps;	Fig. 1.2
-----	Training Requirements;	App. D
-----	Role of Government Departments;	§ 4.6
-----	Manual Updating Procedure and Schedule;	§ 1.4
-----	Forms and Records; and	App. F
-----	Manual Distribution List.	Foreword

ANNEX A TO CAN/CSA-Z731-03	
SAMPLE TABLE OF CONTENTS FOR AN EMERGENCY PREPAREDNESS MANUAL	
REFERENCE	LOCATION
1 Administration	-----
1.1 Emergency Preparedness Policy	Sec. 1.1
1.2 Purpose of This Manual	Sec. 1.2
1.3 Distribution of This Manual	Foreword, Sec. 1.3
1.4 Definitions	Glossary of Terms/Acronyms
2 Organization of Emergency Areas	Annexes
3 Roles and Responsibilities	Sec. 4.0
4 Communications	App. A.6
5 Emergency Response	-----
5.1 Emergencies Caused by Human Activity	Fig. 3.1
5.2 Natural Disasters	Fig. 3.1
6 Emergency Resources	-----
6.1 Contact List	Fig 2.2, 2.5
6.2 Personnel/Equipment	App. A
7 Training	-----
7.1 Employees	App. D.1
7.2 Contractors	App. D.1
7.3 Training Drills	App. D.2
8 Checklists	App. F
8.1 Role Checklists	App. F
8.2 Equipment Checklists	App. F

GLOSSARY OF TERMS AND ACRONYMS

[Glossary](#)

[Acronyms](#)

GLOSSARY OF TERMS

This glossary contains definitions of terms that will be used frequently during the course of response operations.

Activate: The process of mobilizing personnel and/or equipment within the response organization to engage in response operations.

Activator: An individual in the response organization whose responsibilities include notifying other individuals or groups within the organization to mobilize personnel and/or equipment.

Adverse Weather: The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating 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.

Agency Representative: Individual assigned to an incident from an agency who has been delegated full authority to make decisions on all matters affecting that agency's participation in response operations.

Area Committee: As defined by Sections 311(a)(18) and (j)(4) of CWA, as amended by OPA, means the entity appointed by the President consisting of members from Federal, State, and local agencies with responsibilities that include preparing an Area Contingency Plan for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

Area Contingency Plan: As defined by Sections 311(a)(19) and (j)(4) of CWA, as amended by OPA, means the plan prepared by an Area Committee, that in conjunction with the NCP, shall address the removal of a discharge including a worst-case discharge and the mitigation or prevention of a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

Average Most Probable Discharge : A discharge of the lesser of 50 barrels or 1% of the volume of the worst case discharge.

Barrel (bbl): Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

Bioremediation Agents: Means microbiological cultures, enzyme additives, or nutrient additives that are deliberately introduced into an oil discharge and that will significantly increase the rate of biodegradation to mitigate the effects of the discharge.

Boom: A piece of equipment or a strategy used to either contain free floating oil to a confined area or protect an uncontaminated area from intrusion by oil.

Booming Strategies: Strategic techniques which identify the location and quantity of boom required to protect certain areas. These techniques are generated by identifying a potential spill source and assuming certain conditions which would affect spill movement on water.

Bulk: Material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.

Chemical Agents: Means those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or the removal of the oil pollutant from the water. Chemical agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include solvents.

Clean-up Contractor: Persons contracted to undertake a response action to clean up a spill.

Cleanup: For the purposes of this document, cleanup refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Cleanup includes restoration of the site and its natural resources.

Coastal Waters: For the purpose of classifying the size of discharges, means the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers.

Coastal Zone: As defined for the purpose of the NCP, means all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

Coast Guard District Response Group (DRG): As provided for by CWA sections 311(a)(20) and (j)(3), means the entity established by the Secretary of the department in which the USCG is operating within each USCG district and shall consist of: the combined USCG personnel and equipment, including firefighting equipment, of each port within the district; additional prepositioned response equipment; and a district response advisory team.

Command: The act of controlling manpower and equipment resources by virtue of explicit or delegated authority.

Command Post: A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

Communications Equipment: Equipment that will be utilized during response operations to maintain communication between the Company employees, contractors, Federal/State/Local agencies. (Radio/ telephone equipment and links)

Containment Boom: 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.

Contingency Plan: A document used by (1) federal, state, and local agencies to guide their planning and response procedures regarding spills 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.

Contract or Other Approved Means: For OPA 90, a written contract with a response contractor; certification by the facility owner or operator that personnel and equipment are owned, operated, or under the direct control of the facility, and available within the stipulated times; active membership in a local or regional oil spill removal organization; and/or the facility's own equipment.

Critical Areas to Monitor: Areas which if impacted by spilled oil may result in threats to public safety or health.

Cultural Resources: Current, historic, prehistoric and archaeological resources which include deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.

Damage Assessment: 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.

Decontamination: The removal of hazardous substances from personnel and their equipment necessary to prevent adverse health effects.

Discharge: Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Dispersants: Means 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.

Diversion Boom: A floatation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

Drinking Water Supply: As defined by Section 101(7) of CERCLA, means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act) or as drinking water by one or more individuals.

EM: Emergency Management. Serves as the focal point for senior management support of an incident.

Economically Sensitive Areas: Those areas of explicit economic importance to the public that due to their proximity to potential spill sources may require special protection and include, but are not limited to: potable and industrial water intakes; locks and dams; and public and private marinas.

Emergency Management: The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Emergency Service: Those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.

Environmentally Sensitive Areas: 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.

Facility: Either an onshore facility or an offshore facility and includes, but is not limited to structures, equipment, and appurtenances thereto, used or capable of being used to transfer oil to or from a vessel or a public vessel. A facility includes federal, state, municipal, and private facilities.

Facility Operator: The person who owns, operates, or is responsible for the operation of the facility.

Federal Fund: The spill liability trust fund established under OPA.

Federal Regional Response Team: The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

Federal Response Plan (FRP): Means the agreement signed by 25 federal departments and agencies in April 1987 and developed under the authorities of the Earthquake Hazards Reduction Act of 1977 and the Disaster Relief Act of 1974, as amended by the Stafford Disaster Relief Act of 1988.

First Responders, First Response Agency: A public health or safety agency (e.g., 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.

Handle: To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.

Harmful Quantity Of Oil: The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen upon or discoloration of the surface of the water or a 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.

Hazardous Material: Any nonradioactive 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.

Hazardous Substance: 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 SERC.

Hazardous Waste: 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.

HAZMAT: Hazardous materials or hazardous substances, exposure to which may result in adverse effects on health or safety of employees.

HAZWOPER: Hazardous Waste Operations and Emergency Response Regulations published by OSHA to cover worker safety and health aspects of response operations.

Heat Stress: Dangerous physical condition caused by over exposure to extremely high temperatures.

Hypothermia: Dangerous physical condition caused by over exposure to freezing temperatures.

Incident: "Incident" means an occurrence that results in:

- (a) the death of or serious injury to a person;
- (b) a significant adverse effect on the environment;
- (c) an unintended fire or explosion;
- (d) an unintended or uncontained release of LVP hydrocarbons in excess of 1.5m³;
- (e) an unintended or uncontrolled release of gas or HVP hydrocarbons;
- (f) the operation of a pipeline beyond its design limits as determined under CSA Z662 or CSA Z276 or any operating limits imposed by the Board [Onshore Pipeline Regulations, 1999 (SOR/99-294), s. 1].

Incident Briefing Meeting: Held to develop a comprehensive, accurate, and up-to-date understanding of the incident, nature of status of control operations, and nature and status of response operations; ensure the adequacy of control and response operations; begin to organize control and response operations; and prepare for interactions with outside world.

Incident Command Post (ICP): That location at which all primary command functions are executed.

Incident Command System (ICS): The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of assigned resources at an incident.

Incident Commander (IC): The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

Indian Tribe: As defined in OPA section 1001, means any Indian tribe, band, nation, or other organized group or community, but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians and has governmental authority over lands belonging to or controlled by the Tribe.

Initial Cleanup: 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).

Initial Notification: The process of notifying necessary the Company personnel and Federal/ State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

Initial Response Actions: The immediate actions that are to be taken by the spill observer after detection of a spill.

Inland Area: The area shoreward of the boundary lines defined in 46 CFR part 7, except that in the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) as defined in §80.740 through 80.850 of this chapter. The inland area does not include the Great Lakes.

Inland Waters: State waters not considered coastal waters; lakes, rivers, ponds, streams, underground water, et. al.

Inland Zone: Means the environment inland of the coastal zone excluding the Great Lakes, and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

Interim Storage Site: 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.

Lead Agency: The government agency that assumes the lead for directing response activities.

Lead Federal Agency: The agency which coordinates the federal response to incident on navigable waters. The lead federal agencies are:

- **U.S. Coast Guard:** Oil and chemically hazardous materials incidents on navigable waters.
- **Environmental Protection Agency:** Oil and chemically hazardous materials incidents on inland waters.

Lead State Agency: The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

Loading: Transfer from Facility to vehicle.

Local Emergency Planning Committee (LEPC): A group of local representatives appointed by the State Emergency Response Commission (SERC) to prepare a comprehensive emergency plan for the local emergency planning district, as required by the Emergency Planning and Community Right-to-know Act (EPCRA).

Local Response Team: Designated Facility individuals who will fulfill the roles determined in the oil spill response plan in the event of an oil or hazardous substance spill. They will supervise and control all response and clean-up operations.

Lower Explosive Limit: Air measurement utilized to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

Marinas: Small harbors with docks, services, etc. for pleasure craft.

Medium Discharge: Means a discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (85+ Bbls) or 10% of the capacity of the largest tank, whichever is less and not to exceed the WCD.

National Contingency Plan: The plan prepared under the Federal Water Pollution Control Act (33 United State Code §1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code § 9601 et seq), as revised from time to time.

National Pollution Funds Center (NPFC): Means the entity established by the Secretary of Transportation whose function is the administration of the Oil Spill Liability Trust Fund (OSLTF). Among the NPFC's duties are: providing appropriate access to the OSLTF for federal agencies and states for removal actions and for federal trustees to initiate the assessment of natural resource damages; providing appropriate access to the OSLTF for claims; and coordinating cost recovery efforts.

National Response System (NRS): Is the mechanism for coordinating response actions by all levels of government in support of the OSC. The NRS is composed of the NRT, RRTs, OSC, Area Committees, and Special Teams and related support entities.

National Strike Force (NSF): Is a special team established by the USCG, including the three USCG Strike Teams, the Public Information Assist Team (PIAT), and the National Strike Force Coordination Center. The NSF is available to assist OSCs in their preparedness and response duties.

National Strike Force Coordination Center (NSFCC): Authorized as the National Response Unit by CWA section 311(a)(23) and (j) (2), means the entity established by the Secretary of the department in which the USCG is operating at Elizabeth City, North Carolina, with responsibilities that include administration of the USCG Strike Teams, maintenance of response equipment inventories and logistic networks, and conducting a national exercise program.

Natural Resource: Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.

Navigable Waters: As defined by 40 CFR 110.1 means the waters of the United States, including the territorial seas. The term includes:

All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

Interstate waters, including interstate wetlands;

All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

- that are or could be used by interstate or foreign travelers for recreational or other purposes;
- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; and
- that are used or could be used for industrial purposes by industries in interstate commerce.

All impoundments of waters otherwise defined as navigable waters under this section;

Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and

Wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act jurisdiction remains with EPA.

Nearshore Area: For OPA 90, the area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation defined in §80.740 - 80.850 of title 33 of the CFR.

Non-persistent or Group I Oil: 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 degrees C (645 degrees F);
2. At least 95% of which volume, distill at a temperature of 370 degrees C (700 degrees F).

Ocean: The open ocean, offshore area, and nearshore area as defined in this subpart.

Offshore area: The area up to 38 nautical miles seaward of the outer boundary of the nearshore area.

Oil or Oils: 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.

Oil Control Centre (OCC): Responsible for 24/7 Remote Monitoring and Control of Oil Pipelines Facilities.

Oil Spill Liability Trust Fund: Means the fund established under section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

Oily Waste: Product contaminated waste resulting from a spill or spill response operations.

On-Scene Coordinator (OSC): Means the federal official predesignated by the EPA or the USCG to coordinate and direct response under subpart D.

On-site: Means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of a response action.

Open Ocean: means the area from 38 nautical miles seaward of the outer boundary of the nearshore area, to the seaward boundary of the exclusive economic zone.

Owner or Operator: Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil: A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

1. Group II specific gravity less than .85
2. Group III specific gravity between .85 and less than .95
3. Group IV specific gravity .95 and including 1.0

4. Group V specific gravity greater than 1.0

Plan Holder: The plan holder is the industry transportation related facility for which a response plan is required by federal regulation to be submitted by a vessel or facility's owner or operator.

Primary Response Contractors or Contractors: An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

Qualified Individual (QI): That person or entity who has authority to activate a spill cleanup contractors, act as liaison with the "On-Scene Coordinator" and obligate funds required to effectuate response activities.

Recreation Areas: Publicly accessible locations where social/sporting events take place.

Regional Response Team (RRT): The Federal response organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for overall planning and preparedness for oil and hazardous materials releases and for providing advice to the OSC in the event of a major or substantial spill.

