OP Reno LLC

Sparks Terminal Emergency Response Plan

Manual No:

Assigned To:

Information Summary

Plan Identification

Sparks Terminal Emergency Response Plan OP Reno Facility Response Plan - PHMSA Sequence Number OPN0

Name and Address of Operator

Owner	OP Reno LLC 525 Nugget Avenue Sparks, NV 89431
Operator	OP Reno LLC 525 Nugget Avenue Sparks, NV 89431

Qualified Individual

The qualified individual for OP Reno LLC may be contacted on a 24 hour basis via the company emergency number at:

775-745-5273

The following English speaking representative(s) of the operator, located in the United States have been identified as qualified individual, as defined under 49 CFR 194.5.

	Name	Position	Office	Cell
Primary QI	Frank Padilla	Terminal Manager	775-331-5420 775-331-9068 (Fax)	775-745-5273
Alternate QI	Lee Bonham	Terminal Operator	775-331-5420 775-331-9068 (Fax)	775-745-5290

Determination of Significant and Substantial Harm

The OP Reno LLC Sparks Terminal meets the definition for "Significant and Substantial Harm" because it meets at least one of the criteria listed in 194.103(c)(1) – (5). Therefore, a response plan per 49 CFR 194 must be submitted for this facility.

Response Zone Description

A single response zone is defined for this response plan, which encompasses the Sparks Storage Terminal owned and operated by OP Reno LLC. Particulars of this response zone are as follows:

Response Zone	States	Counties
Sparks Storage Terminal	Nevada	Washoe

(b) (7)(F)

[redacted]

Operator Certification

The undersigned, representing the operator, states that he has read the following document and knows the contents of it, and that all of the statements contained in that document are true and correct, to the best of his knowledge and belief.

OP Reno LLC also certifies that the necessary internal or external personnel and equipment have been obtained, through contract or other approved means, to respond to the maximum extent practicable to a worst case discharge or the substantive threat of such a discharge.

John Niemi
LLC Manager, OP Reno LLC

11/15/2010
Date

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REVISION RECORD

Information contained in the hardcopy version of the OP Reno LLC Sparks Terminal Emergency Response Plan will be updated periodically to ensure that procedures and references contained in the plan remain current. Revision sets will be issued to plan holders of record, which will be required to be inserted into this copy of the Emergency Response Plan.

Revision Requirements

Record that you have revised this copy of the Sparks Terminal Emergency Response Plan, after pages have been inserted, in the appropriate area indicated below:

- Please discard all old pages which have been removed from the plan to eliminate confusion regarding which information is correct
- Notify the person who sent you the revision, if you note that a previous revision is missing (eg. You have received revision 2, but revision 1 is not indicated to have been received in the revision record below)

Revision No.	Date of Revision	Initials	Comments (if required)
0	July 15, 2010	JRN	1st edition of plan issued
1	August 9, 2010	JRN	Revision issued to address PHMSA Questionnaire requirements
2	November 15, 2010	JRN	Revision issued to clarify reporting requirements identified in Section 2 Added Sequence Number to Info Summary
3			
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Sparks Terminal Emergency Response Plan
Revision Request Form

(Photocopy this form for submission and retain original in plan)

Requested By:		**Date:**	
Telephone No:		**Agency / Company/ Department (if request is from outside company)**	

Section *(or new)*	**Page No.** *(or new)*	**(A)ddition (C)orrection (D)eletion (O)ther**	**Briefly describe required revision** (attach separate sheet if required)
			Or See Attachment #
			Or See Attachment #
			Or See Attachment #
			Or See Attachment #
			Or See Attachment #
			Or See Attachment #
			Or See Attachment #

___ Additional Revision Request Pages Attached

Please forward revision request to:	LLC Manager OP Reno LLC 1331 Christine Avenue, Ste 100 St. Louis, MO 63131.

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Section 1 – General Information

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SECTION 1 – GENERAL INFORMATION

1.1 Plan Purpose

OP Reno LLC (also referred to as OP Reno or OPR within the text of this response plan) terminal emergency response personnel shall use this Emergency Response Plan during an actual emergency or oil spill. This action plan contains information necessary to combat the spill and is arranged to ensure that initial response actions are not delayed.

The information and procedures are designed to help company employees respond to an incident in a manner that reduces damage to property and the environment. Actual circumstances will vary and will dictate the procedures to be followed, some of which may not be included in this plan.

This Plan and referenced documents have been compiled in accordance requirements listed under 49 CFR Part 194, related to contingency plans for on-shore pipeline facilities. A cross-reference index to the guidelines issued for the pipelines compliance with the appropriate 49 CFR 194 requirements is included in Appendix B of the Emergency Response Plan.

1.2 Facility Description

This Emergency Response Plan (ERP) covers terminaling facilities owned and operated by OP Reno LLC within the state of Nevada in the United States.

The location of the terminal is as follows:

Address: Sparks Terminal
525 Nugget Avenue
Sparks, Nevada 89431

(b) (7)(F)

The terminal operates as a bulk petroleum fuel storage and distribution facility only (NAICS Code 424710), providing breakout tankage for the on-shore pipelines identified below. No on-shore pipelines are owned by the company. Pipeline transport to the Sparks facility is undertaken by Kinder Morgan, while transport from the facility is undertaken by Buckeye Partners L.P. Additionally, vehicle tanker loading is also undertaken at the facility. (See Figure 1.1 for the Sparks Terminal Site Plan)

The terminal has approximately (b) (7)(F) of petroleum storage in 7 aboveground storage tanks (AST's), as well as additional storage of other materials, in both aboveground and underground storage tanks, as follows:

Table 1.1 – Storage Tank Summary – OP Reno LLC Sparks Terminal

Aboveground Petroleum			(b) (7)(F)
Tank No.	**Substances Stored**	**Tank Type/Year**	
8001	ULSD	Int. Floater / 1960	
8003	ULSD	Ext. Floater / 1960	
12002	ULSD	Ext. Floater / 1960	
12004	ULSD	Cone / 1960	
12005	ULSD	Int. Floater / 1977	
25007	Jet-A	Int. Floater / 1988	
25008	Jet-A	Int. Floater / 1988	
Other			
Tank No.	**Substances Stored**	**Tank Type/Year**	
95	Transmix	Aboveground	
96	PCW	Underground	
97	Knock Out	Underground	
98	Gas Additive	Underground	

(b) (7)(F)

[redacted]

Products contained on site at the Sparks Terminal include the following:

Table 1.2 – Product Storage – OP Reno LLC Sparks Terminal

Substances Stored	Receipt Method	Delivery Method
Ultra Low Sulfur Diesel (ULSD)	Received from the Kinder Morgan P/L	Delivered into truck transports at the terminal loading rack.
Jet-A (Turbine Fuel)	Received from the Kinder Morgan P/L	Delivered into truck transports at the loading rack and pumped to the Reno Airport via the WesPac P/L

Table 1.3 – Other Materials - OP Reno LLC Sparks Terminal

Petroleum Contact Water (PCW)	Generated from rainwater	Removed from the facility via vac trucks and disposed with Reno Oil Drain Service, local licensed waste handler
Transmix	Refined product interface generated by the receipt of pipeline batches. Generated from the Kinder Morgan P/L interface on Jet-A and ULSD product P/L receipts	Removed from the facility by truck transport and processed at a transmix distillation facility
Gas Additive (Intake Valve Deposit Detergent Additive)	Received via truck at the facility	Injected into the product as it is dispensed into truck transports

Estimated volumes of material involved in transfer operations at the Sparks Terminal averages 2,000 barrels per day. Internal transfers are routinely conducted through the terminal's fixed piping and manifold systems. The average transfer rate is 30,000 barrels, with a normal throughput of 1,800 to 2,500 barrels per hour.

On-Shore Pipeline Facilities

Tanks 25007 and 25008 receive Jet-A (Turbine Fuel/Kerosene) from the Kinder Morgan P/L (also known as the North Line or SFPP, L.P.). This pipeline system originates at the refineries in the San Francisco Bay area, specifically Richmond / Concord within the state of California.

Tanks 25007 and 25008 then deliver the Jet-A in two methods, via reinjection into a pipeline system and via a truck loading rack.

The WesPac Pipeline is the 3 mile pipeline which transports Jet-A to the Reno/Tahoe International Airport. This pipeline is owned by Buckeye Partners, L.P. (WesPac Pipelines-Reno, LLC is a subsidiary of Buckeye).

Tanker Delivery Facilities

The deliveries from Tanks 25007 and 25008 to the truck rack are either Jet-A fuel for vehicular transport to the Reno Airport or other Airports in the area, or Kerosene, which is used as heating fuel.

The other tanks in the facility are 8001, 12002, 8003, 12004, and 12005. These tanks store Ultra Low Sulfur Diesel Fuel (ULSD), and all receive their product as a final pipeline delivery point, via the Kinder Morgan P/L for distribution via the truck loading rack.

The bulk of the fuel contained in these tanks is used for on-road diesel fuel and is delivered to Nevada retail locations. Some of this fuel may be dyed diesel fuel and delivered into truck transports for delivery in off-road applications, mainly the mines in central Nevada.

Other Site Facilities

The Sparks Terminal Site has three (3) (b) (7)(F) underground process tanks on-site, all associated with the tanker loading process.