Remove or Removal: As defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove discharge.

Reportable Commodity Pipeline Accident: "reportable commodity pipeline accident" means an accident resulting directly from the operation of a commodity pipeline, where:

- (a) a person sustains a serious injury or is killed as a result of being exposed to
 - (i) a fire, ignition or explosion, or
 - (ii) a commodity released from the commodity pipeline, or
- (b) the commodity pipeline
 - (i) sustains damage affecting the safe operation of the commodity pipeline as a result of being contacted by another object or as a result of a disturbance of its supporting environment,
 - (ii) causes or sustains an explosion, or a fire or ignition that is not associated with normal operating circumstances, or
 - (iii) sustains damage resulting in the release of any commodity [Transportation Safety Board Regulations (SOR/92-446), s. 2(1)].

Reportable Commodity Pipeline Incident: "reportable commodity pipeline incident" means an incident resulting directly from the operation of a commodity pipeline, where:

- (a) an uncontained and uncontrolled release of a commodity occurs,
- (b) the commodity pipeline is operated beyond design limits,
- (c) the commodity pipeline causes an obstruction to a ship or to a surface vehicle owing to a disturbance of its supporting environment,
- (d) any abnormality reduces the structural integrity of the commodity pipeline below design limits,
- (e) any activity in the immediate vicinity of the commodity pipeline poses a threat to the structural integrity of the commodity pipeline, or
- (f) the commodity pipeline, or a portion thereof, sustains a precautionary or emergency shut-down for reasons that relate to or create a hazard to the safe transportation of a commodity [Transportation Safety Board Regulations (SOR/92-446), s. 2(1)].

Response Activities: 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 public health or welfare, or the environment.

Response Contractors: Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

Response Guidelines: Guidelines for initial response that are based on the type of product involved in the spill, these guidelines are

utilized to determine clean-up methods and equipment.

Response Plan: A practical manual used by industry for responding to a spill. Its features include: (1) identifying the notifications 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 data required by regulatory agencies to prevent confusion during a spill incident.

Response Priorities: Mechanism used to maximize the effective use of manpower and equipment resources based upon their availability during an operational period.

Response Resources: All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

Responsible Party: Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.

Restoration: The actions involved in returning a site to its former condition.

Rivers and Canals: 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.

Securing the Source: Steps that must be taken to stop discharge of oil at the source of the spill.

Serious Injury: "serious injury" includes an injury that results in :

- (a) the fracture of a major bone;
- (b) the amputation of a body part;
- (c) the loss of sight in one or both eyes;
- (d) internal hemorrhage;
- (e) third degree burns;
- (f) unconsciousness; or
- (g) the loss of a body part or function of a body part. (blessure grave)

Significant Adverse Effect: "significant adverse effect" is defined under the Canadian Environmental Assessment Act as any effect of any change on:

- (i) any change the project may cause on the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individual of that species, as those terms are defined in subsection 2(1) of the Species at Risk Act.
- (ii) health and socio-economic conditions;
- (iii) physical and cultural heritage;
- (iv) the current use of lands and resources for traditional purposes by aboriginal persons;
- (v) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance;
- (vi) any change to the project that may be caused by the environment.

Sinking Agents: Means those additives applied to oil discharges to sink floating pollutants below the water surface.

Site Characterization: An evaluation of a cleanup site to determine the appropriate safety and health procedures needed to protect employees from identified hazards.

Site Conditions: Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.

Site Safety and Health Plan: A site specific plan developed at the time of an incident that addresses:

- Safety and health hazard analysis for each operation.
- Personal protective equipment to be used.
- Training requirements for site workers.
- Medical surveillance requirements.
- Air monitoring requirements.
- Site control measures.
- Decontamination procedures.
- Emergency response procedures.
- Confined space entry procedures.

Site Security and Control: 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.

Skimmers: Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.

Snare Boom: Oil will adhere to the material of which this boom is made of and thus collect it.

Sorbents: 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.

Spill: An unauthorized discharge of oil or hazardous substance into the waters of the state.

Spill Observer: The first Facility individual who discovers a spill. This individual must function as the first responder and person-in-charge until relieved by an authorized supervisor.

Spill of National Significance (SONS): Means a spill which due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and cleanup the discharge.

Spill Management Team: The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Spill Response: All actions taken in responding to spills of oil and hazardous materials, e.g.: 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.

Spill Response Personnel: Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be pre-approved on a list maintained in each region.

Staging Areas: Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

State Emergency Response Commission(SERC): A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Re-authorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

Surface Collecting Agents: Means those chemical agents that form a surface film to control the layer thickness of oil.

Surface Washing Agent: Is any product that removes oil from solid surfaces, such as beaches and rocks, through a detergency mechanism and does not involve dispersing or solubilizing the oil into the water column.

Tanker: A self-propelled tank vessel constructed or adapted primarily to carry or hazardous material in bulk in the cargo spaces.

Tidal Current Tables: Tables which contain the predicted times and heights of the high and low waters for each day of the year for designated areas.

Trajectory Analysis: Estimates made concerning spill size, location, and movement through aerial surveillance or computer models.

Transfer: Any movement of oil to, from, or within a vessel by means of pumping, gravitation, or displacement.

Trustee: Means an official of a federal natural resources management agency designated in subpart G of the NCP or a designated state official or Indian tribe or, in the case of discharges covered by the OPA, a foreign government official, who may pursue claims for damages under section 1006 of the OPA.

Underwriter: An insurer, a surety company, a guarantor, or any other person, other than an owner or operator of a vessel or facility, that undertakes to pay all or part of the liability of an owner or operator.

Unified Command: The method by which local, state, and federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed-upon objectives.
- Deploy resources to achieve agreed-upon objectives.

Unified or Coordinated Command Meeting: Held to obtain agreement on strategic objectives and response priorities; review tactical strategies; engage in joint planning, integrate response operations; maximize use of resources; and minimize resolve conflicts.

Volunteers: An individual who donates their services or time without receiving monetary compensation.

Waste: Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

Waters of the United States: See **Navigable Waters** in this Glossary.

Wetlands: Those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds (40 CFR 112.2(y)).

Wildlife Rescue: Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

Worst Case Discharge: The largest foreseeable discharge under adverse weather conditions. For facilities located above the high water line of coastal waters, a worst case discharge includes those weather conditions most likely to cause oil discharged from the facility to enter coastal waters.

ACRONYMS

AMIO	- Alien Migration Interdiction Operation
AQI	- Alternate Qualified Individual
AM	- Ante Meridiem
ACP	- Area Contingency Plan
ACP	- Area Contingency Plans
Avg.	- Average
bbl/hr	- Barrel per Hour
Br	- Branch
BLM	- Bureau of Land Management
CANUSCENT	- Canada - United States Joint Inland Pollution Contingency Plan - Annex II
CA	- Canada
CA NEB	- Canadian National Energy Board
COTP	- Captain of the Port
Ctr.	- Center
CAS Number	- Chemical Abstracts Service
CST	- Civil Support Team
CG	- Coast Guard
CFR	- Code of Federal Regulations
Cont'd	- Continued
CMT	- Crisis Management Team
DOA	- Dead on Arrival
Dept.	- Department
DOD	- Department of Defense
DENR	- Department of Environment and Natural Resources
DHS	- Department of Homeland Security
DOI	- Department of Interior
DNR	- Department of Natural Resources
DOT	- Department of Transportation
D.C.	- District of Columbia
Div.	- Division
DOCL	- Documentation Unit Leader
EMS	- Emergency Management System
EM	- Emergency Manager
EOC	- Emergency Operations Center
ESA	- Endangered Species Act
EET	- Environmental Emergency Team
EDRC	- Estimated Daily Recovery Capability
ETA	- Estimated Time of Arrival
etc.	- Et Cetera
exempli gratia e.g.	- For Example
FAA	- Federal Aviation Administration
FBI	- Federal Bureau of Investigation
FOSC	- Federal On-Scene Coordinator
Ft./Sec.	- Feet/Second
FIR	- Field Investigation Report

FR	- Fire Retardant
FWD	- Forward
Freq.	- Frequency
GRP	- Group
Gru Sups.	- Group Supervisors
HAZMAT	- Hazardous Material
HAZWOPER	- Hazardous Waste Operations and Emergency Response Standard
HVAC	- Heating, Ventilating, and Air Conditioning
HEPA OVV	- High Efficiency Particle Air Device
HF ERW	- High Frequency Electric-Resistance Weld
HLS	- Homeland Security
Hrs.	- Hours
ID NO.	- Identification Number
IL	- Illinois
IDNR	- Illinois Department of Natural Resources
IAW	- In Accordance With
IAP	- Incident Action Plan
ICS	- Incident Command System
ICS	- Incident Command System
IC	- Incident Commander
IMH	- Incident Management Handbook
IMS	- Incident Management System
Info.	- Information
KS	- Kansas
KM	- Kilometer
KP	- Kilometer Point
LE	- Law Enforcement
LO	- Liaison Officer
LPG	- Liquefied Petroleum Gas
LEPC	- Local Emergency Planning Committee
LRT	- Local Response Team
LSC	- Logistics Section Chief
LF ERW	- Low Frequency Electric-Resistance Weld
LEL	- Lower Explosive Limit
MO	- Missouri
MSDS	- Material Safety Data Sheets
MEDEVAC'D	- Medical Evacuation
NCP	- National Contingency Plan
NE	- Nebraska
NEECP (CA)	- National Environmental Emergencies Contingency Plan
NFPA	- National Fire Protection Association
NIMS	- National Incident Management System
ND	- North Dakota
NOAA	- National Oceanographic Atmospheric Administration
NCP (U.S.)	- National Oil and Hazardous Substances Contingency Plan
NRC	- National Response Center
NRC/ES	- National Response Corporation

NRDAR	- Natural Resource Damage Assessment and Restoration
N	- No
NW	- North West
N/A	- Not Available
OCC	- Oil Control Centre
OSHA	- Occupational Safety & Health Administration
OSRO	- Oil Spill Removal Organization
OSRP	- Oil Spill Response Plan
OSRV	- Oil Spill Response Vessel
OSC	- On-Scene Coordinate
OSC	- Operation Section Chief
OP	- Operational Period
Op.	- Operations
OPS	- Operations
O&M	- Operations and Maintenance
OCC	- Operations Coordination Center
OV	- Organic Vapor
PPM	- Parts Per Million
PFD	- Personal Floatation Device
PPE	- Personal Protective Equipment
PHMSA	- Pipeline and Hazardous Materials Safety Administration
PSC	- Planning Section Chief
PSC	- Planning Section Chief
POC	- Point of Contact
PVC	- Polyvinyl Chloride
P.M.	- Post Meridiem
PREP	- Preparedness for Response Exercise Program
Prot.	- Protection
PWSD	- Public Water Supply District
QI	- Qualified Individual
RPT	- Regional Preparedness Team
Req.	- Required
RCRA	- Resource Conservation and Recovery Act
RESL	- Resource Leader
RP	- Responsible Party
RPIC	- Responsible Party Incident Commander
Rev.	- Revision
R/W	- Right-of-Way
RWD	- Rural Water District
SAR	- Search and Rescue
SART	- Search and Rescue Transporter
SD	- South Dakota
SI	- Security Incident
SO	- Security Officer
SCBA	- Self Contained Breathing Apparatus
SSPs	- Site Safety Plans
SITL	- Situation Unit Leader

Spec.	- Special
SPCC	- Spill Prevention, Control, and Countermeasure
SORS	- Spilled oil Recovery System
Sq. Ft.	- Square Foot
STAM	- Staging Area Manager
SERC	- State Emergency Response Center
SERC	- State Emergency Response Commission
SOSC	- State On-Scene Coordinator
SOR	- Statutory Orders and Regulations
SCADA	- Supervisory Control and Data Acquisition
TOC	- Table of Contents
TC	- TC Oil Pipeline Operations Inc.
TSD	- Temporary Storage and Disposal
TSC	- Temporary Storage Capacity
TGLO	- Texas General Land Office
id est, I.E.	- That is
TBA	- To be Assigned
TSB	- Transportation Safety Board
UC	- Unified Command
UN Number	- United Nations
US	- United States
USCG	- United States Coast Guard
EPA	- US Environmental Protection Agency
USN	- US Navy Supervisor Salvage
Vsl.	- Vessel
VOSS	- Vessel of Opportunity Skimmer System
VOC	- Volatile Organic Compound
Vol.	- Volume
W	- West
WCD	- Worst Case Discharge
Y	- Yes

RESPONSE ZONE INFORMATION

Hardisty Pump Station/ Regina Pump Station

RESPONSE ZONE CONTACT INFORMATION

Owner Name:	TransCanada
Addresses:	Physical Address 450 - 1st Street Calgary, Alberta T2P 5H1
24 Hour Emergency Contact Phone Numbers:	1-800-447-8066 (24 Hours)
Telephone/Fax:	Telephone references, including 24 hour numbers, for the Facility, Owner, and Qualified Individual/Alternate Qualified Individual are provided in Figure 2.2.
Provinces/States Traversed:	Alberta, Saskatchewan
Areas/Counties Traversed:	Eastern Alberta, Western Saskatchewan