Tank 96 is a PCW or petroleum contact water/slop tank. Tank 97 is a KO or knock out tank for the vapors/liquids generated from loading truck transports at the loading rack. Tank 98 is for Gas Additive or intake valve deposit detergent additive for injection into gasoline loaded into truck transports at the truck loading rack.

One other aboveground tank (Tank 95) is present on site, utilized for the storage of Transmix. Transmix consists of the pipeline interface between the Ultra Low Sulfur Diesel fuel and the Jet-A fuel which is a high sulfur product, which, due to mixing within the pipeline, is off spec for retail use. This tank has a capacity of (b) (7)(F)

Control of Site Operations

Local control of Tanker loading is undertaken at the Sparks Terminal itself.

1.3 Plan Scope

This Plan is prepared in English as required under 49 CFR 194.107 (b). Individuals required to respond to a discharge as described under this plan speak English, the plan is developed in no other language.

This Plan outlines information for response to incidents that could occur within the terminaling facility. Techniques and response procedures are included for spills onto land and water. OP Reno LLC will operate within the guidelines of the Incident Command System in unified command with the appropriate state and federal agencies, as required. This ICS and Tiered response system is discussed in greater detail in Section 3 of this Plan.

This manual contains:

- An Information Summary
- General Information, Review and Update Procedures
- Notification Procedures
- Spill Detection and On-Scene Spill Mitigative Procedures
- Response Activities
- Contact Lists
- Training Procedures
- Drill Procedures
- Information on Worst Case Discharge and Response to an Incident of this Nature
- Reference Information related to the Response Zone

1.4 Administrative Procedures

Update Procedures

The owner/operator of the terminal will periodically update this plan based on lessons learned through an exercise or response to an actual incident. The procedures for critiquing an actual or simulated response are as follows:

Post Discharge Review Procedures

After the initial emergency of a discharge has passed, a review committee will be formed. This committee will consist of the representatives of the terminal operator, the cleanup contractor and all agencies that participated in the cleanup effort.

This committee will review the cause of the discharge and the effectiveness of the response procedures taken. The committee will assess the effectiveness of this plan in minimizing the impact of the discharge to the environment. Appropriate recommendations will be made for any additional measures needed to either prevent or reduce the impact of future discharges. Appropriate personnel who will then determine whether revising this plan is appropriate will then review these recommendations.

Response Critique and Plan Review and Modification Process

This plan shall be reviewed annually to ensure that it is representative of terminal operations and to reflect changes in procedures, response strategies, phone numbers, or regulatory mandates.

The plan will be submitted to the Pipeline Hazardous Materials Safety Administration (PHMSA) and required applicable EPA region, State and/or Local Agencies to obtain written approval every five years from the date of the last written approval. Each plan submittal will be prepared in accordance with the most recent Area Contingency Plan (the plan in effect six months before submittal).

Plan review and modifications will be initiated and coordinated by the Manager, LLC, as required, with input from other key personnel, as appropriate.

Should conditions arise which require immediate revision to the Emergency Response Plan, a copy of the changes shall be forwarded to the appropriate government agencies.

Examples of changes to this plan which require immediate revision can include but not be limited to:

- New pipeline construction or purchase
- A change in facility configuration that materially alters the information included in the plan, such as a change to the WCD volume.

- A change in the type of oil handled, stored, or transferred that materially alters the required response resources.
- A material change in capabilities of contracted OSRO's (oil spill removal organizations) that provide equipment and personnel to respond to discharges of oil.
- A material change in the pipelines spill prevention and response equipment or emergency response procedures.
- A change in the National Contingency Plan (NCP) or appropriate Area Contingency Plan (ACP) that has significant impact on the equipment appropriate for response activities.
- Change in Qualified Individuals, as identified within then plan.
- Any other changes that materially affect the full implementation of the Plan (e.g.), including.
    - Recommendations from Post- Exercise reviews, and
    - Recommendations resulting from Post-Incident Reviews

Any updates or changes to the plan should be submitted to the LLC Manager, by completing the Revision Request Form located at the front of the plan.

Post Incident /Drill Reviews:

Any identified or needed changes resulting from post incident or post drill evaluations must be communicated to the LLC Manager, who is responsible for incorporating those changes into the plan. The person who leads the evaluation will be responsible for submitting the requested changes to the LLC Manager using the procedure as described above.

Plan Distribution

As per requirements identified in 49 CFR 194.111(a), OP Reno LLC shall maintain relevant portions of its response plan at the operator's headquarters and at other locations from which response activities may be conducted.

Also, as identified in 49CFR194.111 (b) a copy of this response plan shall be provided to each qualified individual.

1.5 Regulatory Requirements

Interface and Consistency with Other Plans

Response to a spill may require coordination of company departments, outside agencies, and response contractors. As per requirements identified in 49 CFR 194.107(b), the operator of the pipelines addressed within this Plan has reviewed the applicable plans as listed below:

National Contingency Plan, Publication 9200.2-14

EPA Region IX Regional Contingency Plan

Under section 1005.02.2(b) the following Inland Zone Area Contingency Plan is identified, which is applicable to operations at the Sparks Terminal site:

- **Truckee River Geographic Response Plan**

This Plan is consistent with the requirements of the current outside agency contingency plans listed above. As changes occur in the federal, state and local plans, the Company will make necessary changes to its plan to remain consistent and compatible with these plans.

Regulatory References

FEDERAL REQUIREMENTS

Clean Water Act Section 311 - Reporting requirements for discharge of hydrocarbons.

Superfund Amendments and Reauthorization Act (SARA), Title III - Requirements related to emergency planning and notification.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Title I – Reportable quantities, reporting requirements, and response authorities for hazardous substances in the United States. Establishes requirements for the federal National Contingency Plan (NCP), under section 105.

15 CFR 990 – Requirements for a Natural Resources Damage Assessment (NRDA) for oil spills.

29 CFR 1904.8 – Rules governing the reporting of fatalities or multiple hospitalizations of employees as a result of work-related incidents.

Hazardous Waste Operations and Emergency Response Personnel Training (HAZWOPER) (29 CFR 1910.120 (q)) - Training standards in emergency response operations for all employees expected to respond to emergencies

33 CFR 153 Subpart B – Requirements for immediate telephone notification to the National Response Center of any spill reaching surface water.

40 CFR 300 – Emergency requirements set out under the U.S. National Contingency Plan (NCP).

40 CFR 302 – establishes the EPA Title III List of Lists outlining Federal EPA guidelines for reportable quantity of hazardous wastes.

The Oil Pollution Act of 1990 (OPA90) 49 CFR 194 Subpart B - Rules governing on-shore pipeline facility preparation of response plans.

Transportation of Hazardous Liquids By Pipeline, 49 CFR 195 - Rules governing safety standards and the reporting requirements for pipeline facilities used in the transport of hazardous liquids or carbon dioxide, and requirements for a pipeline integrity management program for areas defined as High Consequence Areas (HCA's).

Additional guidance related to federal requirements is also found in the following documentation:

National Preparedness for Emergency Response Exercise Program (PREP) Guidelines published by the U.S. Coast Guard.

Integrated Contingency Plan Guidance published by the U.S. National Response Team (NRT)

NEVADA REQUIREMENTS

Nevada Revised Statutes - Chapter 459 – outlines requirements for responding to spills accidents and incidents involving hazardous materials within the State of Nevada. Establishes the State Emergency Response Commission (SERC).

1.6 Relationship to Other Facility Documents

Other internal Company response plans, operating plans, and manuals exist which apply to incidents at the Sparks Terminal site. These include:

- **Sparks Terminal Spill Prevention Control and Countermeasures Plan (SPCC)**
- **Sparks Terminal Facility Specific Response Plan (FRP)** (as per 40 CFR 112.20(h)
- **Material Safety Data Sheets (MSDS)**

Written hard copies of the plans and documentation above will be maintained at the Sparks Terminal for use as needed. Additional electronic copies of appropriate documents will also be maintained in appropriate databases within the organization.

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Section 2 - Notification and Reporting

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SECTION 2 – NOTIFICATION AND REPORTING

2.1 Notification and Reporting Policies

OP Reno LLC is committed to providing prompt and effective response to all emergencies affecting the Sparks terminal facility. A key element in this process is implementation of effective notification and reporting procedures.

Two types of notification and reporting are required in any emergency:

- **internal company reporting**, on a 24 hour basis, to ensure that appropriate personnel are notified and required resources, both internal and external, are mobilized quickly to deal with an incident, and

- **external reporting to appropriate agencies** in compliance with government legislation

All company personnel shall be familiar with the internal company notification process, and understand their responsibilities to report immediately any emergency condition discovered, to ensure that proper internal contacts and call down procedures are implemented.