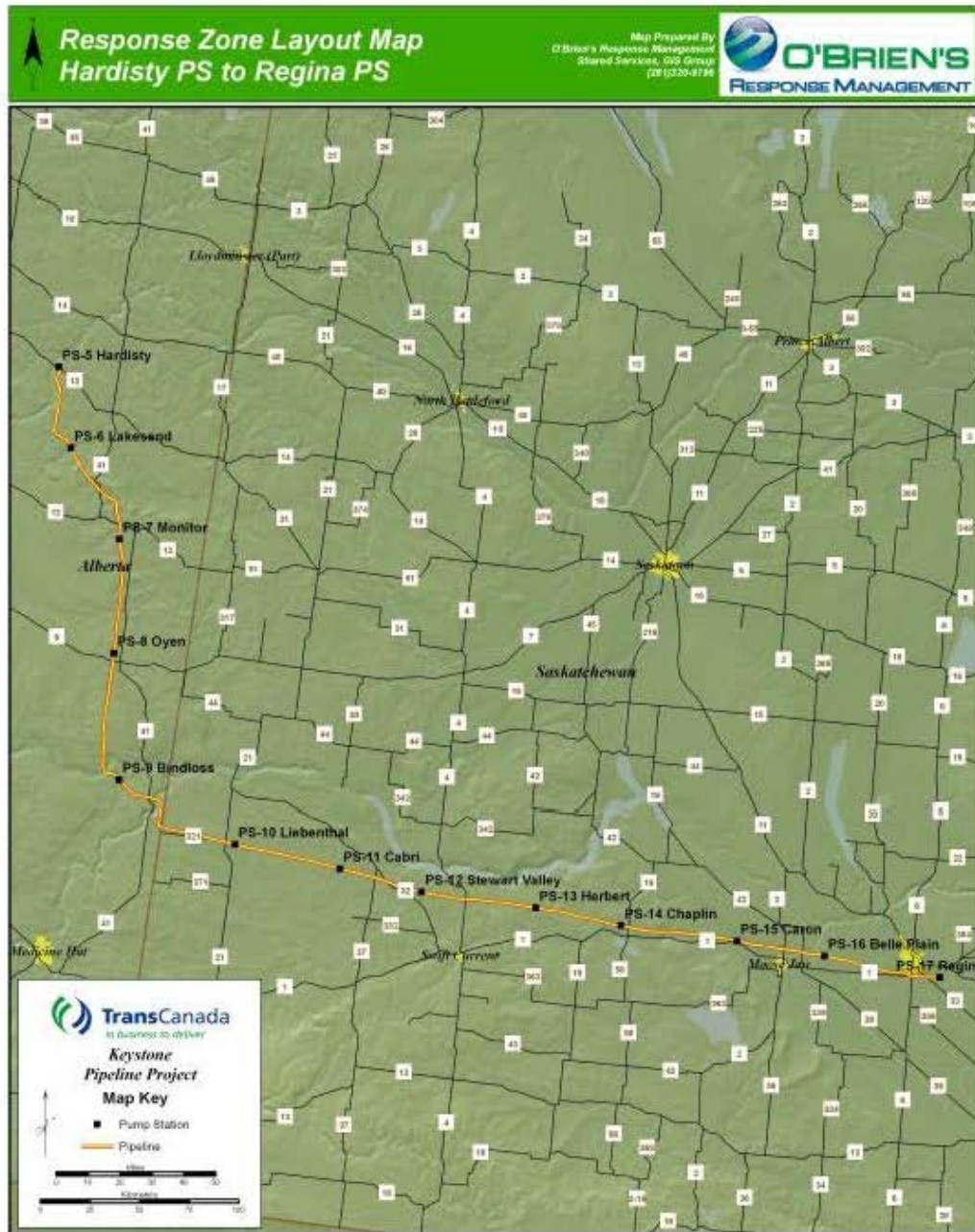
INFORMATION SUMMARY

Determination of Significant and Substantial Harm (United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration):

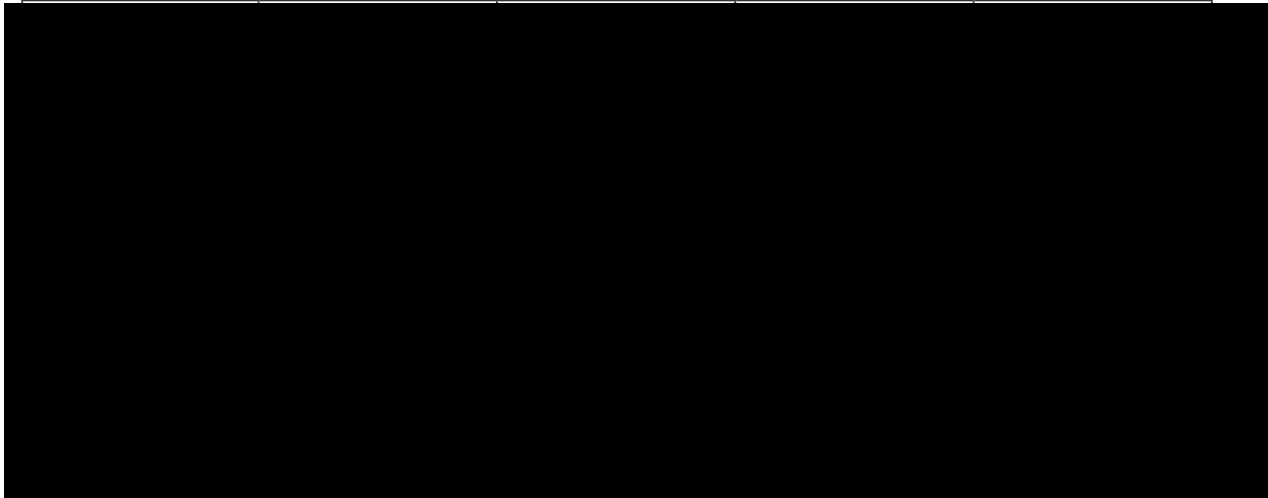
This Response Zone has been determined to meet the significant and substantial harm classification because at least one (1) line section within the response zone has met at least one of the criteria listed in 49CFR194.103(c)(1).

Worst Case Discharge (Refer to Appendix B for calculations):

▪ Potential Oil Group:	3
▪ United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Planning Volume:	41,504 Bbls



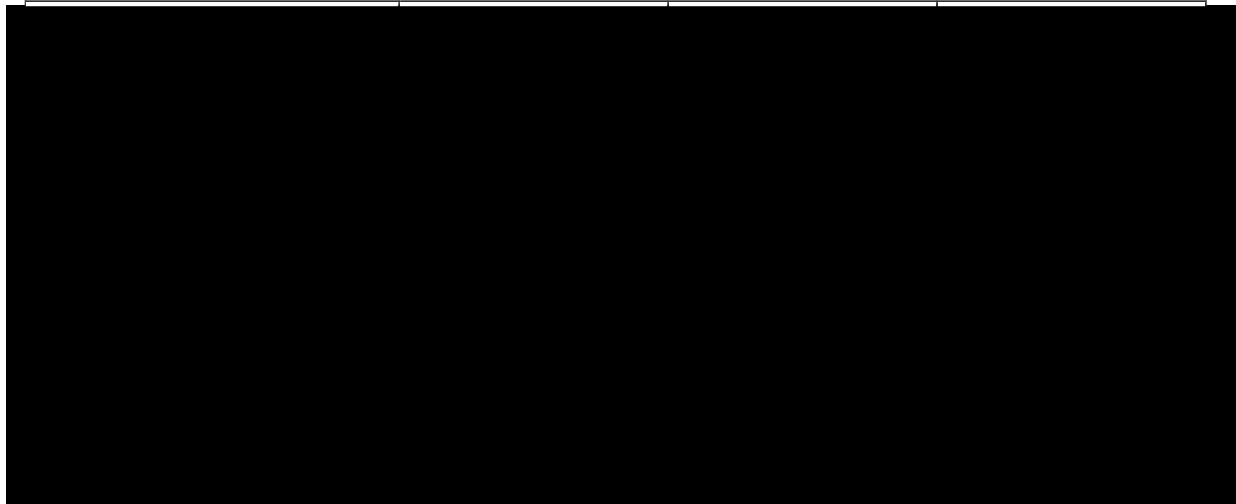
RESPONSE ZONE COMPANY CONTACTS				
POSITION/TITLE	NAME	OFFICE	HOME	CELL



Area: Hardisty Pump Station / Regina Pump Station

Qualified Individuals:

Qualified Individuals			
NAME	OFFICE	HOME	CELL



Alternate Qualified Individuals:

Alternate Qualified Individuals			
NAME	OFFICE	HOME	CELL

Pipeline Specifications:

The tables below list the pipeline facilities within the East Response Zone Response Zone.

Pipeline Specifications			
Location	Type of Oil	State	County
Caron PS / Regina PS	Crude Oil	Saskatchewan	Western Saskatchewan
Hardisty PS / Lakesend PS	Crude Oil	Alberta	Eastern Alberta
Lakesend PS / Monitor PS	Crude Oil	Alberta	Eastern Alberta

Monitor PS / Oyen PS	Crude Oil	Alberta	Eastern Alberta
Oyen PS / Bindloss PS	Crude Oil	Alberta	Eastern Alberta
Blindloss PS / Cabri PS	Crude Oil	Alberta	Eastern Alberta
Cabri PS / Herbert PS	Crude Oil	Saskatchewan	Western Saskatchewan
Herbert PS / Caron PS	Crude Oil	Saskatchewan	Western Saskatchewan

Company Owned Response Equipment:

Response Equipment		
NAME	LOCATION	DESCRIPTION
Equipment Response Trailer		See Equipment List - Appendix A

Breakout Tanks:

Breakout Tanks			
FACILITY NAME	TANK NUMBER	CAPACITY (Bbls)	TYPE OF OIL

EXTERNAL NOTIFICATION REFERENCES Saskatchewan

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Western Saskatchewan		
Abbey Fire Department	Abbey, Alberta	
Bindloss Fire Department	Bindloss, Alberta	
Bow Island Fire Department	Bow Island, Alberta	
Burstall Ambulance Services	Burstall, Saskatchewan	
Burstall EMO Services	Burstall, Saskatchewan	
Burstall Fire Department	Burstall, Saskatchewan	
Cabri Ambulance Services	Cabri, Saskatchewan	
Cabri Fire Department	Cabri, Saskatchewan	
Cabri RCMP Detachment	Cabri, Saskatchewan	
Caronport Fire Department	Caronport, Saskatchewan	
Central Butte Ambulance Services	Central Butte, Saskatchewan	
Cereal Fire Department	Cereal, Alberta	
CFB Suffield Military Police Detachment	Ralston, Alberta	
Chaplin Fire Department	Chaplin, Saskatchewan	
City of Regina - Emergency Planning	Regina, Saskatchewan	
Climax Fire Department	Climax, Saskatchewan	
Eastend Fire Department	Eastend, Saskatchewan	
Elkwater Fire Department	Elkwater, Alberta	
Fox Valley Fire Department	Fox Valley, Saskatchewan	
Frontier Ambulance Services	Frontier, Saskatchewan	
Frontier Fire Department	Frontier, Saskatchewan	

Gull Lake Ambulance Services	Gull Lake, Saskatchewan	██████████
Gull Lake EMO Services	Gull Lake, Saskatchewan	██████████
Gull Lake Fire Department	Gull Lake, Saskatchewan	██████████
Herbert Fire Department	Herbert, Saskatchewan	██████████
Kipling Fire Department	Kipling, Saskatchewan	██████████
Leader Ambulance Services	Leader, Saskatchewan	██████████
Leader EMO Services	Leader, Saskatchewan	██████████
Leader Fire Department	Leader, Saskatchewan	██████████
Leader RCMP Detachment	Leader, Saskatchewan	██████████
Maple Creek Ambulance	Maple Creek, Saskatchewan	██████████
Maple Creek EMO Services	Maple Creek, Saskatchewan	██████████
Maple Creek RCMP Detachment	Maple Creek, Saskatchewan	██████████
Medicine Hat Police Service	Medicine Hat, Alberta	██████████
Medicine Hat Fire Department	Medicine Hat, Alberta	██████████
Moose Jaw Ambulance Services	Moose Jaw, Saskatchewan	██████████
Moose Jaw EMO Services	Moose Jaw, Saskatchewan	██████████
Moose Jaw Fire Department	Moose Jaw, Saskatchewan	██████████
Moose Jaw RCMP Detachment	Moose Jaw, Saskatchewan	██████████
Morse Fire Department	Morse, Saskatchewan	██████████
Morse RCMP Detachment	Morse, Saskatchewan	██████████
Pense Fire Department	Pense, Saskatchewan	██████████
Piapot Fire Department	Piapot, Saskatchewan	██████████
RCMP - Gull Lake Community Detachment	Swift Current, Saskatchewan	██████████
Regina City Police Department	Regina, Saskatchewan	██████████
Regina EMS - Ambulance	Regina, Saskatchewan	██████████
Regina Fire Department	Regina, Saskatchewan	██████████

Regina RCMP Detachment	Regina, Saskatchewan	[REDACTED]
Richmond Ambulance Services	Leader, Saskatchewan	[REDACTED]
RM of Moose Jaw EMO Services	Moose Jaw, Saskatchewan	[REDACTED]
RM of Wheatland EMO Services	Mortlach, Saskatchewan	[REDACTED]
Rural Municipality of Riverside No.168 Fire Depart	Pennant, Saskatchewan	[REDACTED]
Sceptre Fire Department	Sceptre, Saskatchewan	[REDACTED]
Shaunavon Ambulance Services	Shaunavon, Saskatchewan	[REDACTED]
Shaunavon EMO Services	Shaunavon, Saskatchewan	[REDACTED]
Shaunavon Fire Department	Shaunavon, Saskatchewan	[REDACTED]
Shaunavon RCMP Detachment	Shaunavon, Saskatchewan	[REDACTED]
Stewart Valley Fire Department	Stewart Valley, Saskatchewan	[REDACTED]
Swift Current Ambulance Services	Swift Current, Saskatchewan	[REDACTED]
Swift Current Fire Department	Swift Current, Saskatchewan	[REDACTED]
Swift Current RCMP Detachment	Swift Current, Saskatchewan	[REDACTED]
Val Marie Ambulance Services	Val Marie, Saskatchewan	[REDACTED]
Val Marie Fire Department	Val Marie, Saskatchewan	[REDACTED]

RESPONSE ZONE INFORMATION

Regina Pump Station / Haskett Pump Station

RESPONSE ZONE CONTACT INFORMATION

Owner Name:	TransCanada
Addresses:	Physical Address 450 - 1st Street Calgary, Alberta T2P 5H1
24 Hour Emergency Contact Phone Numbers:	1-800-447-8066 (24 Hours)
Telephone/Fax:	Telephone references, including 24 hour numbers, for the Facility, Owner, and Qualified Individual/Alternate Qualified Individual are provided in Figure 2.2.
Provinces/States Traversed:	Saskatchewan, Manitoba
Areas/Counties Traversed:	Eastern Saskatchewan, Southwestern Manitoba

INFORMATION SUMMARY

Determination of Significant and Substantial Harm (United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration):

This Response Zone has been determined to meet the significant and substantial harm classification because at least one (1) line section within the response zone has met at least one of the criteria listed in 49CFR194.103(c)(1).

Worst Case Discharge (Refer to Appendix B for calculations):

- Potential Oil Group:** 3
- United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Planning Volume:**
 Bbls

RESPONSE ZONE INFORMATION

Regina Pump Station / Haskett Pump Station

RESPONSE ZONE CONTACT INFORMATION

Owner Name:	TransCanada
Addresses:	Physical Address 450 - 1st Street Calgary, Alberta T2P 5H1
24 Hour Emergency Contact Phone Numbers:	1-800-447-8066 (24 Hours)
Telephone/Fax:	Telephone references, including 24 hour numbers, for the Facility, Owner, and Qualified Individual/Alternate Qualified Individual are provided in Figure 2.2.
Provinces/States Traversed:	Saskatchewan, Manitoba
Areas/Counties Traversed:	Eastern Saskatchewan, Southwestern Manitoba

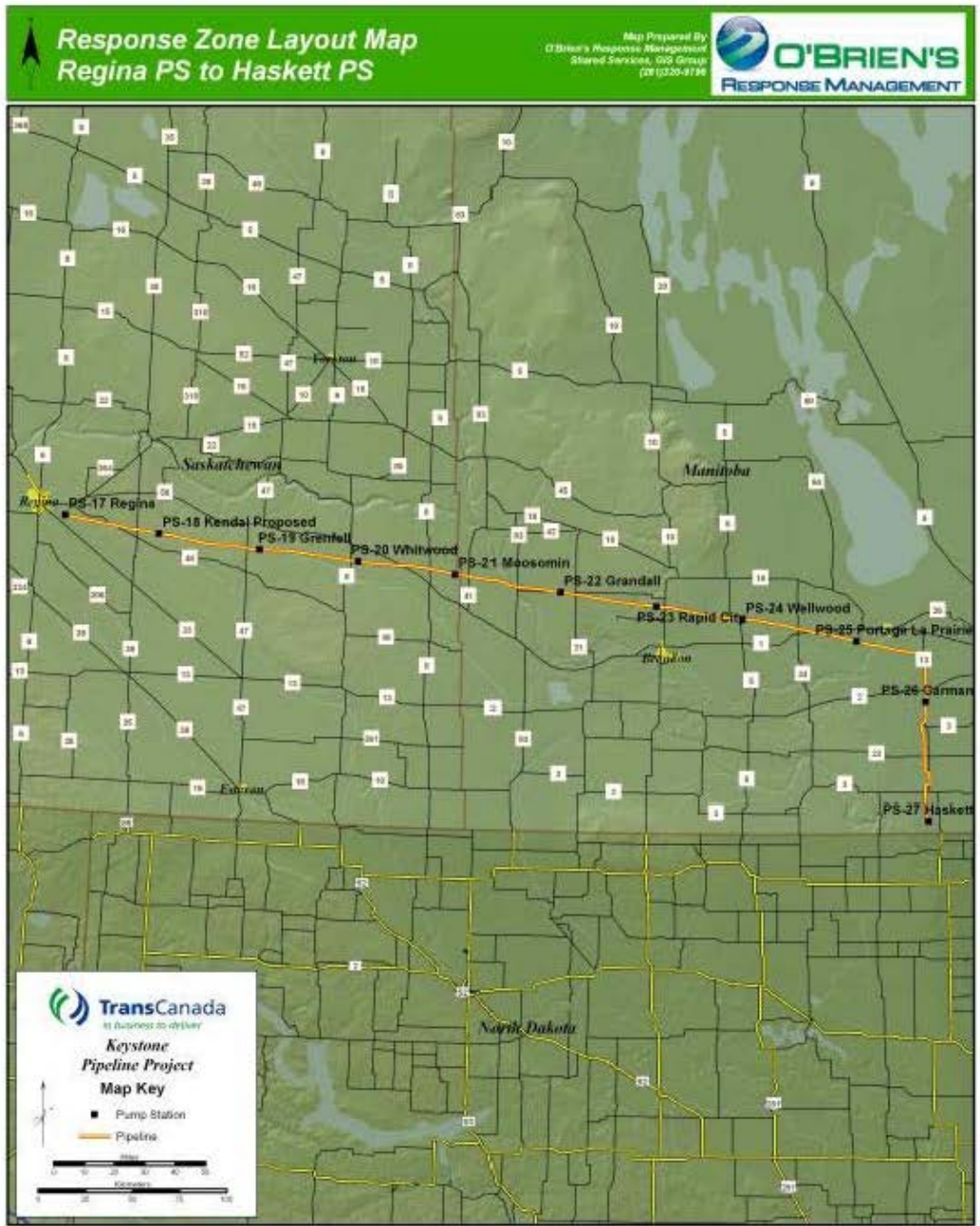
INFORMATION SUMMARY

Determination of Significant and Substantial Harm (United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration):

This Response Zone has been determined to meet the significant and substantial harm classification because at least one (1) line section within the response zone has met at least one of the criteria listed in 49CFR194.103(c)(1).

Worst Case Discharge (Refer to Appendix B for calculations):

▪ Potential Oil Group:	3
▪ United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Planning Volume:	51,413 Bbls



RESPONSE ZONE COMPANY CONTACTS				
POSITION/TITLE	NAME	OFFICE	HOME	CELL

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Area: Regina Pump Station / Haskett Pump Station

Qualified Individuals:

Qualified Individuals			
NAME	OFFICE	HOME	CELL

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Alternate Qualified Individuals:

Alternate Qualified Individuals			
NAME	OFFICE	HOME	CELL

Pipeline Specifications:

The tables below list the pipeline facilities within the East Response Zone Response Zone.

Pipeline Specifications			
Location	Type of Oil	State	County
Regina PS / Kendal PS	Crude Oil	Saskatchewan	Eastern Saskatchewan
Kendal PS / Grenfell PS	Crude Oil	Saskatchewan	Eastern Saskatchewan
Grenfell PS / Moosomin PS	Crude Oil	Saskatchewan	Eastern Saskatchewan
Moosomin PS / Rapid City PS	Crude Oil	Manitoba	Southwestern Manitoba
Rapid PS / Portage La Prairie PS	Crude Oil	Manitoba	Southwestern Manitoba

Portage La Prairie PS / Carman PS	Crude Oil	Manitoba	Southwestern Manitoba
Carman PS / Haskett PS	Crude Oil	Manitoba	Southwestern Manitoba

Company Owned Response Equipment:

Response Equipment		
NAME	LOCATION	DESCRIPTION
Equipment Response Trailer		See Equipment List - Appendix A

Breakout Tanks:

Breakout Tanks			
FACILITY NAME	TANK NUMBER	CAPACITY (Bbls)	TYPE OF OIL

EXTERNAL NOTIFICATION REFERENCES Saskatchewan

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Eastern Saskatchewan		
Balgonie Fire Department	Balgonie, Saskatchewan	(306) 771-2206
Carry The Kettle Fire Department	Sintaluta, Saskatchewan	(306) 727-2135
City of Regina - Emergency Planning	Regina, Saskatchewan	(306) 777-7886
Glenavon Fire Department	Glenavon, Saskatchewan	(306) 429-2220
Grenfell Ambulance Services	Grenfell, Saskatchewan	(306) 697-2707
Grenfell Fire Department	Grenfell, Saskatchewan	(306) 697-2217
Indian Head Fire Department	Indian Head, Saskatchewan	(306) 695-3887
Indian Head RCMP Detachment	Indian Head, Saskatchewan	(306) 695-5200
Kipling Ambulance Service	Kipling, Saskatchewan	(306) 736-2553
Kipling RCMP Detachment	Kipling, Saskatchewan	(306) 736-6400
Montmartre Fire Department	Montmartre, Saskatchewan	(306) 424-2040
Montmartre RCMP Detachment	Montmartre, Saskatchewan	(306) 424-6400
Moosomin Ambulance Services	Moosomin, Saskatchewan	(306) 435-2962
Moosomin Fire Department	Moosomin, Saskatchewan	(306) 435-2105
Moosomin RCMP Detachment	Moosomin, Saskatchewan	(306) 435-3361
Regina City Police Department	Regina, Saskatchewan	(306) 777-6500
Regina EMS - Ambulance	Regina, Saskatchewan	(306) 766-7007
Regina Fire Department	Regina, Saskatchewan	(306) 777-7829 /7830
Regina RCMP Detachment	Regina, Saskatchewan	(306) 780-5560
Val Marie Fire Department	Val Marie, Saskatchewan	(306) 298-2012 /2022
White City Fire Department	White City, Saskatchewan	(306) 781-2303

Whitewood Fire Department	Whitewood, Saskatchewan	(306) 735-2331
Wolseley Fire Department	Wolseley, Saskatchewan	(306) 698-2288

**EXTERNAL NOTIFICATION REFERENCES
Manitoba**

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Southwestern Manitoba		
Austin Fire Department	Austin, Manitoba	(204) 637-2169
Brandon Ambulance	Brandon, Manitoba	(204) 729-2400 /2406
Brandon Fire Department	Brandon, Manitoba	(204) 729-2400 /2406
Brandon RCMP Detachment	Brandon, Manitoba	(204) 726-7500 /7522
Broadview Fire Department	Broadview, Saskatchewan	(306) 696-2533
Broadview RCMP Detachment	Broadview, Saskatchewan	(306) 696-5200
Carberry - Assiniboine EMS	Carberry, Manitoba	(204) 834-3548
Carberry Ambulance Services	Carberry, Manitoba	(204) 834-3548
Carberry Fire Department	Carberry, Manitoba	(204) 834-2212
Carberry RCMP Detachment	Carberry, Manitoba	(204) 834-2905
Cartier Ambulance	Elie, Manitoba	(204) 353-4161
Cartier Fire Department	Elie, Manitoba	(204) 353-2214 /2424
City of Brandon Emergency Management Services	Brandon, Manitoba	(204) 729-2239
Dominion City Fire Department	Dominion City, Manitoba	(204) 427-2628
Emerson Ambulance Department	Emerson, Manitoba	(204) 373-2002
Emerson Fire Department	Emerson, Manitoba	(204) 373-2335 /2414
Emerson RCMP	Emerson, Manitoba	(204) 373-2505
Falcon / Whiteshell Fire Department	Falcon Lake, Manitoba	(204) 349-8772
Gladstone RCMP Detachment	Gladstone, Manitoba	(204) 385-3035
Hadashville Ambulance Services	Hadashville, Manitoba	(204) 426-5328