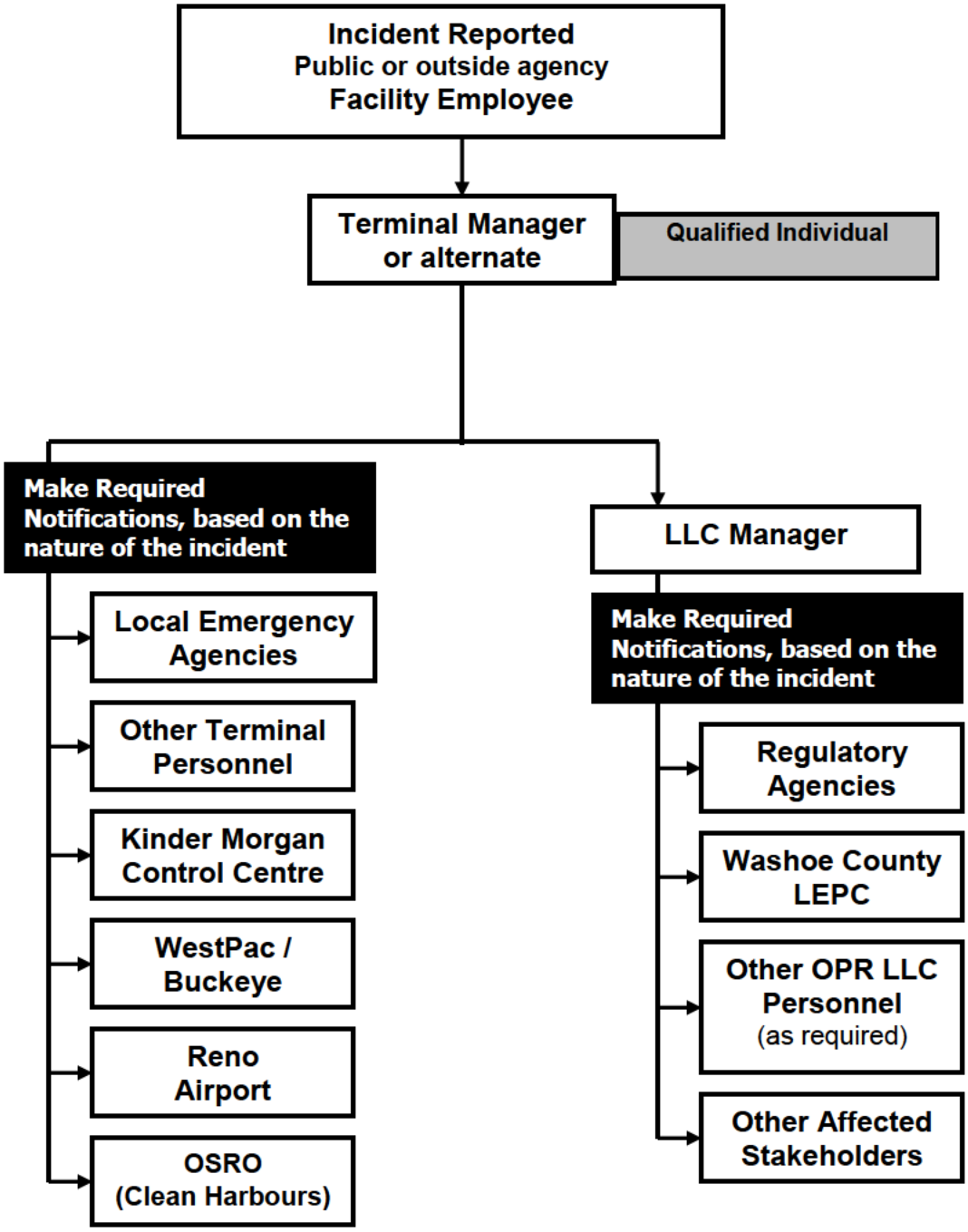
Once internal reporting procedures have been implemented, other appropriate response actions will be undertaken, as outlined in the Emergency Response Plan.

2.2 Internal Notification Sequence

General Responsibilities

OP Reno LLC personnel may be required to function in various key roles in the emergency notification process. A general flowchart outlining internal reporting for both pipeline systems is presented in Figure 2.1 and a summary of responsibilities is given in Table 2.1 below. All personnel with emergency reporting responsibilities should be familiar with requirements related to their position.

Figure 2.1 – Internal Company Notification and Reporting



For major emergencies or spills, and all spills into water, immediate notification via telephone or cell phone is required. For minor spills or upsets, notification via telephone or e-mail should be undertaken in a timely manner. **WHEN IN DOUBT – REPORT IMMEDIATELY!**

Table 2.1 – Personnel Notification Responsibilities

Position or Location	Role	Reporting Responsibility
Company Personnel	Initiate company internal reporting procedures, based on a report of a suspected emergency from an external source (landowner, public, other company, police, etc.) or the discovery of an emergency during normal work activities	▪ Record information related to the incident ▪ Provide any required safety instructions to persons reporting the emergency
LLC Manager	Initiates additional management and corporate support related to the emergency Files a verbal or written report, in compliance with government legislation, if a confirmed incident meets or exceeds applicable reporting criteria.	▪ Receives and records information received from the **Terminal Manager** or from other personnel on **Spill Response Notification Form (Form 1 Appendix C)** or receives copy of form from Terminal Manager ▪ Notifies and continues to update the following individuals or groups, as appropriate, based on the nature of the emergency – **Other OPR LLC personnel** – **Other Affected Stakeholders** ▪ Contacts appropriate **Regulatory Agencies**, based on the location and nature of the emergency, including National Response Center (NRC). ▪ Initiates **Local Emergency Planning Committee (LEPC) contacts**,as required based on location of the incident ▪ Provides additional support to response organizations, as required or requested

Table 2.1 – Personnel Notification Responsibilities cont'd

Position or Location	Role	Reporting Responsibility
Terminal Manager or Designate	Confirms the nature and location of the incident, and coordinates field response activities related to the incident. **Serves as the Incident Commander** for a major incident **Functions as the Qualified Individual** for emergencies in the United States.	▪ Receive information from company personnel, external callers or other sources related to an emergency condition ▪ Obtain necessary information and complete the **"Spill Response Notification Form" (see Form 1, Appendix C)** ▪ Calls **other Terminal Personnel** and requests that they proceed to the site of the reported emergency if required ▪ Calls **Emergency Agencies (police, fire, ambulance)** to inform them of incident, and to request assistance, as required, ▪ Contacts the **LLC Manager** to in form him of incident and to provide status reports related to the emergency as required ▪ Calls **pipeline and other stakeholders** (Kinder Morgan, WestPac / Buckeye, Reno Airport, **etc.) contract emergency response personnel or OSRO's** to alert them of potential incident or to mobilize emergency response resources. ▪ **Notifies and obtains other resources** as required ▪ Coordinates overall response to incident, on behalf of company, unless relieved by personnel of higher authority.

2.3 External Reporting

General Requirements

Included in this section are detailed reporting requirements to all appropriate federal and state agencies within the response zone.

Table 2.2 - External Spill Reporting - Reportable Quantity Summary below identifies external notifications that are required by law, as well as reportable quantities. Additional detailed information on both written and verbal reporting requirements is also provided in appropriate section.

TABLE 2.2 - External Spill Reporting – Reportable Quantity

State	Regulatory Agency	Reportable Quantity	Hours	Phone #
ALL	**National Response Center (NRC) (NOTE: NRC notifies EPA, OPS-PHMSA & USCG)**	Any discharges of oil or hazardous substances into or upon navigable waters	24 Hr.	(800) 424-8802 (202) 267-2675
ALL	**PHMSA Pipeline Safety Western Region Office** **12300 West Dakota Ave., Suite 110** **Lakewood, Colorado 80228**	> 5 gal or more (Refer to REG BULLETIN 20) Written 7000-1 form required within 30 days	Office	(720) 963-3160 (original call comes directly from NRC – OPR will call to confirm information only)
NV	**Nevada Division of Environmental Protection (NDEP)** **Bureau of Corrective Action** 901 South Stewart Street. Suite 4001 Carson City, NV 89701-5249	> 25 gal. to ground; any amount present on water or in groundwater	24 Hr.	(888) 331-6337 (in-state) (775) 687-9485 (out of state)

The **LLC Manager** is responsible for making appropriate external notifications, based on the nature of the incident. The LLC Manager will also prepare follow-up written reporting as required or requested.

Federal Jurisdictions

Federal agencies that require reporting of a spill or accident include the Environmental Protection Agency, the Department of Transportation (DOT), and the Coast Guard.

The Occupational Safety and Health Administration (OSHA) also requires telephone notification of any employee deaths or multiple hospitalizations resulting from work-related activities.

Environmental Protection Agency (EPA)

Section 311 of The Clean Water Act requires reporting of any **discharge of oil or hazardous substances** into or upon the navigable waters of the United States or adjoining shorelines.

Such discharges must be reported **immediately by telephone** to the **National Response Center at 1 (800) 424-8802** or **(202) 267-2675.**

DOT Pipeline and Hazardous Materials Safety Administration (PHMSA)

Federal Regulation **49 CFR 195.50** prescribes the rules for the reporting of any **failure in a pipeline system** in which there is a **release of transported hazardous liquid** that results in any of the following:

- explosion or fire not intentionally set by the operator
- release of five (5) gallons or more of hazardous liquid, **except that no report is required for a release of less than 5 barrels resulting from a maintenance activity** if the release is:
  - not otherwise reportable under this section
  - confined to company property or pipeline right-of way, and
  - cleaned up promptly
- death of any person
- personal injury necessitating hospitalization
- estimated property damage, including cost of clean-up and recovery, value of lost product and damage to the property of the operator or others or both exceeding $50,000

In addition, as required under **49 CFR 195.52**, **Telephone Notification** to the **National Response Center at 1 (800) 424-8802** is required **at the earliest practicable moment following discovery of a release of the hazardous liquid hours** for any failure that causes:

- hospitalization or death of any person
- explosion or fire not intentionally set by the operator
- estimated property damage, including cost of clean-up and recovery, value of lost product and damage to the property of the operator or others or both exceeding $50,000
- pollution of any stream, river, lake, reservoir, or other similar body of water that violates applicable water quality standards, causes a discoloration of the surface of the water adjoining a shoreline, or deposits a sludge or emulsion beneath the surface or upon adjoining shorelines
- an incident which in the judgment of the operator is significant even though it does not meet any of the criteria listed above

Information for any incidents that meet the above criteria should be called in to the District Office as soon as possible.