Hamiota - Ambulance EMS	Hamiota, Manitoba	(204) 764-4207
Hamiota Fire Department	Hamiota, Manitoba	(204) 764-3050 /3055
Hamiota RCMP Detachment	Hamiota, Manitoba	(204) 759-2704 /2732
Headingley Fire Department	Headingley, Manitoba	(204) 837-5766
Headingley RCMP Detachment	Headingley, Manitoba	(204) 888-0358
Headingley Traffic Services	Winnipeg, Manitoba	(204) 984-6911
Ile des Chenes Ambulance Services	St. Pierre-Jolys, Manitoba	(204) 433-3330
MacDonald Ambulance Services	Oak Bluff, Manitoba	(204) 837-3332
MacGregor Ambulance Services	MacGregor, Manitoba	(204) 685-2161
MacGregor Fire Department	MacGregor, Manitoba	(204) 685-2161
MacGregor RCMP	Portage la Prairie, Manitoba	(204) 857-4445
McAuley Fire Department	McAuley, Manitoba	(204) 722-2211
Miniota Fire Department	Miniota, Manitoba	(204) 567-3683 /3813
Minnedosa Ambulance Services	Minnedosa, Manitoba	(204) 867-5555
Minnedosa EMO Services	Minnedosa, Manitoba	(204) 867-5273
Minnedosa Fire Department	Minnedosa, Manitoba	(204) 867-2727
Minnedosa RCMP Detachment	Minnedosa, Manitoba	(204) 867-2916
Morris RCMP Detachment	Morris, Manitoba	(204) 746-2323
Neepawa Ambulance Services	Neepawa, Manitoba	(204) 476-7840
Neepawa Fire Department	Neepawa, Manitoba	(204) 476-7654
Neepawa RCMP Detachment	Neepawa, Manitoba	(204) 476-7340
North Eastman Health Association Inc	Pinawa, Manitoba	(204) 753-2015
Oak Bank RCMP Detachment	Oak Bank, Manitoba	(204) 444-3847
Oak River Fire Department	Oak River, Manitoba	(204) 566-2126
Portage la Prairie Ambulance Central Region Health	Portage la Prairie, Manitoba	(204) 857-5444
Portage la Prairie Fire Department	Portage la Prairie, Manitoba	(204) 239-5154

Portage la Prairie RCMP Detachment	Portage la Prairie, Manitoba	(204) 857-8767 /4445
Rapid City EMO	Rapid City, Manitoba	(204) 826-2679
Rapid City Fire Department	Rapid City, Manitoba	(204) 826-2652 /2679
Richer Fire Department	Richer, Manitoba	(204) 422-5929
Ritchot Fire Department	Ile Des Chenes, Manitoba	(204) 981-6782
Rivers Ambulance Services	Rivers, Manitoba	(204) 328-6201
Rivers Fire Department	Rivers, Manitoba	(204) 328-7437 /7930
Rivers Police Services	Rivers, Manitoba	(204) 328-7430
RM of Reynolds Fire Department	Hadashville, Manitoba	(204) 426-2265 /2266
RM of Tache Fire Department	Lorette, Manitoba	(204) 878-9977
Sanford Fire Department	Sanford, Manitoba	(204) 736-2255
Shoal Lake RCMP Detachment	Shoal Lake, Manitoba	(204) 759-2390
Souris RCMP Detachment	Souris, Manitoba	(204) 483-2854
South Eastman Health/EMS	Ste. Anne, Manitoba	(204) 935-2730
St. Malo Fire Department	St. Malo, Manitoba	(204) 347-5246 /
St. Pierre-Jolys Ambulance Service	St. Pierre-Jolys, Manitoba	(204) 433-7701
St. Pierre-Jolys Fire Department	St. Pierre-Jolys, Manitoba	(204) 433-7117
St. Pierre-Jolys RCMP Detachment	St. Pierre-Jolys, Manitoba	(204) 433-7908
Ste. Anne Fire Department	Ste. Anne, Manitoba	(204) 422-9110
Ste. Anne Police Service	Ste. Anne, Manitoba	(204) 422-8209
Steinbach Ambulance Services	Steinbach, Manitoba	(204) 346-6411
Steinbach Fire Department	Steinbach, Manitoba	(204) 326-1109 /9877
Steinbach RCMP Detachment	Steinbach, Manitoba	(204) 326-1234 /4452
Virden & Wallace Fire Department	Virden, Manitoba	(204) 748-1304
Virden Ambulance Services	Virden, Manitoba	(204) 748-4332
Virden RCMP Detachment	Virden, Manitoba	(204) 748-2046

Whitemouth Ambulance Services	Whitemouth, Manitoba	(204) 348-7700
Whitemouth Fire Department	Whitemouth, Manitoba	(204) 348-7911
Winnipeg Fire Paramedic Service	Winnipeg, Manitoba	(204) 986-6380
Winnipeg Police Service	Winnipeg, Manitoba	(204) 986-6222
Winnipeg RCMP Detachment	Winnipeg, Manitoba	(204) 983-5420

RESPONSE ZONE INFORMATION

North Dakota, South Dakota, Nebraska

RESPONSE ZONE CONTACT INFORMATION

Owner Name:	TransCanada
Addresses:	Physical Address 450 - 1st Street Calgary, Alberta T2P 5H1
24 Hour Emergency Contact Phone Numbers:	1-800-447-8066 (24 Hours)
Telephone/Fax:	Telephone references, including 24 hour numbers, for the Facility, Owner, and Qualified Individual/Alternate Qualified Individual are provided in Figure 2.2.
Provinces/States Traversed:	North Dakota, South Dakota, Nebraska
Areas/Counties Traversed:	Barnes, Beadle, Butler, Cavalier, Cedar, Clark, Colfax, Day, Gage, Hanson, Hutchinson, Jefferson, Kingsbury, Marshall, McCook, Miner, Nelson, Pembina, Platte, Ransom, Saline, Sargent, Seward, Stanton, Steele, Walsh, Wayne, Yankton

INFORMATION SUMMARY

Determination of Significant and Substantial Harm (United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration):

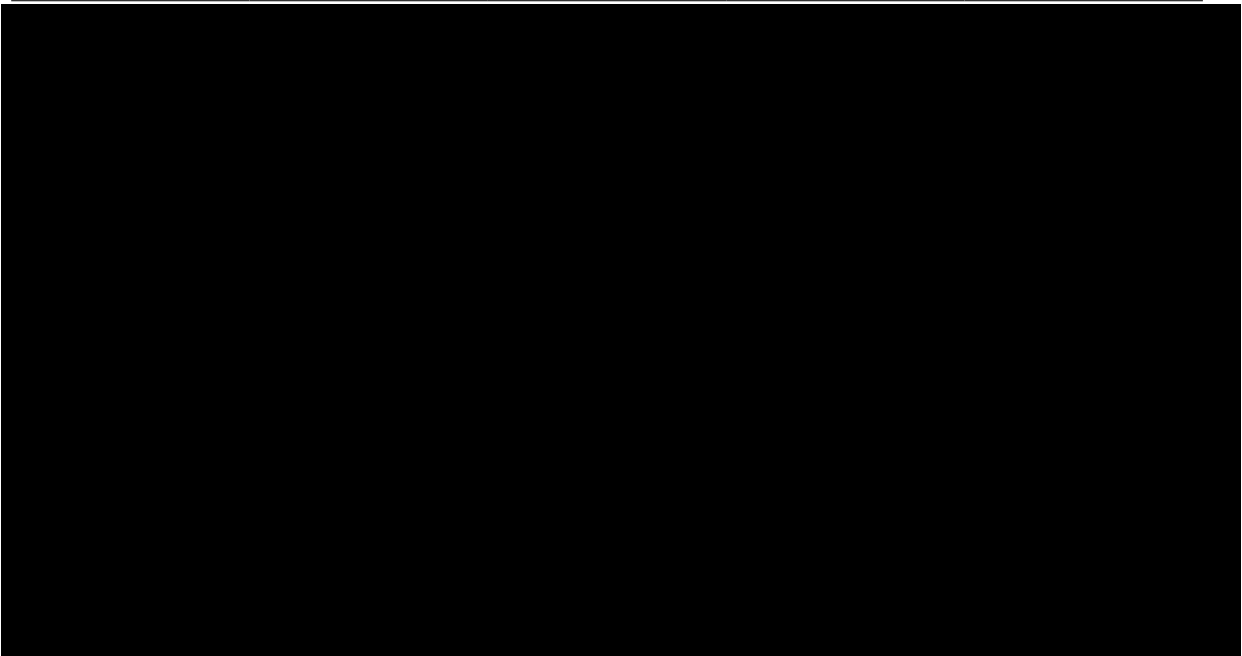
This Response Zone has been determined to meet the significant and substantial harm classification because at least one (1) line section within the response zone has met at least one of the criteria listed in 49CFR194.103(c)(1).

Worst Case Discharge (Refer to Appendix B for calculations):

▪ Potential Oil Group:	3
▪ United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Planning Volume:	27,329 Bbls



RESPONSE ZONE COMPANY CONTACTS				
POSITION/TITLE	NAME	OFFICE	HOME	CELL



Area: North Dakota, South Dakota, Nebraska

Qualified Individuals:

Qualified Individuals			
NAME	OFFICE	HOME	CELL

Alternate Qualified Individuals:

Alternate Qualified Individuals			
NAME	OFFICE	HOME	CELL

Pipeline Specifications:

The tables below list the pipeline facilities within the East Response Zone Response Zone.

Pipeline Specifications			
Location	Type of Oil	State	County
Ferney PS / Carpenter PS	Crude Oil	South Dakota	Day, Clark
Carpenter PS / Roswell PS	Crude Oil	South Dakota	Clark, Beadle, Kingsbury, Miner
Roswell PS / Freeman PS	Crude Oil	South Dakota	Miner, Hanson, McCook, Hutchinson

Freeman PS / Hartington PS	Crude Oil	Nebraska , South Dakota	Hutchinson, Yankton, Cedar
Hartington PS / Stanton PS	Crude Oil	Nebraska	Cedar, Wayne, Stanton
Stanton PS / David City PS	Crude Oil	Nebraska	Stanton, Platte, Colfax, Butler
David City PS / Wilber PS	Crude Oil	Nebraska	Butler, Seward, Saline
Wilber PS/Steele City PS	Crude Oil	Nebraska	Saline, Jefferson
Steele City / State Line	Crude Oil	Nebraska	Jefferson, Gage
US-CAN Border / Edinburg PS	Crude Oil	North Dakota	Cavalier, Pembina, Walsh
Edinburg PS / Niagara PS	Crude Oil	North Dakota	Walsh, Nelson
Niagara PS / Luverne PS	Crude Oil	North Dakota	Nelson, Steele
Luverne PS / Fort Ransom PS	Crude Oil	North Dakota	Steele, Barnes, Ransom
Fort Ransom PS / Ludden PS	Crude Oil	North Dakota	Ransom, Sargent
Ludden PS / Ferney PS	Crude Oil	North Dakota , South Dakota	Sargent, Marshall, Day

Company Owned Response Equipment:

Response Equipment		
NAME	LOCATION	DESCRIPTION
Equipment Responses Trailer		See Equipment List - Appendix A

Breakout Tanks:

Breakout Tanks			
FACILITY NAME	TANK NUMBER	CAPACITY (Bbls)	TYPE OF OIL

EXTERNAL NOTIFICATION REFERENCES Nebraska

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Cedar		
Cedar County	Hartington, Nebraska	(402) 254-7411
Cedar County (LEPC)	Hartington, Nebraska	(402) 254-7411
Cedar County Sheriff & Emergency Mgmt.	Hartington, Nebraska	(402) 254-6884
City of Hartington	Hartington, Nebraska	(402) 254-6353
Wayne		
City of Wayne	Wayne, Nebraska	(402) 375-1733
City of Wayne Electric Distribution Department	Wayne, Nebraska	(402) 375-2896
City of Wayne Fire Department	Wayne, Nebraska	(402) 375-1122
City of Wayne Police Department	Wayne, Nebraska	(402) 375-2626
City of Wayne Public Works Department	Wayne, Nebraska	(402) 375-1300
City of Wayne Water Department	Wayne, Nebraska	(402) 375-5250
Wayne County (LEPC)	Wayne, Nebraska	(402) 833-5190
Stanton		
City of Stanton	Stanton, Nebraska	(402) 439-2119
Stanton County LEPC	Stanton, Nebraska	(402) 439-2631
Stanton County Sheriff	Stanton, Nebraska	(402) 439-2212
Village of Pilger	Stanton, Nebraska	(402) 396-3563
Platte		
City of Columbus	Columbus, Nebraska	(402) 562-4224
Platte County LEPC	Columbus, Nebraska	(402) 564-1206
Platte County Sheriff	Columbus, Nebraska	(402) 564-3229
Colfax		

City of Schuyler Schools	Schuyler, Nebraska	(402) 352-3527
Colfax County	Schuyler, Nebraska	(402) 352-8502
Colfax County LEPC	Schuyler, Nebraska	(402) 352-8522
Colfax County Sheriff	Schuyler, Nebraska	(402) 352-8526
Village of Leigh	Leigh, Nebraska	(402) 487-3303
Village of Richland	Richland, Nebraska	(402) 564-0609
Butler		
Butler County First Responder / Sheriff	David City, Nebraska	(402) 367-7400
Butler County LEPC	David City, Nebraska	(402) 367-3125
David City Electric & Light Department	David City, Nebraska	(402) 367-3197
David City Park & Auditorium Department	David City, Nebraska	(402) 367-3914
David City Police Department	David City, Nebraska	(402) 367-3133
David City Power Plant	David City, Nebraska	(402) 367-3138
David City Water & Sewer Department	David City, Nebraska	(402) 367-3132
Seward		
City of Milford	Milford, Nebraska	(402) 761-3247
City of Seward	Seward, Nebraska	(402) 643-2928
City of Seward Electric Department	Seward, Nebraska	(402) 643-3151
City of Seward Fire Department	Seward, Nebraska	(402) 643-6088
City of Seward Police Department	Seward, Nebraska	(402) 643-2759
City of Seward Sheriff	Seward, Nebraska	(402) 643-2359
City of Seward Water Department	Seward, Nebraska	(402) 643-3433
Seward County	Seward, Nebraska	(402) 643-6262
Seward County LEPC	Seward, Nebraska	(402) 643-4722
Village of Bee	Bee, Nebraska	(402) 643-6247
Village of Goehner	Goehner, Nebraska	(402) 534-4311
Village of Staplehurst	Staplehurst, Nebraska	(402) 535-2507

Jefferson		
City of Fairbury	Fairbury, Nebraska	(402) 729-2476
Jefferson Co. Emergency Management Agency/Planning	Fairbury, Nebraska	(402) 729-3602
Village of Diller	Diller, Nebraska	(402) 793-5991
Village of Plymouth	Plymouth Village, Nebraska	(402) 656-3132
Saline		
City of Wilber	Wilber, Nebraska	(402) 821-2320
City of Wilber Fire Department	Wilber, Nebraska	(402) 821-2647
City of Wilber Police Department	Wilber, Nebraska	(402) 821-2201
Saline County	Wilber, Nebraska	(402) 826-2363
Saline County LEPC	Wilber, Nebraska	(402) 821-3010
Saline County Sheriff	Wilber, Nebraska	(402) 821-2111
Village of Dorchester	Dorchester, Nebraska	(402) 946-3201
Village of Swanton	Swanton, Nebraska	(402) 448-2285
Gage		
Gage County LEPC	Beatrice, Nebraska	(402) 223-1305
Gage County Sheriff / First Responder	Beatrice, Nebraska	(402) 223-1382

EXTERNAL NOTIFICATION REFERENCES North Dakota

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Cavalier		
Cavalier County	Langdon, North Dakota	(701) 256-2229
Cavalier County Fire Department	Langdon, North Dakota	(701) 256-3911
Cavalier County LEPC	Langdon, North Dakota	(701) 256-3911
Cavalier County Water Resource	Langdon, North Dakota	(701) 256-2220
Fremont Township	Walhalla, North Dakota	(701) 549-2748
Pembina		
City of Cavalier	Cavalier, North Dakota	(701) 265-8800
City of Walhalla	Walhalla, North Dakota	(701) 549-3176
Drayton, North Dakota	Drayton, North Dakota	(701) 265-4231
Pembina County	Cavalier, North Dakota	(701) 265-4231
Pembina County LEPC	Cavalier, North Dakota	(701) 265-4849
Pembina County Water Resource Board	Cavalier, North Dakota	(701) 265-4511
Walsh		
City of Grafton	Grafton, North Dakota	(701) 352-1561
City of Lankin	Lankin, North Dakota	(701) 593-6322
City of Minto	Minto, North Dakota	(701) 248-3480
City of Park River	Park River, North Dakota	(701) 284-6426
Golden Township	Park River, North Dakota	(701) 284-6846
Norton Township	Fordville, North Dakota	(701) 593-6249
Town of Norton	Park River, North Dakota	(701) 331-0810
Vesta Township	Adams, North Dakota	(701) 944-2790

Walsh County LEPC	Grafton, North Dakota	(701) 352-2311
Nelson		
Adler Township, Nelson County	Petersburg, North Dakota	(701) 345-8287
Dodds Township, Nelson County	Lakota, North Dakota	(701) 247-2279
Michigan City	Michigan, North Dakota	(701) 259-2553
Nelson County	Lakota, North Dakota	(701) 247-2463
Nelson County Fire Department	Lakota, North Dakota	(701) 247-2474
Nelson County First Responder	Lakota, North Dakota	(701) 247-2474
Petersburg Township, Nelson County	Petersburg, North Dakota	(701) 345-6134
Steele		
City of Finley	Finley, North Dakota	(701) 352-1651
Steele County	Finley, North Dakota	(701) 945-2572
Steele County LEPC	Finley, North Dakota	(701) 524-2742
Barnes		
Barnes County	Sanborn, North Dakota	(701) 646-6983
Barnes County Emergency Manager (LEPC)	Valley City, North Dakota	(701) 845-8510
Township of Alta	Valley City, North Dakota	(701) 845-2744
Township of Baldwin	Hope, North Dakota	(701) 945-2436
Township of Cuba	Valley City, North Dakota	(701) 845-0533
Township of Grand Prairie	Valley City, North Dakota	(701) 845-2544
Township of Noltimier	Valley City, North Dakota	(701) 845-3835
Township of Norma	Oriska, North Dakota	(701) 924-8629
Valley City	Valley City, North Dakota	(701) 845-1700 ext. 17
Ransom		
City of Lisbon	Lisbon, North Dakota	(701) 683-4472 Rvrsd Bldg Ctr
Ransom County LEPC	Lisbon, North Dakota	(701) 683-5823, x125
Sargent		
City of Forman	Forman, North Dakota	(701) 724-3673

Denver Township	Gwinner, North Dakota	(701) 753-7671
Jackson Township	Forman, North Dakota	(701) 724-3420
Sargent County First Responder	Forman, North Dakota	(701) 724-3302
Sargent County LEPC	Forman, North Dakota	(701) 724-6241, x113
Southwest Township	Forman, North Dakota	(701) 724-3452
Verner Township	Oakes, North Dakota	(701) 742-3711
Verner Township	Gwinner, North Dakota	(701) 753-7161

EXTERNAL NOTIFICATION REFERENCES South Dakota

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Marshall		
BDM Rural Water System, Inc.	Britton, South Dakota	(605) 448-5417
City of Britton, South Dakota	Britton, South Dakota	(605) 448-5721
Marshall County LEPC	Britton, South Dakota	(605) 448-2401
Marshall County South Dakota	Britton, South Dakota	(605) 448-2116
Mc Cook Co., SD County Emergency Management	Britton, South Dakota	(605) 425-2791
Day		
City of Webster, South Dakota	Webster, South Dakota	(605) 345-3241
Day County, South Dakota LEPC	Webster, South Dakota	(605) 345-9500
Clark		
City of Clark, South Dakota	Clark, South Dakota	(605) 532-3512
Clark County, South Dakota	Clark, South Dakota	(605) 532-5921
Clark County, South Dakota LEPC	Clark, South Dakota	(605) 532-5953
Beadle		
Beadle County, South Dakota	Huron, South Dakota	(605) 352-5010
Beadle County, South Dakota LEPC	Huron, South Dakota	(605) 353-8421
City of Huron, South Dakota	Huron, South Dakota	(605) 353-8500
Kingsbury		
City of De Smet, South Dakota	De Smet, South Dakota	(605) 854-3731
Kingsbury County Fire Department / First Responder	De Smet, South Dakota	(605) 854-3832
Kingsbury County, South Dakota	De Smet, South Dakota	(605) 854-3832
Kingsbury County, South Dakota LEPC	De Smet, South Dakota	(605) 854-3711

Miner		
Miner County Fire Department / First Responder	Howard, South Dakota	(605) 772-4671
Miner County, South Dakota LEPC	Howard, South Dakota	(605) 772-4533
Hanson		
Edgerton Township	Alexandria, South Dakota	(605) 239-4361
Hanson County Fire Department	Alexandria, South Dakota	(605) 239-4717
Hanson County, South Dakota	Alexandria, South Dakota	(605) 239-4717
Hanson County, South Dakota LEPC	Alexandria, South Dakota	(605) 239-4218
Spring Lake Township	Canova, South Dakota	(605) 523-2546
McCook		
McCook Co., SD County Emergency Management	Salem, South Dakota	(605) 425-2791
McCook County, South Dakota LEPC	Salem, South Dakota	(605) 425-2466
Hutchinson		
City of Olivet	Olivet, South Dakota	(605) 387-5596
Grandview Township	Freeman, South Dakota	(605) 925-4142
Hutchinson County, South Dakota	Menno, South Dakota	(605) 387-4217
Hutchinson County, South Dakota LEPC	Menno, South Dakota	(605) 387-5104
Molan Township	Menno, South Dakota	(605) 387-5250
Pleasant Township	Bridgewater, South Dakota	(605) 449-4669
Valley Township	Menno, South Dakota	(605) 387-5480
Yankton		
City of Yankton Fire Department	Yankton, South Dakota	(605) 668-5210
City of Yankton, Department of Public Works	Yankton, South Dakota	(605) 668-5251
City of Yankton, South Dakota	Yankton, South Dakota	(605) 668-5210
Jamesville Township	Jamesville, South Dakota	(605) 387-5756
Mission Hill Township	Mission Hill, South Dakota	(605) 665-7592
Utica Township	Utica, South Dakota	(605) 665-1341

Yankton County Fire Department	Yankton, South Dakota	(605) 668-3567
Yankton County LEPC	Yankton, South Dakota	(605) 668-5289
Yankton County, South Dakota	Yankton, South Dakota	(605) 668-3567

RESPONSE ZONE INFORMATION

Kansas, Missouri, Illinois

RESPONSE ZONE CONTACT INFORMATION

Owner Name:	TransCanada
Addresses:	Physical Address 450 - 1st Street Calgary, Alberta T2P 5H1
24 Hour Emergency Contact Phone Numbers:	1-800-447-8066 (24 Hours)
Telephone/Fax:	Telephone references, including 24 hour numbers, for the Facility, Owner, and Qualified Individual/Alternate Qualified Individual are provided in Figure 2.2.
Provinces/States Traversed:	Kansas, Missouri, Illinois
Areas/Counties Traversed:	Audrain, Bond, Brown, Buchanan, Caldwell, Carroll, Chariton, Clinton, Doniphan, Fayette, Lincoln, Madison, Marion, Marshall, Montgomery, Nemaha, Randolph, St. Charles

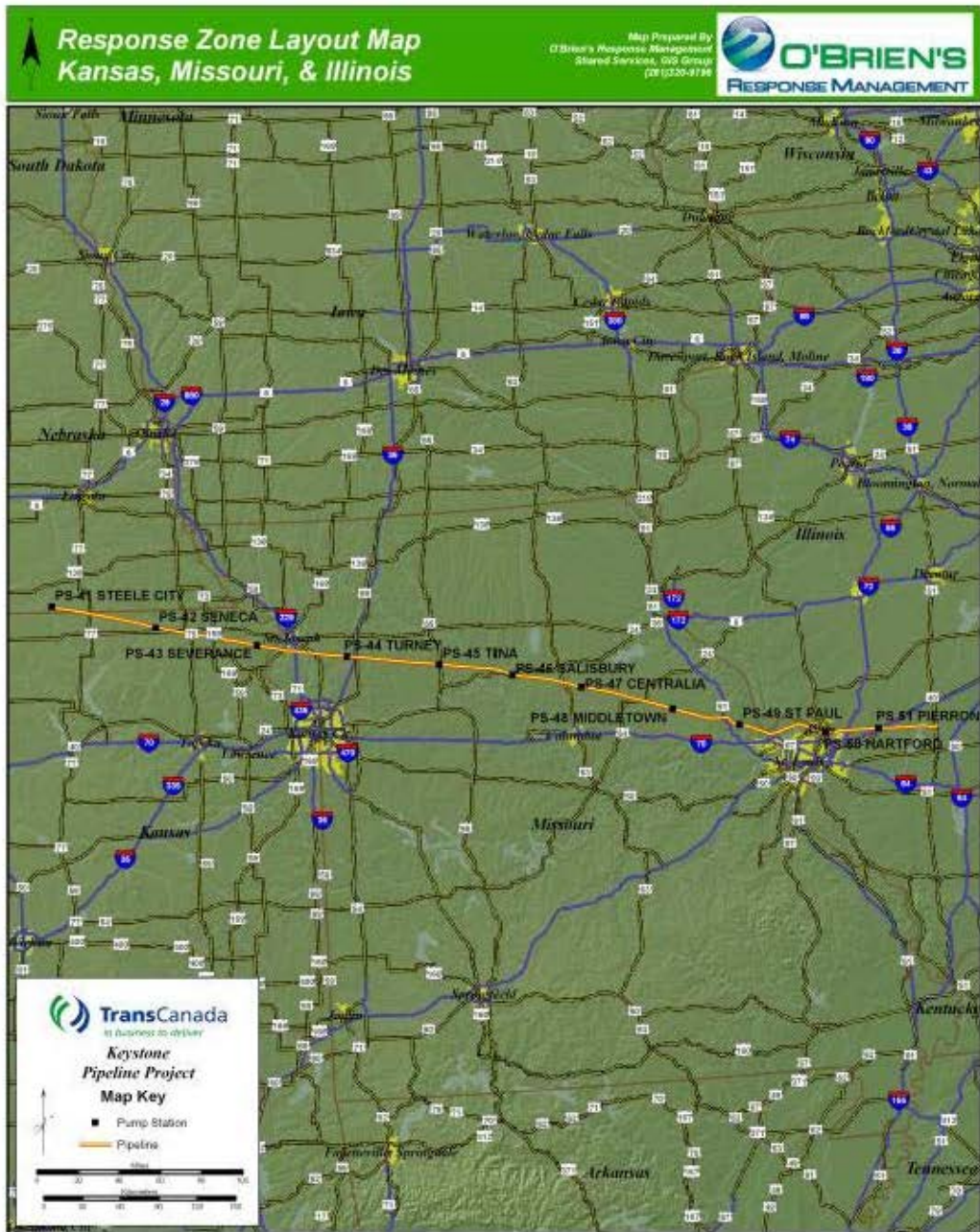
INFORMATION SUMMARY

Determination of Significant and Substantial Harm (United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration):

This Response Zone has been determined to meet the significant and substantial harm classification because at least one (1) line section within the response zone has met at least one of the criteria listed in 49CFR194.103(c)(1).