A **written DOT "Pipeline Carrier Accident Report"** is required for each incident described above, on **DOT Form F7000-1.** This form is to be submitted as soon as practical, but **no later than 30 days** after discovery of the incident. The LLC Manager will prepare the report, with information supplied by the field personnel.

The company shall file electronically or submit two copies of each report to:

Information Systems Manager
Materials Transportation Bureau
Department of Transportation
Washington, D.C.
20590

Volumes reportable on the DOT F7000-1 report:

1. **Spilled** - The total volume of **hazardous liquid**, or carbon dioxide, **released** from a **pipeline system** (including breakout tankage) in an uncontrolled manner

2. **Recovered** - The portion of the spill that was subsequently **recovered** and returned to the **pipeline system** (or breakout tankage)

Volumes not reportable on the DOT F7000-1 report:

1. **Drain-down** - The volume of **hazardous liquid** released in a controlled manner, so as to not come in contact with the earth, which is subsequently returned to the pipeline system. The **drain-down** volume is not included in either the “spilled” or “recovered” volumes of the DOT report

A copy of the report shall also be retained at the terminal and at the corporate office located in St. Louis, Missouri.

Reporting Changes in Original DOT Form 7000-1

Whenever an operator needs to report any changes or additions to the original information submitted on DOT Form 7000-1, they shall immediately file a supplemental report with the Director, Office of Pipe Line Safety, Department of Transportation, Washington, D.C.

United States Coast Guard

U. S. Coast Guard regulation **33 CFR 153 Subpart B** prescribes **immediate telephone notification** to the **National Response Center at 1 (800) 424-8802** for **any spill reaching surface water**, regardless of quantity.

Occupational Safety and Health Administration (OSHA)

29 CFR 1904.8 prescribes rules governing the **reporting of fatalities or multiple hospitalizations** of employees as a **result of work-related incidents,** as follows:

- Within **eight hours** of any of the following occurring, an **employer** is required to **notify OSHA by telephone at 1-800-321-OSHA** of
  - the death of an employee from a work-related incident, if the death occurs within 30 days of the incident.
  - in-patient hospitalization of three or more employees as a result of a work-related incident, if hospitalization occurs within 30 days of the incident

- If any employer **does not learn of any of the above reportable incident at the time it occurs**, the employer is responsible for **notifying OSHA by telephone within eight hours of the time the incident is reported to any agent or employee** of the employer

The telephone report required by OSHA shall include:

- time when the employer became aware of the incident
- location of incident
- time of the incident
- number of fatalities and/or hospitalizations.
- contact person
- phone number
- brief description of the accident

SARA Title III Reporting

Federal requirements under **SARA Title III, Section 304** require immediate telephone notification to local state agencies for releases of a **listed hazardous substance that exceed the reportable quantity**. Spills contained entirely within a company facility are not required to be reported pursuant to SARA.

Reporting shall be made to the county sheriff's office and the appropriate state agency for each state. Local governments may also require reports to their Local Emergency Planning Committee (LEPC) in addition to the local sheriff's office.

Information required in the report includes:

- time and duration of release
- material spilled
- type of release (e.g., land spill, watercourse spill, etc.)
- known or anticipated health or safety risks
- safety precautions undertaken

- name and telephone number of contact person

Specific SARA reporting guidelines for the Sparks Terminal site are listed below.

State Jurisdictions

Nevada

The **Nevada Division of Environmental Protection (NDEP) , Bureau of Corrective Actions requires reporting as soon as possible, but no later than the end of the first working day of the release immediate notification via telephone (24 Hour) at 1-888-331-6337 (in-state) or 1-775-687-9485 (out of state)** for:

- **petroleum products such as gasoline, diesel, and hydraulic fluid** of 25 gallons or 3 yd^3 of contaminated material
- **a spill of any quantity that affects a water way or groundwater within the State of Nevada**

A spill form, in PDF format, has been made available to assist the caller in what information is asked by NDEP, and is posted on the NDEP website at http://ndep.nv.gov/bca/spil_rpt.htm. The caller must call Nevada Division of Environmental Protection (NDEP), a fax is not an acceptable reporting mechanism at this time.

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NEVADA SARA NOTIFICATIONS

SARA Title III emergency release notifications for facilities in Nevada are made at the state level to the Nevada State Fire Marshal and State Emergency Response Commission.

Nevada State Fire Marshal and State Emergency Response Commission
107 Jacobsen Way
Carson City, Nevada 89711
Phone : 775-687-7524 Fax : 775-684-7518

The Nevada State Fire Marshal should be informed that the leak is SARA Title III reportable.

Nevada has implemented the "Nevada Online Hazardous Materials Reporting System" for State Fire Marshal permitting and EPCRA reporting. The system and instructions are accessed through the State Fire Marshal's website at www.fire.state.nv.us. The direct web address to the system is www.hazmat.nv.gov/tieriimanager/submit.

LOCAL EMERGENCY PLANNING COMMITTEE (LEPC)

Washoe County LEPC

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3.1 Preplanning Measures

General

Pre-planning efforts shall be undertaken within the company to ensure that the company responds in a prompt and effective manner during an incident. Pre-planning is accomplished in the following manner:

- **implementing spill prevention measures** as an integral part of company operations
- **procuring or contracting resources** to respond effectively to emergencies
- **meeting with stakeholders** (e.g., government agencies, other involved companies emergency agencies) on a regular basis, to discuss emergency planning
- **compiling reference information** to assist in emergency operations
- **defining the roles and responsibilities** of company personnel in an emergency
- **providing sufficient training** to allow personnel to function effectively in an emergency, in compliance with government requirements, based on their specific roles in an emergency
- **undertaking exercises to test company response capabilities** in an emergency
- **implementing security measures** as an integral part of company operations

Spill Prevention

Protection Measures – Terminal and Storage

There is a minimal risk of discharging oil in normal day-to day operations at the terminal due to the following:

- All bulk storage tanks are surrounded by secondary containment.
- All pumps are de-energized and hoses drained if a transfer is not in progress.
- Terminal checks are performed. Items checked include the transfer control stations, pipeline manifolds, tanks, tank valve

pumps, lines, dikes and valves, fire fighting equipment, loading rack, lights and anything that looks out of place.

- A leak or anything out of the ordinary would be quickly noticed.
- Inspections are routinely conducted before/after each transfer.
- Maintenance and/or training/drills are conducted on days when transfers are not scheduled and any leak or anything out of the ordinary would be quickly noticed.
- All tanks and lines are drained prior to any maintenance, line repair, valve replacement, etc.
- Trained/qualified persons who are ready to terminate the transfer on a moments notice conduct all transfers.
- All leaks are immediately reported and corrected.
- All personnel undergo a rigorous OJT training program and refresher training.

Protection measures – Tanker Loading

Protective measures undertaken at the tanker Loading rack can include but not be limited to the following:

- The terminal has a loading rack that is used to transfer diesel fuel and Jet-A and Kerosene to tank trucks. Tank truck transfers are performed within the confines of a secondary containment system that can hold at least 110% of the single largest compartment of any tank truck at the loading rack. Any product spill from these facilities would terminate and be safely contained within sumps or diked areas inside property boundaries. The average transfer is normally 6,000 to 8,000 gallons, and transferred at a rate of 600 gallons per minute.
- The loading rack is constructed with a quick drainage system. This system will hold the maximum capacity of any single compartment of a tank truck loaded in the plant. The tank truck rack is equipped with a reinforced concrete catchment basin connected by pipelines to a (b) (7)(F) underground steel tank. This tank is periodically pumped out and its contents are removed from the site.
- A physical barrier system and warning signs are provided in loading areas to prevent vehicular departure before disconnect of transfer lines. Loading arms on all racks are equipped with automated loading valves which are pre-set and have automatic shut-off controls. Warning signs are posted on racks in strategic locations.
- Drains and outlets on tank trucks are checked for leakage before loading and again before departure. Whenever necessary, repairs are affected to ensure prevention of liquid leakage while in transit.
- All tank truck operators shall be properly trained and are required to comply with proper procedures for oil transfers procedures before transferring petroleum product at the loading rack. These procedures must meet or exceed the minimum requirements of the Department of

Transportation (DOT). The physical presence of the tank truck operator monitors the transfer of oil at the terminal.

- Small product spills at the tank truck loading rack would remain within secondary containment and be recovered with absorbents. Larger oil spills would flow into the drains and to a (b) (7)(F) steel tank. Loading rack spills are minimal due to installed safety shut down equipment

Leak Detection

Leak detection measures undertaken at the terminal site can include but not be limited to the following:

- A detailed monthly visual inspection of all equipment and structures is performed by trained terminal operators. The findings of the inspection is documented and retained. Potential concerns revealed during the inspection process are made available to the terminal manager for immediate action. An inspection prior to the transfer operations at the dock is performed following USCG provisions (33 CFR 156 and 46 CFR 35) and documented (Declaration of Inspection).
- All product transfer operations are manned and visual inspections are performed at least once an hour until completion of the transfer operation. In addition, all inspections described above are performed and findings documented. Tank inspections are performed following API Standard 653 (Tank Inspection, Repair, Alteration, and Reconstruction) and the findings documented..
- (b) (7)(F)

3.2 Response Actions

The QI, Incident Commander or other designated personnel will ensure that the response plan is activated and all appropriate measures as described in this Emergency Response Plan, and within the terminal's Spill Prevention Control and Countermeasure (SPCC) plan are implemented based on the characteristics and nature of the spill.