Worst Case Discharge (Refer to Appendix B for calculations):

▪ Potential Oil Group:	3
▪ United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Planning Volume:	24,069 Bbls



RESPONSE ZONE COMPANY CONTACTS				
POSITION/TITLE	NAME	OFFICE	HOME	CELL

Area: Kansas, Missouri, Illinois

Qualified Individuals:

Qualified Individuals			
NAME	OFFICE	HOME	CELL

Alternate Qualified Individuals:

Alternate Qualified Individuals			
NAME	OFFICE	HOME	CELL

Pipeline Specifications:

The tables below list the pipeline facilities within the East Response Zone Response Zone.

Pipeline Specifications			
Location	Type of Oil	State	County
State Line / Seneca PS	Crude Oil	Kansas	Marshall, Nemaha
Seneca PS / Severance PS	Crude Oil	Kansas	Nemaha, Brown, Doniphan
Severance PS / Turney PS	Crude Oil	Kansas , Missouri	Doniphan, Buchanan, Clinton
Turney PS / Tina PS	Crude Oil	Missouri	Clinton, Caldwell, Carroll
Tina PS / Salisbury PS	Crude Oil	Missouri	Carroll, Chariton

Salisbury PS / Centralia PS	Crude Oil	Missouri	Chariton, Randolph, Audrain
Centralia PS / Middletown PS	Crude Oil	Missouri	Audrain, Montgomery
Middletown PS / Saint Paul PS	Crude Oil	Missouri	Montgomery, Lincoln
Saint Paul PS / Hartford PS	Crude Oil	Illinois , Missouri	Lincoln, St. Charles, Madison
Hartford PS / Patoka Terminal	Crude Oil	Illinois	Madison, Bond, Fayette, Marion

Company Owned Response Equipment:

Response Equipment		
NAME	LOCATION	DESCRIPTION
Equipment Response Trailer		See Equipment List - Appendix A

Breakout Tanks:

Breakout Tanks			
FACILITY NAME	TANK NUMBER	CAPACITY (Bbls)	TYPE OF OIL

EXTERNAL NOTIFICATION REFERENCES

Illinois

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Madison		
City of Edwardsville	Edwardsville, Illinois	(618) 692-7520
City of Edwardsville Fire Department	Edwardsville, Illinois	(618) 692-7541
City of Edwardsville, Illinois Public Works	Edwardsville, Illinois	(618) 692-7535
City of Highland Fire Department	Highland, Illinois	(618) 654-5901
City of Wood River Fire Department	Wood River, Illinois	(618) 251-3100
Madison Co. Ambulance (Fire Dept) First Respons	Edwardsville, Illinois	(618) 692-4433
Madison Co. IL Emergency Svcs. and Disaster Agency	Edwardsville, Illinois	(618) 692-0537
Madison County	Edwardsville, Illinois	(618) 692-4482
Madison County (LEPC)	Edwardsville, Illinois	(618) 296-4482
Bond		
Bond Co. IL Emergency Svcs. and Disaster Agency	Greenville, Illinois	(618) 644-1442
Bond County (LEPC)	Greenville, Illinois	(618) 644-1442
Bond County First Responder (Fire Department)	Greenville, Illinois	(618) 664-2151
City of Greenville	Greenville, Illinois	(618) 664-1644
City of Greenville Public Works Department	Greenville, Illinois	(618) 664-1644
Village of Pocahontas	Pocahontas, Illinois	(618) 669-2431
Fayette		
City of Alton Fire Department	Alton, Illinois	(618) 463-3565
City of Vandalia Public Works Department	Vandalia, Illinois	(618) 283-1296

City of Vandalia, Illinois	Vandalia, Illinois	(618) 283-1196
Fayette County	Vandalia, Illinois	(618) 283-5000
Fayette County (LEPC)	Vandalia, Illinois	(618) 283-4292
Fayette County Ambulance / First Responder	Vandalia, Illinois	(618) 283-2141
Marion		
Army Corps of Engineers - St. Louis District	Illinois	(314) 331-8583
City of Patoka	Patoka, Illinois	(618) 432-5855
City of Salem Marion County	Salem, Illinois	(618) 548-2222
Marion Co. Ambulance (Fire Dept) / First Response	Salem, Illinois	(618) 548-2141
Marion County (LEPC)	Salem, Illinois	(618) 548-2600
Marion County Department of Environmental Quality	Salem, Illinois	(618) 692-0537

EXTERNAL NOTIFICATION REFERENCES

Kansas

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
<p>DIAL 911 for all Police, Fire and Ambulance Services.</p> <p>* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.</p>		
AGENCY	LOCATION	OFFICE / ALTERNATE
Marshall		
City of Axtell	Axtell, Kansas	(785) 736-2834
City of Beattie	Beattie, Kansas	(785) 353-2527
City of Summerfield	Summerfield, Kansas	(785) 244-6531
Marshall County LEPC First Responder	Marysville, Kansas	(785) 562-3141
Marshall County Public Works Department	Marysville, Kansas	(785) 562-5349
Nemaha		
City of Oneida Sewerage Department	Oneida, Kansas	(785) 336-3038
City of Seneca	Seneca, Kansas	(785) 336-2747
Nemaha Co. Emergency Management / First Responder	Seneca, Kansas	(785) 336-2135
Brown		
Brown County Fire Department	Hiawatha, Kansas	(785) 742-7125
Brown County LEPC	Hiawatha, Kansas	(785) 547-3415
City of Fairview	Fairview, Kansas	(785) 467-3521
City of Hamlin	Hamlin, Kansas	(785) 742-2995
City of Hiawatha	Hiawatha, Kansas	(785) 742-2967
City of Robinson	Robinson, Kansas	(785) 544-7766
Irving Township	Hiawatha, Kansas	(785) 544-6691
Mission Township	Hiawatha, Kansas	(785) 474-3564
Morrill Township	Morrill, Kansas	(785) 459-2277
Padonia Township	Hiawatha, Kansas	(785) 742-2777
Powhattan Township	Powhattan, Kansas	(785) 467-3520

Robinson Township	Robinson, Kansas	(785) 544-6831
Walnut Township	Walnut, Kansas	(785) 467-3250
Doniphan		
City of Denton	Denton, Kansas	(785) 359-6952
City of Denton Fire Department	Denton, Kansas	(785) 359-6641
City of Severance	Severance, Kansas	(785) 359-6589
City of Troy	Troy, Kansas	(785) 985-2101
Doniphan Co. Emergency Management / Zoning Dept.	Troy, Kansas	(785) 985-2229
Doniphan County Fire District No. 1	Wathena, Kansas	(785) 989-3265
Doniphan County Fire District No. 2	Highland, Kansas	(785) 359-6699
Doniphan County Fire District No. 3	Denton, Kansas	(785) 359-6715
Doniphan County Fire District No. 4	Elwood, Kansas	(913) 365-8697
Doniphan County Fire District No. 5	Troy, Kansas	(785) 985-2145
Independence Township	Independence, Kansas	(785) 988-4425
Union Township	Denton, Kansas	
Wayne Township	Troy, Kansas	(785) 985-2400
Wold River Township	Severance, Kansas	(785) 442-3775
Marion		
Army Corps of Engineers - St. Louis District	Illinois	(314) 331-8583
City of Patoka	Patoka, Illinois	(618) 432-5855
City of Salem Marion County	Salem, Illinois	(618) 548-2222
Marion Co. Ambulance (Fire Dept) / First Response	Salem, Illinois	(618) 548-2141
Marion County (LEPC)	Salem, Illinois	(618) 548-2600
Marion County Department of Environmental Quality	Salem, Illinois	(618) 692-0537

EXTERNAL NOTIFICATION REFERENCES
Missouri

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Buchanan		
Buchanan County LEPC	St. Joseph, Missouri	(816) 271-1574
City of Gower Clerk	Gower, Missouri	
City of St Joseph Council	St Joseph, Missouri	(816) 271-4640
City of St Joseph LEPC	St Joseph, Missouri	(816) 271-4603
Colony Fire District	St. Joseph, Missouri	(816) 232-5307
Dearborn Fire District, Buchanan County	Dearborn, Missouri	(816) 992-8919
Easton Fire District, Buchanan County	Easton, Missouri	(816) 262-7057
Edgerton Fire District, Buchanan County	Edgerton, Missouri	(816) 790-3362
Maxwell Heights Fire District, Buchanan County	St. Joseph, Missouri	(816) 233-4160
Rushville Fire District, Buchanan County	Rushville, Missouri	(816) 688-7900
San Antonio Fire District, Buchanan County	San Antonio, Missouri	(816) 232-1664
South Buchanan Fire District, Buchanan County	Faucett, Missouri	(816) 253-9018
Sugar Lake Fire District, Buchanan County	Rushville, Missouri	(913) 367-2655
Village of Agency Clerk	Agency, Missouri	(816) 253-9176
Village of Dekalb Clerk	Amity, Missouri	(816) 685-3305
Village of Lewis & Clark Clerk	Lewis & Clark, Missouri	(816) 579-5737
Clinton		
City of Cameron	Cameron, Missouri	(816) 632-2177
City of Cameron Fire Department	Cameron, Missouri	(816) 632-2345
City of Cameron Police Department / First Responde	Cameron, Missouri	(816) 632-6521

City of Cameron Public Works Department	Cameron, Missouri	(816) 632-2177
City of Cameron Water and Electric Department	Cameron, Missouri	(816) 632-2177
City of Lathrop	Lathrop, Missouri	(816) 740-4251
Clinton County PWSD No 1	Plattsburg, Missouri	(816) 370-2528
Clinton County PWSD No 4	Plattsburg, Missouri	(816) 580-7211
Lathrop Fire District	Lathrop, Missouri	(816) 740-3218
Osborne Fire District	Osborne, Missouri	(816) 675-2549
Plattsburg City Hall	Plattsburg, Missouri	(816) 539-2148
Plattsburg Fire District	Plattsburg, Missouri	(816) 539-3017
Stewartsville Fire District	Stewartsville, Missouri	(816) 669-3387
Village of Turney	Turney, Missouri	(816) 664-2009
Caldwell		
Caldwell County	Kingston, Missouri	(816) 586-2571
Cowgill No 1 Water District	Cowgill, Missouri	(660) 255-4421
Grant Township	Livonia, Missouri	(660) 354-2337
Rockford Township	Polo, Missouri	
Carroll		
Carroll County	Carrollton, Missouri	(660) 542-0615
Carroll County Fire Protection District No. 1	Carrollton, Missouri	(660) 542-2178
City of Carrollton	Carrollton, Missouri	(660) 542-1414
Hale Fire Protection District	Hale, Missouri	(660) 565-2212
Norborne Fire Protection District	Norborne, Missouri	(660) 594-3505
North Central Fire Protection District	Bogard, Missouri	(660) 731-5371
Stet Fire Protection District	Norborne, Missouri	(660) 484-3179
Chariton		
Chariton County, Missouri	Keytesville, Missouri	(660) 288-3200
Chariton County, Missouri LEPC/First Responder	Keytesville, Missouri	(660) 288-3277

City of Keytesville, Missouri	Keytesville, Missouri	(660) 288-3745
City of Salisbury, Missouri	Salisbury, Missouri	(660) 388-6197
Randolph		
City of Huntsville, Missouri	Huntsville, Missouri	(660) 277-3110
City of Moberly, Missouri Public Works	Moberly, Missouri	(660) 269-8705
Randolph County County Government	Huntsville, Missouri	(660) 277-4714
Randolph County LEPC	Huntsville, Missouri	(573) 564-2283
Audrain		
Audrain County, Missouri	Mexico, Missouri	(573) 473-5822
Audrain County, Missouri LEPC	Mexico, Missouri	(660) 582-8183
City of Mexico, Missouri	Mexico, Missouri	(573) 581-2100
Montgomery		
City of Montgomery, Missouri	Montgomery City, Missouri	(573) 564-3160
Montgomery County	Montgomery City, Missouri	(573) 564-8084
Montgomery County LEPC	Montgomery City, Missouri	(573) 564-2283
Lincoln		
Lincoln County Fire Protection District	Troy, Missouri	(636) 528-8567
Lincoln County, Missouri	Troy, Missouri	(636) 528-6300
Lincoln County, Missouri LEPC	Troy, Missouri	(636) 528-6182
St. Charles		
Central County Fire & Rescue	St. Peters, Missouri	(636) 970-9700
City of O'Fallon, Missouri	O'Fallon, Missouri	(636) 379-5500
City of St. Charles City/Municipal Government	St. Charles City, Missouri	(636) 949-3260
City of St. Charles Fire Department	St. Charles, Missouri	(636) 949-3250
City of St. Peters, Missouri	St. Peters, Missouri	(636) 477-9920
Dardenne Prairie Township	O'Fallon, Missouri	(636) 300-0014
O'Fallon Fire Protection District	O'Fallon, Missouri	(636) 272-3493