Corporate personnel have access to additional response equipment ands experts both on a regional and national level which are available to the terminal.

Immediate actions for response to an oil spill are described as follows:

Action	Steps
Stop the product flow	• Act quickly as possible to secure pumps, close valves etc.
Warn personnel.	• Enforce safety, evacuation and security measures.
Shut off ignition sources.	• Motors, electrical circuits, open flames, hot work, etc.
Initiate containment.	• Around the tank and/or transfer equipment (loading platforms). • Protect all potentially affected storm drains and flow pathways leading off-site. • Use on-site equipment.
Make notifications.	• Report spill to supervisor or company Qualified Individual (Terminal Manager). • Take further directions from supervisor or company Qualified Individual. • Notify Local Emergency Responders, 911. • Notify applicable Federal, State and local agencies (see Emergency Notification Phone List on page 7 of ERAP). • Document all notifications using Spill Response Notification Form (see Appendix C of this plan).
Supervise response resources.	• Company Incident Commander, Qualified Individual or designated alternate shall supervise all facility emergency response team members spill mitigation actions. • Depending on the size and complexity of the incident, the Company QI shall call for additional contracted help by contacting an OSRO listed in this plan.

The Incident Commander, QI or alternate, or a designated Safety Officer appointed for the incident would implement the terminal's safety and health plan developed under 29 CFR 1910.120 and designed to identify, evaluate, and control safety and health hazards during emergency response operations.

3.3 Emergency Resources

Spill Response Equipment

OP Reno LLC has positioned emergency response equipment at the Sparks Terminal site to facilitate response to an emergency. A listing of available equipment is located in Appendix D of this emergency Response Plan.

The Terminal Manager shall be responsible for ensuring that all company equipment maintained at the Sparks Terminal is inventoried at least annually and inspected and maintained in good condition. Inventory lists shall be kept and revised as equipment is added or removed from storage locations at the terminal site.

As per requirements identified in 49 CFR 194.115, OP Reno LLC shall contract with an oil spill response organization (OSRO) to obtain sufficient resources to respond to a worst-case discharge at the Sparks Terminal and within the surrounding response zone.

3.4 Reference Information

Environmental Sensitivity Information

Environmentally sensitive areas may include but are not limited to the following:

- environmentally sensitive shoreline types and habitats
- areas of known populations of federal or state listed threatened or endangered species
- wetland areas
- National Parks
- Wilderness Refuges
- Marine Sanctuaries
- Conservation Areas
- Indian Reservations

Sensitivity information for the area surrounding the Sparks terminal is contained in the **Truckee River Geographic Response Plan,** the Inland Zone Area Contingency Plan identified in the EPA Region IX Regional Contingency Plan for this area**.** Information applicable to the Sparks Terminal Site is contained in Appendix E of this Emergency Response Plan.

High Consequence Areas

High Consequence Areas (HCA's) as defined in 49 CFR 195.450, are areas along the pipeline system in the United States identified as:

- commercially navigable waterways
- high population areas
- other populated areas
- unusually sensitive areas (USA's), as defined under 49 CFR 195.6

As applicable, information is presented in Appendix E of the Emergency Response Plan, to identify HCA's areas which, if impacted by a spill, threaten the safety or health of the general public.

Site Safety / Evacuation Plans

The Sparks Terminal shall have a current site Safety/Evacuation Plan posted in a visible location. All company personnel at the facility shall review the plan and familiarize themselves with the information contained in the plan. A briefing related to the site Safety/Evacuation Plan shall be given to all contractors and visitors to the site to ensure they are aware of site emergency procedures.

The site Safety/Evacuation Plan includes the following information:

- predetermined evacuation assembly points
- alarm procedures
- personnel in charge (most senior employee on-site or alternate as designated)
- command post for facility
- emergency procedures for facility
- emergency contact numbers (fire, police, ambulance)
- location of nearest medical facilities
- site location (legal description, latitude/longitude)
- directions to get to the site

Company personnel responsible for the site shall review the plan at least annually and ensure that the plan is kept current.

For off-site areas, a written site-specific Safety Plan shall also be developed by the Incident Commander or designated Site Safety Officer for Level II or Level III emergencies.

3.5 Roles and Responsibilities

All OP Reno LLC personnel in the U.S. who have a function in an emergency should know their roles and responsibilities. This will ensure prompt and effective response to emergencies affecting company operations. Knowledge of these responsibilities shall be enhanced through training undertaken as part of the company emergency response program.

A summary of key roles and responsibilities for these personnel is presented in Table 3.1.

Qualified Individual (QI) Responsibilities

As identified under 49 CFR 194.5, OP Reno LLC shall designate an English-speaking representative of the company located in the United States to function as a **Qualified Individual (QI)**.

The following is a summary of the QI's responsibilities, priorities and authority.

- **Ensure the safety of facility personnel**, local community and emergency responders;
- **Secure the source of the spill** to limit its outflow, and
- **Prevent damage to the environment** or mitigate these impacts
- **Activate emergency personnel and equipment** maintained by the operator
- **Ensure notification and reporting has been undertaken** to appropriate Federal, State and Local authorities
- **Coordinate response actions**
- **Act as a liaison** with the Federal On-Scene Coordinator (FOSC)
- **Obligate any funds required** to carry out all required and directed oil spill response activities

The OP Reno Sparks Terminal Manager, identified as Qualified Individual or his designated alternate has full authority, including contracting authority, to implement response actions. The QI is responsible for initiating the response to any discharge of oil with the potential of entering navigable waters.

The Qualified Individual(s) and alternates for OP Reno LLC are listed in the Information Summary located at the front of this Emergency Response Plan

Personnel Emergency Responsibilities

A summary of general personnel responsibilities in an emergency arte listed below:

Table 3.1 PERSONNEL EMERGENCY RESPONSIBILITIES

TERMINAL MANAGER	• verifies appropriate equipment at the terminal has been shutdown and determines incident level, to ensure appropriate Tiered response level is implemented. • functions as the Qualified Individual (as required) based on the nature of the incident. • serves as Incident Commander for OP Reno LLC, unless relieved. • coordinates activation of additional internal resources or additional external resources as requested or required. • contacts the LLC Manager, to provide information for incident reporting and provides on-going status reports related to emergency • initiates actions and mobilizes appropriate emergency, safety, and environmental resources to control incident
COMPANY FIELD PERSONNEL (Terminal Operations Personnel)	• contact the **Terminal Manager** if an emergency condition is discovered • ensure safety of public and other company personnel • may initiate on-site evacuation, if conditions require evacuation of personnel or the public • may function as First Responder, if an incident is discovered • participate in emergency operations as directed by the Incident Commander
FIRST RESPONDER	• undertakes initial company response to the scene of the emergency, if an incident is discovered, taking all necessary safety precautions • confirms the existence of an emergency condition • communicates information related to the emergency to the Terminal Manager • functions as Initial Incident Commander on-site until relieved by designated Incident Commander for OP Reno

Table 3.1 PERSONNEL EMERGENCY RESPONSIBILITIES CONT'D

LLC MANAGER	• provides support to emergency personnel in the United States • undertakes contacts with other senior company personnel and appropriate corporate personnel related to the incident • undertakes reporting to appropriate federal, and/or state emergency numbers, as required • provides functional support to the Incident Commander related to health environment and safety aspects of the emergency, as required • may function in an appropriate role within the OPR response management system in a major incident • ensure the terminal Safety and Health Plan for responders is implemented
INCIDENT COMMANDER	• assumes control of the emergency organization and overall supervision of OPR's actions taken to deal with the emergency • ensures safety of the public • determines whether public or company personnel require evacuation

3.6 Response Levels

General Approach

The ability of any site or operating department to manage any given incident is a function of variables including the local ERT's capability, government control or expectations, and the incident's magnitude, complexity, response duration, location, financial exposure, and media attention.

In the event of an incident, OP Reno will quickly respond with the resources readily available. During the course of the response, the Qualified Individual / Incident Commander (QI/IC) will make a determination whether additional resources are required and will activate additional levels of the tiered response system, if they are needed to support the response.

The following response approach will be used to respond to an incident, as outlined below:

Response Levels

Level 1 Response

Any response that can be effectively managed completely within the Sparks Terminal including functional resources and contractors. Terminal resources will be used to respond to the incident, with additional support as required

Level 2 Response

Any response that immediately requires some external resources, as the response is beyond the Sparks Terminals internal ability to manage the incident effectively (e.g. one or more resources from other facilities, agencies, contractors or OSRO's are deployed to assist and support control, containment and recovery efforts for the emergency).

Level 3 Response

Any response that requires a significant commitment of internal OPR resources and outside OSRO and other agency resources to effectively manage response to an emergency. Response to any Worst Case Discharge would be considered a Level 3 Response.

3.7 Response Management System

Requirement

Under 49 CFR 194.107 (c)(3) , the Emergency Response Plan, as a general requirement, must contain “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.”

Outlined below is a description of OP Reno’s response management system and strategy.

Incident Command System

The coordination, merging, or integration of all required resources in an emergency is made possible through the Incident Command System (ICS), allowing a site or operating department to plan for and respond to incidents well beyond their own resource capability.

This emergency management system, developed in the United States, has the following advantages in an emergency:

- One individual (the Incident Commander) is in charge of all aspects of the emergency and has responsibility for creating the right organization for the emergency
- The organizational structure is flexible and can be adapted to the type of incident
- The organizational structure can be adapted to any size of incident, and can be rapidly expanded, based on the nature of the emergency
- The organizational structure is modular, with positions being added to the organization based on issues or needs, rather than on rigid structure
- Common organizational terminology is used, allowing two organizations using ICS to merge and function smoothly together in an emergency

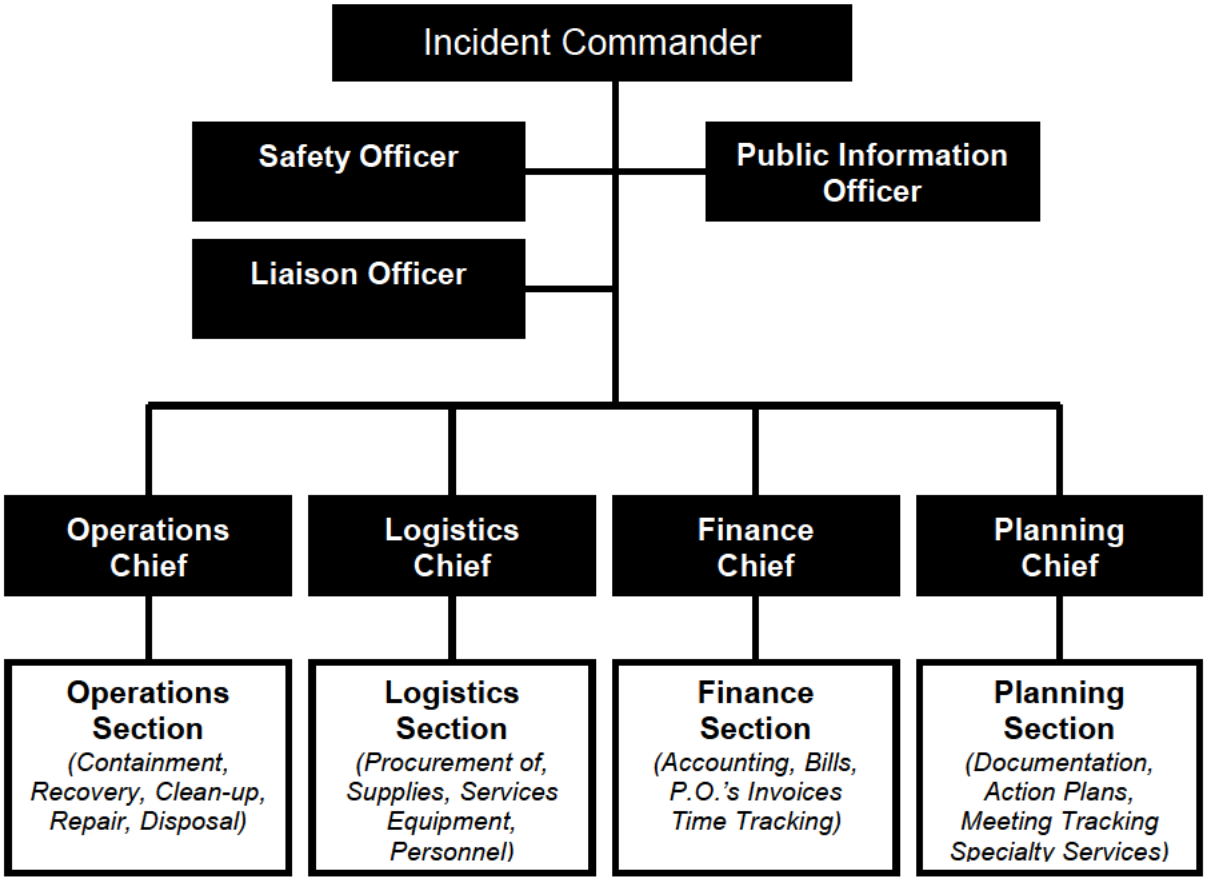
Utilizing ICS results in considerable economic benefits in response planning, and facilitates an effective response. The ICS is modular and practical, as only the elements required for effective response need to be activated, based on the needs of the emergency organizations, and the issues involved in the emergency.

The designated Incident Commander for the incident shall determine exactly which elements are to be activated based on the severity of the

incident. Positions are staffed, as necessary, to respond effectively to the incident.

A general sample organization chart for the emergency organization is included in **FIGURE 3.1** below.

FIGURE 3.1 – General Emergency Organizational Structure



Unified Command

Unified Command may be used in an emergency to coordinate involvement of OP Reno and various other agencies involved in the emergency.

Unified command has the following advantages in an emergency:

- allows for coordination of activities of various response agencies involved in the emergency
- provides a method where all organizations involved in the emergency have input into the decision making process

Using the principles of the Incident Command System a unified command may be formed with the Federal On-Scene Coordinator (FOSC), State On-Scene Coordinator (SOSC) as well as local municipal agencies, fire departments and sheriff's departments. Applicable OSRO's and contractors may also be integrated into this ICS based structure with clearly identified roles.

Under the unified command structure in the United States, the Incident Commander would meet and coordinate with other on-site agency representatives, including the FOSC, the SOSC, or other on-site agency representatives, as appropriate, to make joint decisions related to the emergency. Items discussed may include but not be limited to:

- definition of objectives and priorities for the emergency
- review of response strategies and procedures
- joint planning for multi-agency involvement
- integration of multi-agency operations and resources
- resolution of conflicts related to incident response

Where applicable, joint company/agency organizational structures may be created to distribute information to the media, public and non-responding government agencies. This may be done through the Public Information Officers of the company, the FOSC and/or SOSC or other involved as appropriate. Creation of a Joint Information Center (JIC) staffed by personnel of the company and other agencies may also be used to facilitate this process.

Emergency Organizational Roles

A description of various key Incident Command System ICS roles follows.

INCIDENT COMMANDER CHECKLIST

The Incident Commander is responsible for overall management of the emergency. The Incident Commander ensures that response to the emergency is carried out in a manner consistent with company policy and government regulations, and takes into account the concerns of all affected agencies or individuals.

The Terminal Manager, as Qualified Individual (QI) shall assume the designated role of Incident Commander in a major incident, or shall ensure an Incident Commander has been appointed for other incidents based on the nature of the emergency. The First Responder on-site shall assume the role of the initial Incident Commander in a limited capacity, until relieved by the designated or appointed Incident Commander.

Based on the nature and scope of the incident, a Deputy Incident Commander may be appointed, to assume some of the duties and tasks outlined below.

- **Obtain all required initial information** from sources within the company about the incident
- **Receive briefing from on-scene response personnel** or previous Incident Commander, if applicable
- **Assess the incident** to define key issues and determine the appropriate level of response for the emergency
- **Develop response incident objectives priorities and strategies**, mobilizing required internal or external response resources and personnel to control the effects of the emergency
- **Serve as primary contact with company management**, updating status of the emergency with company management on a regular basis throughout the incident
- **Notify and maintain contact with on-site emergency agencies,** government, and/or municipal agencies
- **Ensure contact with affected landowners or the public is maintained**, as required, throughout the incident
- **Create an emergency organization** to effectively manage issues and resources, assigning tasks and briefing personnel
- **Brief key command staff and general staff**
- **Develop and approve the Incident Action Plan** and Site Safety Plan with input from other personnel within the emergency organization
- **Establish a Command Post** and appropriate command and communications facilities for the emergency, at or near the site of the emergency, as required
- **Participate in and coordinate with a Unified Command structure**, if one has been formed, based on the nature and scope of the incident
- **Ensure that an Incident Log**, adequate records and all necessary documentation are maintained related to the incident

INCIDENT COMMANDER CHECKLIST

continued. . .

- **Maintain an individual log** of important events you participated in, related to the incident
- **Determine the need to develop plans for 24 hour operations** and ensure appropriate support structure is in place to manage these operations effectively
- **Attend and/or facilitate appropriate meetings** and briefings related to the incident, as required
- **Approve use of any trainees, volunteers, and auxiliary personnel**, as appropriate
- **Review overall emergency operations on a continuous basis** to identify further issues related to the emergency, and determine any additional resource or manpower requirements
- **Assume responsibilities for issues or duties not assigned to other personnel** within the emergency organization
- **Demobilize parts of the emergency organization that are no longer required**, based on the status of the emergency and site conditions
- **Coordinate incident investigation activities**, as required
- **Conduct a post-incident meeting** to review emergency activities after the emergency is over

SAFETY OFFICER CHECKLIST

The Safety Officer, designated by the Incident Commander, is responsible for providing technical assistance and advice to the emergency organization to ensure the safety of emergency personnel and site operations.

The Safety Officer shall have the authority to alter or suspend any emergency operations or activities that pose an immediate threat to life and health. For other activities that are considered unsafe, the Safety Officer shall recommend corrective actions to the Incident Commander.

Personnel filling this position should be familiar with company safety procedures, safe operating practices and safety procedures related to emergency operations.