O'Fallon Township	O'Fallon, Missouri	(636) 978-4144
St. Charles County First Responder	St. Charles, Missouri	(636) 949-1818
St. Charles County Government	St. Charles, Missouri	(636) 949-7455
St. Charles County LEPC	St. Charles, Missouri	(636) 949-3023
Wentzville Fire Protection District	Wentzville, Missouri	(636) 327-6239
Wentzville Township	Wentzville, Missouri	(636) 332-5101

RESPONSE ZONE INFORMATION

Cushing Extension

RESPONSE ZONE CONTACT INFORMATION

Owner Name:	TransCanada
Addresses:	Physical Address 450 - 1st Street Calgary, Alberta T2P 5H1
24 Hour Emergency Contact Phone Numbers:	1-800-447-8066 (24 Hours)
Telephone/Fax:	Telephone references, including 24 hour numbers, for the Facility, Owner, and Qualified Individual/Alternate Qualified Individual are provided in Figure 2.2.
Provinces/States Traversed:	Kansas, Nebraska, Oklahoma
Areas/Counties Traversed:	Butler, Clay, Cowley, Dickinson, Jefferson, Kay, Lincoln, Marion, Noble, Payne, Washington

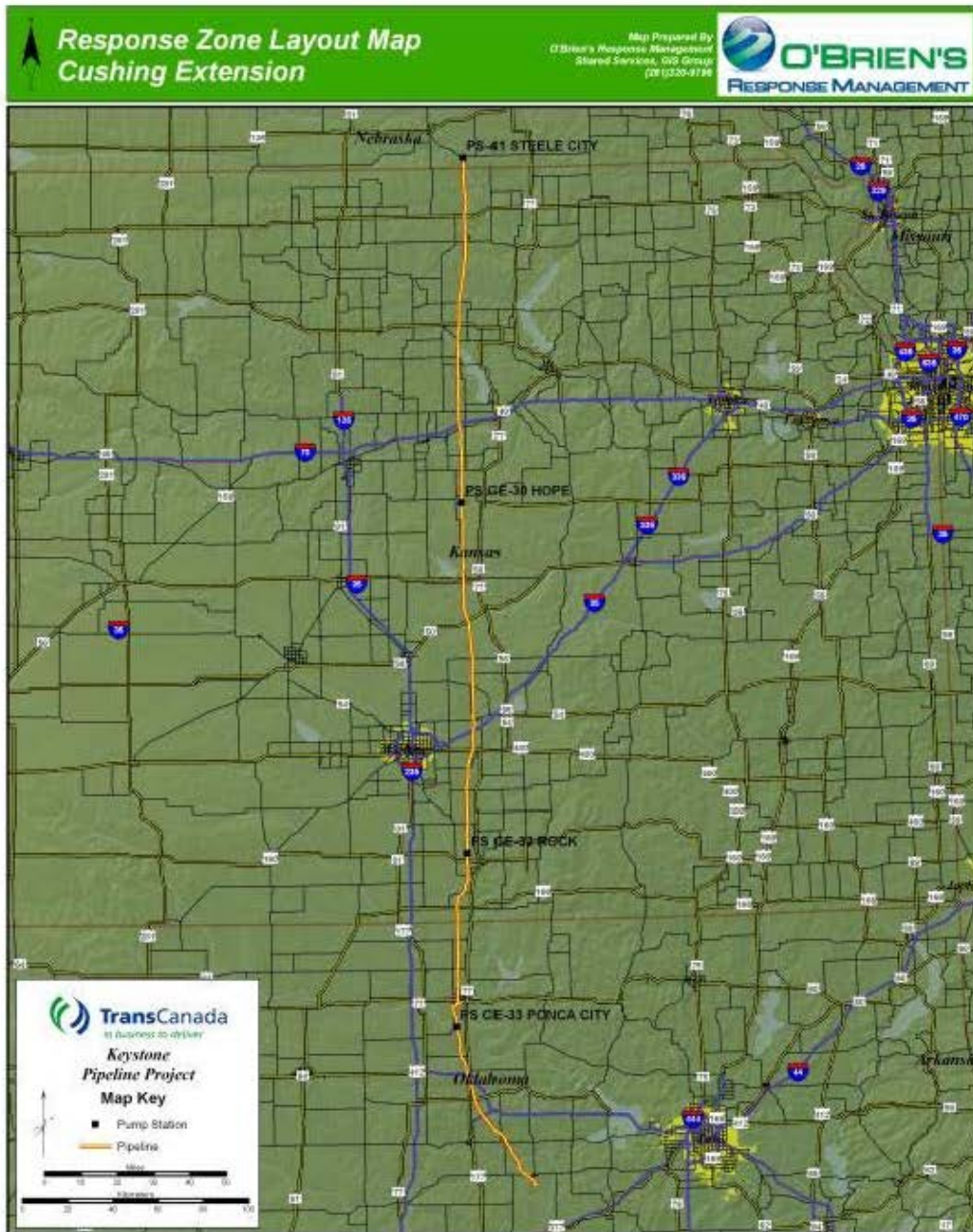
INFORMATION SUMMARY

Determination of Significant and Substantial Harm (United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration):

This Response Zone has been determined to meet the significant and substantial harm classification because at least one (1) line section within the response zone has met at least one of the criteria listed in 49CFR194.103(c)(1).

Worst Case Discharge (Refer to Appendix B for calculations):

▪ Potential Oil Group:	3
▪ United States Department of Transportation/Pipeline and Hazardous Materials Safety Administration Planning Volume:	32,265 Bbls



RESPONSE ZONE COMPANY CONTACTS				
POSITION/TITLE	NAME	OFFICE	HOME	CELL

Area: Cushing Extension Area

Qualified Individuals:

Qualified Individuals			
NAME	OFFICE	HOME	CELL

Alternate Qualified Individuals:

Alternate Qualified Individuals			
NAME	OFFICE	HOME	CELL

Pipeline Specifications:

The tables below list the pipeline facilities within the East Response Zone Response Zone.

Pipeline Specifications			
Location	Type of Oil	State	County
Station Steele City / Hope PS	Crude Oil	Kansas , Nebraska	Jefferson, Washington, Clay, Dickinson
Hope PS / Rock PS	Crude Oil	Kansas	Marion, Dickinson, Butler, Cowley
Rock PS / Ponca City PS	Crude Oil	Kansas , Oklahoma	Cowley, Kay

Ponca City PS / Cushing Extension	Crude Oil	Oklahoma	Kay, Noble, Payne

Company Owned Response Equipment:

Response Equipment		
NAME	LOCATION	DESCRIPTION
Equipment Response Trailer		See Equipment List - Appendix A

Breakout Tanks:

Breakout Tanks			
FACILITY NAME	TANK NUMBER	CAPACITY (Bbls)	TYPE OF OIL

EXTERNAL NOTIFICATION REFERENCES

Kansas

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Marion		
City of Marion Fire Department	Marion, Kansas	(620) 382-3833
Lost Springs Fire Dept.	Lost Springs, Kansas	(785) 983-4410
Marion County EMS	Marion, Kansas	(620) 382-6271
Marion County Environmental Dept.	Marion, Kansas	(620) 382-2550
Marion County LEPC	Marion, Kansas	(620) 382-2144
Marion County Sheriff	Marion, Kansas	(620) 382-2144
Washington		
City of Linn Fire Department	Linn, Kansas	(785) 348-5373
Hanover Fire Department	Washington, Kansas	(785) 325-2293
Hanover Hospital	Hanover, Kansas	(785) 337-2214
Washington County LEPC	Washington, Kansas	(785) 325-2924
Washington County Sheriff	Washington, Kansas	(785) 325-2293
Washington Hospital	Washington, Kansas	(785) 325-2211
Clay		
Clay Center Fire Dept.	Clay Center, Kansas	(785) 632-5606
Clay County (First Responder)	Kansas	
Clay County Ambulance Service	Clay Center, Kansas	(785) 632-2166
Clay County Health Dept.	Clay Center, Kansas	(785) 632-3193
Clay County LEPC	Clay Center, Kansas	(785) 632-2166
Clay County Sheriff	Clay Center, Kansas	(785) 632-5601
Milford Fire Dept.	Milford, Kansas	(785) 463-5490
Dickinson		

City of Abilene Fire Dept.	Abilene, Kansas	(785) 263-1121
City of Enterprise Fire Dept.	Enterprise, Kansas	(785) 263-8323
Dickinson County Emergency Management	Abilene, Kansas	(785) 263-3608
Dickinson County EMS	Abilene, Kansas	(785) 263-0716
Dickinson County Environmental Services	Abilene, Kansas	(785) 263-4780
Dickinson County LEPC	Abilene, Kansas	(785) 263-1121
Dickinson County Sherriff	Abilene, Kansas	(785) 263-4081
Herrington Fire Dept.	Herrington, Kansas	(785) 258-3020
Butler		
Augusta Fire Dept.	Augusta, Kansas	(316) 775-4500
Butler County (LEPC)	Augusta, Kansas	(316) 733-9796
Butler County Emergency Communications	El Dorado, Kansas	(316) 322-4207
Butler County EMS	El Dorado, Kansas	(316) 321-9264
Butler County Fire District No. 3	Rose Hill, Kansas	(316) 776-0401
Butler County Sherriff	El Dorado, Kansas	(316) 322-4254
El Dorado Fire Department	El Dorado, Kansas	(316) 321-9100
Towanda Fire Department	Towanda, Kansas	(316) 541-2373
Cowley		
Arkansas City Fire Department	Arkansas City, Kansas	(620) 441-4430
Arkansas City Police Dept.	Arkansas City, Kansas	(620) 441-4444
Cowley County (LEPC)	Winfield, Kansas	(620) 221-0470
Winfield Ambulance Service	Winfield, Kansas	(620) 221-2300
Winfield Fire Department	Winfield, Kansas	(620) 221-5560
Winfield Police Dept.	Winfield, Kansas	(620) 221-5555

EXTERNAL NOTIFICATION REFERENCES

Nebraska

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Butler		
Augusta Fire Dept.	Augusta, Kansas	(316) 775-4500
Butler County (LEPC)	Augusta, Kansas	(316) 733-9796
Butler County Emergency Communications	El Dorado, Kansas	(316) 322-4207
Butler County EMS	El Dorado, Kansas	(316) 321-9264
Butler County Fire District No. 3	Rose Hill, Kansas	(316) 776-0401
Butler County Sherriff	El Dorado, Kansas	(316) 322-4254
El Dorado Fire Department	El Dorado, Kansas	(316) 321-9100
Towanda Fire Department	Towanda, Kansas	(316) 541-2373
Jefferson		
Fairbury Clinic	Fairbury, Nebraska	(402) 729-3361
Fairbury Fire Department		(402) 729-3761
Jefferson County Ambulance	Fairbury, Nebraska	(402) 729-3304
Jefferson County Emergency Management	Fairbury, Nebraska	(402) 729-3602
Jefferson County LEPC	Beaumont, Texas	
Jefferson County Sheriff	Beaumont, Texas	
Lincoln		

EXTERNAL NOTIFICATION REFERENCES
Oklahoma

OTHER POTENTIAL REQUIRED NOTIFICATIONS		
DIAL 911 for all Police, Fire and Ambulance Services.		
* Calls to 911 concerning petroleum spills will usually alert LEPC; however, it is advisable to notify them directly for any spill that requires a 911 notification.		
AGENCY	LOCATION	OFFICE / ALTERNATE
Kay		
Kay County (LEPC)	Ponca City, Oklahoma	(580) 362-2517
Kay County Emergency Management	Newkirk, Oklahoma	(580) 362-3825
Kay County Sheriff's Office	Newkirk, Oklahoma	(580) 362-2517
Newkirk Ambulance Service	Newkirk, Oklahoma	(580) 362-3131
Newkirk Fire Dept.	Newkirk, Oklahoma	(580) 362-3606
Ponca City Fire Dept.	Ponca City, Oklahoma	(580) 767-0368
Noble		
City of Perry Fire Dept.	Perry, Oklahoma	(580) 336-9755
Marland Fire Dept.	Marland, Oklahoma	(580) 268-3468
Morrison Fire Dept.	Morrison, Oklahoma	(580) 724-3535
Noble County (LEPC)	Perry, Oklahoma	(580) 336-3517
Noble County Sherriff	Perry, Oklahoma	(580) 336-2141
Payne		
City of Stillwater Fire Dept.	Stillwater, Oklahoma	(405) 742-8308
Cushing City Ambulance	Cushing, Oklahoma	(918) 225-1790
Cushing Fire Dept.	Cushing, Oklahoma	(918) 225-3361
Payne County (LEPC)	Stillwater, Oklahoma	(405) 372-0497
Payne County Sherriff	Stillwater, Oklahoma	(405) 372-4522

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