- **Obtain briefing from Incident Commander** about the incident and potential safety concerns
- **Ensure site is initially inspected and monitored** to ensure it is safe for workers, based on the product hazards involved and site conditions
- **Evaluate product hazards, site safety hazards and issues**, and prepare Site Safety Plan
- **Review Incident Action Plan** to ensure all health and safety concerns have been addressed
- **Attend required meetings and briefings**, as appropriate, to identify potential health and safety concerns
- **Prepare and implement evacuation plan** for the site
- **Designate hot, warm and cold zones**, as appropriate
- **Identify nearest medical facilities**, and transport method
- **Ensure that personnel and contractors arriving on-site are briefed** about product hazards, and on-site safety concerns, and have received proper safety orientation
- **Establish and supervise Occupational Safety and Health Unit**, as required, and allocate tasks
- **Ensure proper safety equipment is available for workers** and is used in a proper manner
- **Ensure site monitoring is conducted** and continued on a regular basis
- **Investigate accidents that have occurred** as a result of emergency activities, if required
- **Ensure safety precautions are in place** to protect the public
- **Evaluate site safety operations on a continuous basis** and report concerns or recommendations to the Incident Commander

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SAFETY OFFICER CHECKLIST

- **Ensure all necessary safety related documentation** is maintained related to the incident
- **Maintain an individual log of important events** related to the incident

PUBLIC INFORMATION OFFICER CHECKLIST

The Public Information Officer, designated by the Incident Commander, is responsible for providing factual and timely information to the public related to the emergency and for managing all on-site media-related issues and public inquiries. The Public Information Officer shall also communicate with other appropriate off-site company personnel to ensure consistent information is being provided related to the incident.

Personnel filling this position should be trained in media relations and in dealing with the public.

- **Obtain an initial briefing from the Incident Commander** about the emergency and related media inquiries that have been received about the incident
- **Determine any limitations on information release** established by the emergency organization or the Unified Command, as required
- **Handle on-site inquiries from the media and the public**, and inform them about the nature and status of the incident and response operations
- **Prepare factual written statements** and background information about the incident for use in briefings or interviews
- **Ensure all released information of a controversial or sensitive nature is approved** by the Incident Commander, Unified Command and company senior management, as appropriate, throughout the incident
- **Develop lists of contacts**, communications lists and methods of distribution for media, government and community
- **Maintain regular contact with the Incident Commander** and other key emergency personnel and attend meetings to obtain information and updates on incident status, and sensitive media or public issues
- **Maintain contact with off-site company public information officers** and management related to media coverage, incident updates, and approval to release information
- **Coordinate on-site media activities**, including interviews with key emergency personnel, site tours for the media and VIP's, and if required, establish a media center
- **Ensure all necessary media related documentation is maintained** related to the incident
- **Maintain contact with non-involved stakeholders and the public** on a regular basis throughout the incident, to update them on incident status and to identify any additional issues or concerns
- **Coordinate meetings between the public, non-involved stakeholders and company emergency personnel** or other company officials as required
- **Maintain a personal log of important events** related to the incident

LIAISON OFFICER CHECKLIST

The Liaison Officer, designated by the Incident Commander, is responsible for identifying government representative or other stakeholder concerns related to the emergency. This individual also provides a liaison with other on-site response agencies as required.

Personnel filling this position should be familiar with government legislation, government contact procedures and company procedures for ealing with other outside stakeholder concerns.

- **Obtain briefing from Incident Commander** about incident and operations to be undertaken
- **Identify government or other agencies with jurisdiction** related to the incident
- **Identify other stakeholders** (directly affected public, other companies, etc.) who may be impacted by the incident
- **Maintain a listing of involved agencies or stakeholders and contacts**, including names, telephone numbers, fax numbers and other appropriate means of communication, based on the incident
- **Meet with on-site government or other stakeholder representatives** and contact other off-site agencies with jurisdiction or affected off-site stakeholders, to identify concerns or issues that they have about the incident, and to update response status
- **Convey government or other stakeholder concerns or issues** to the Incident Commander for resolution or follow-up
- **Coordinate meetings between government agencies, stakeholders** and emergency personnel or other company officials as required
- **Update the Incident Commander on a regular basis** about on-site agency involvement, inter-organizational issues or stakeholder concerns.
- **Monitor incident progress** and update government or other groups as required
- **Maintain a personal log of important events** related to the incident

FINANCE CHIEF CHECKLIST

The Finance Chief, designated by the Incident Commander, is responsible for coordinating on-site and/or off-site finance and administrative functions that may be required related to the incident. Finance functions may include accounting, cost tracking, personnel records, claims, insurance, clerical support, contracts, and other functions normally provided by corporate departments.

Personnel filling this position should be familiar with financial and administrative support functions.

- **Obtain briefing from Incident Commander** related to the incident
- **Identify finance section requirements** and need for any specialty on-site corporate support
- **Organize on-site or off-site Finance Section** as required in a larger emergency and appoint additional personnel, as required, to adequately manage support issues or concerns
- **Establish and supervise Claims Unit**, as required, and allocate tasks
- **Identify any financial issues related to landowner or affected citizen concerns**, in consultation with the Public Liaison Officer and ensure these concerns are addressed
- **Ensure records are kept related to time worked**, including personnel and equipment time, as appropriate
- **Initiate cash management and accounting procedures**, and maintain a record of purchase orders, bills, receipts and other financial documentation
- **Initiate cost tracking procedures** and monitor costs throughout incident
- **Generate financial evaluations and predictions**, as required, if requested by the Incident Commander or the Unified Command
- **Obtain necessary corporate support** related to legal services and insurance claims as required
- **Maintain contact with affected off-site corporate finance and accounting departments** on a regular basis, and update them on the incident status
- **Meet with the Incident Commander and other key staff regularly** for updates on incident status, to set objectives, and plan for future activities
- **Attend required meetings and briefings**, as appropriate, to identify potential financial concerns or issues
- **Maintain a personal log of important events** related to the incident

OPERATIONS CHIEF CHECKLIST

The Operations Chief, appointed by the Incident Commander, is responsible for management of all operational activities related to the emergency, including containment, recovery, clean-up and repair activities, fire control, or any other activities directly related to containing and controlling the effects of the emergency.

The Operations Chief is also responsible for ensuring that all operational activities are carried out in a manner that is consistent with company policy and government regulations, and takes into account the concerns of all affected agencies or individuals. Personnel filling this position shall be familiar with company operational and safety procedures, and containment, recovery, and clean-up operations in an emergency.

- **Obtain an initial briefing about the incident from the Incident Commander**, and discuss objectives and strategies for the emergency
- **Determine requirements and mobilize resources**, including necessary internal and external manpower and equipment to undertake operational activities
- **Establish an Operations Section,** to manage effectively resources responding to the site. Brief personnel and assign tasks
- **Implement the Site Safety Plan** in consultation with the Safety Officer and assist in preparation of the Incident Action Plan
- **Coordinate with Planning, Finance and Logistics Chiefs** and other Command Staff as required
- **Attend meetings with the Incident Commander** and other key personnel within the organization to update them on the status of emergency operational activities, and define future operational objectives and activities
- **Review operational activities on a continuous basis** to determine that all equipment, supplies, and materials are available to allow operational activities to be undertaken in a safe, efficient, and effective manner. Determine the need for additional operational manpower or resources as required
- **Establish staging areas** and ensure proper maintenance of equipment is undertaken throughout the incident
- **Communicate changes in operational conditions** to the Incident Commander
- **Conduct operational or safety meetings** with operational crews, as required, to advise personnel of changes to conditions or operational procedures at the site
- **Ensure accommodations, shelter, meals, and other requirements are provided** for operations crews, in consultation with the Logistics Chief
- **Arrange for storage for recovered materials**, and disposal of contaminated materials
- **Demobilize manpower, equipment and resources** that are no longer needed to undertake emergency operations, as required
- **Maintain a personal log of important events** related to the incident

LOGISTICS CHIEF CHECKLIST

The Logistics Chief, appointed by the Incident Commander, is responsible for obtaining the necessary manpower, equipment, facilities, supplies, and services to support emergency operations.

Personnel filling this position should be familiar with supply and service procurement procedures, available suppliers, contractors and service providers, as well as means to facilitate obtaining necessary supplies on short notice, and on an emergency basis, outside of normal operational hours.

- **Obtain briefing from Incident Commander** about the incident, including any operational or logistical issues
- **Create Logistics Section in larger emergencies** and appoint additional personnel, as required, to adequately manage logistical concerns or issues
- **Establish a Command Center**, on or off-site, as required
- **Order and maintain supplies or services** in support of emergency operations, at the request of the Incident Commander or Operations Chief
- **Order extra facilities** (e.g., work trailers) or equipment at the request of the Incident Commander or Operations Chief
- **Arrange food and accommodations** for work crews
- **Arrange for needs of affected landowners or affected citizens** if requested by the Public Liaison Officer
- **Arrange for emergency medical facilities and capabilities**, at the request of the Safety Officer
- **Arrange fuelling and repair of equipment** as required throughout the emergency, at the request of the Incident Commander or Operations Chief
- **Contract additional manpower or special resources** (e.g., site security, consultants, specialists, special equipment, etc.) at the request of the Incident Commander, Command Staff or other Section Chiefs
- **Maintain on-site communications systems** and arrange for additional communications support at the request of the Incident Commander or Operations Chief
- **Maintain a record of resources received** and control resource inventory as appropriate
- **Monitor site operations and meet with the Incident Commander** or Operations Chief to anticipate additional logistical needs or concerns
- **Attend required meetings and briefings, as appropriate**, to identify potential logistical concerns
- **Maintain a personal log** of important events related to the incident

PLANNING CHIEF CHECKLIST

The Planning Chief, appointed by the Incident Commander, is responsible for the collection and distribution of information in support of the emergency operations. The Planning Chief is also responsible for analyzing and evaluating information related to the incident, and planning for future events.

In larger incidents, the Planning Chief is responsible for managing the Environmental Unit, Resource Unit, the Documentation Unit and other technical specialists not assigned to other sections in the organization.

- **Obtain briefing from Incident Commander** about the incident
- **Identify planning requirements** and need for any specialty on-site technical support
- **Organize Planning Section** in a larger emergency and appoint additional personnel, as required, to adequately manage planning issues or concerns
- **Prepare Incident Action Plan** in consultation with the Incident Commander and other key staff
- **Establish and supervise Documentation Unit, Resource Unit and Environmental Unit**, as required, and allocate tasks
- **Coordinate with Incident Commander**, Unified Command, Command Staff and Section Chiefs to establish meeting schedules related to the incident
- **Coordinate with Operations Chief**, as required, to formulate appropriate operational plans for the incident
- **Ensure incident status is monitored** and important information related to the incident is provided to appropriate personnel within the emergency organization
- **Supervise on-site technical specialists** as required
- **Gather and store information related to the incident** (photos, video, documentation, etc.) and ensure an Incident Log of emergency activities is kept
- **Maintain an inventory of on-site resources**, as required at the request of the Incident Commander
- **Meet regularly with the Incident Commander and other key staff** to update incident status, set objectives, and plan for future activities

3.8 Evacuation

Facility Evacuation Plan

The following plan shall be implemented in the event of an emergency, including a spill incident, which requires the evacuation of the terminal. This plan is based on assumed conditions that occur during a spill event. Modifications may be necessary depending on the size and complexity of the incident.

The Site Evacuation Plan Diagram is in Appendix E of this emergency response plan

Stored materials are located within the containment area or throughout the piping system. The greatest hazard imposed by spilled products is an ignition source. Significant spills will occur within the containment areas. In the event that spilled product requires a facility evacuation, there is several exits routes facility personnel may take.

Any employee not involved in spill response efforts shall leave the terminal. Those employees designated to remain behind to care for essential terminal operations and/or to participate in spill response shall likewise exit the terminal, if it becomes absolutely necessary, due to life threatening conditions.

(b) (7)(F) [redacted]

In an extreme emergency the facility may be evacuated over or through the fence surrounding the facility. Personnel should be capable of evacuating in a safe manner regardless of the spill conditions.

(b) (7)(F) [redacted]

Personnel should proceed to this area and alert facility personnel of their condition. A roll call will be taken to account for all personnel.

It shall be the policy of any terminal employee to take refuge in any area or any building or terminal area if emergency circumstances prevent escape via the main exits. Those individuals designated to remain to control critical operations should clearly understand that they are to remain for active emergency purposes and not for refuge in a location presumed to be safe.

After evacuating the facility, the proper authorities and response organizations will be briefed on:

- Specifics of the current situation including tank conditions;
- Amount spilled;

- Diagram of the facility;
- Status of electrical equipment;
- Facility inventory; and
- Missing persons, etc.

Adjacent Businesses

If necessary, adjacent businesses should be notified to evacuate. The Qualified Individual should delegate available persons to alert businesses adjacent to the facility along Nugget Avenue and those adjacent to the terminal along its boundaries that might be affected by the incident. The local emergency responders (fire and police departments) should assist with the evacuation of the surrounding area.

Community Evacuation Plan

The evacuation of the surrounding community will be coordinated with local emergency responders (police and fire). Also, coordination with the Washoe County Emergency Management (LEPC) and the State Emergency Response Commission would be conducted. The following shall be provided to outside emergency response agencies:

- Nature of the emergency episode;
- Reason for requesting an evacuation; and
- Location where the facility Terminal Manager/QI can be reached after evacuating the facility.

(b) (7)(F)

[redacted]

3.10 Documentation

Documentation of incident activities is important for a number of reasons, including:

- Due diligence, to protect the company and its representatives from potential legal action
- Documentation of response activities to assist in post incident review
- Documentation to assist in reviewing the cause of the incident, to attempt to prevent reoccurrence in future

Do not be selective about the information you keep. Keep everything. Make copies of documentation for regional files.

Any documentation gathered is to be treated as confidential and is not to be released to third parties without legal approval. All requests for information from outside parties should be forwarded to the Incident Commander.

Written Documentation

Gathering written documentation related to the incident, and keeping factual written records can greatly assist in the documentation process. Procedures that can be implemented to assist in this process can include but are not limited to:

- **Completing the OP Reno Spill Response Notification Form** (see **Form 1 in Appendix C** of this Emergency Response Plan) when the call is initially received. Retain and maintain a copy of this form in the incident files
- **Utilizing appropriate forms** located in Appendix C of this ERP as tools to assist in documenting critical information, phone calls, site hazards, injured personnel, role assignments, response status, etc.
- **Retaining copies of Incident Action Plan** for each operational period, in a major incident
- **Keeping copies of submitted Government Reports,** as appropriate.
- **Maintaining a record of any media or stakeholder contacts** that have occurred on an Incident Log or in another manner.
- **Retaining any personal notes** so that issues that are observed or discovered can be accurately recorded. Carrying a **voice recorder,** if possible and safe to do so, during the incident, can also assist in this process Retain any tapes or memory storage devices used and have notes transcribed into hardcopy as well
- **Keeping other brief notes, as necessary**, including times, dates, people and places. Do not trust your memory. Write or voice record everything

- **Drawing a map of the incident site** showing all geographic and topographic features important to the incident in relation to the terminal site. Note the physical characteristics such as sewers, creeks or rivers, water wells, direction of slope, etc.
- **Documenting the size of the area** over which the product was lost
- **Attempting to gather all necessary information relating to loss of product**, including receipt tickets, deliver tickets, rate of flow at the time of incident, and estimated or known volume in storage tank or vessel.
- **Taking pictures of the spill and surrounding area, if possible and safe to do so,**. Pictures should be documented with the following information, where possible:
  - Location of the camera in relation to the object being photographed
  - Direction the camera is facing and the object being photographed
  - Who took the picture and the date it was taken

Documentation Retention

In a major incident, where an Incident Command based emergency organization structure has been created, originals or copies of important documentation should be forwarded to the Documentation Unit under the Planning Section, for archiving and retention after the incident is over.

In all incidents, copies of all pertinent documentation should be forwarded to the Terminal Manager, to assist in external reporting, and retained in incident files located at the terminal office for subsequent follow-up, as required.

3.11 Termination of Response

The decision to terminate emergency operations and to demobilize personnel and equipment shall be made on a site-specific basis, based on the status of the incident. Factors that may affect the decision to terminate the response include the following:

- The emergency condition has been controlled and immediate threats to the health and safety of the public have been eliminated
- Any leaks or spills have been contained, and all remaining free oil, petroleum products, or hazardous materials have been recovered from the site
- Impacts to High Consequence Areas (HCA's) and other identified sensitive areas have been effectively contained or eliminated
- Repair operations have been undertaken to prevent further leaks or spills from occurring
- Further emergency operations at the site will cause more damage to property and the environment than that which resulted from the leak or spill initially

The Incident Commander and appropriate personnel shall consult appropriate government agencies and other involved parties before making any decisions related to terminating response activities. These agencies and involved parties include representatives from federal, state, and/or municipal agencies with jurisdiction in the emergency.

3.12 Response Actions – Post Incident

Facility Inspection

Before start up of any facilities or equipment involved in the incident, inspections shall be carried out, as per appropriate standards, based on the equipment involved, to ensure no damage has occurred. Inspection of facilities may include but not be limited to:

- visual inspection
- ultrasonic inspection
- x-ray inspection
- hydrostatic testing
- internal inspection

Inspection may be undertaken by company personnel or by qualified outside consultants.

The Terminal Manager, in consultation with OP Reno management and appropriate engineering personnel, shall review the results of the inspections, determine the potential for damage, and determine when it is safe to restart operations.

Post-Incident Review

A post-incident review meeting shall be held by the Incident Commander, with the key emergency personnel involved in the response and company management after a Level II or Level III incident, to review emergency operations and evaluate the response. The meeting shall:

- review the notification procedures and the sequence of events
- review emergency activities and actions taken
- identify problems and safety concerns related to the response
- identify current company emergency procedures which need to be modified and the need for new emergency procedures
- identify environmental concerns and needs related to modification of company environmental procedures
- identify equipment deficiencies
- identify additional training needs for company emergency personnel
- identify company procedures which may prevent similar incidents

Recommendations from the post-incident review shall be used to improve company response capabilities and to prevent future incidents.

3.13 Waste Disposal

Recovered hazardous wastes will be disposed of in accordance with RCRA and all other state and federal regulations. Any qualified OSRO listed in this plan would handle disposals of recovered wastes that cannot be reclaimed at the terminal. These OSROs only offer disposal options that meet the requirements of government regulations. These requirements include the approved containers, labeling, handling, transportation, and disposal or treatment of the waste with manifest documents for tracking.

Recovery of large quantities or oil based liquid wastes from a spill would occur into temporary fractionation tanks, or into temporary storage within a large empty tank at the terminal site, or within empty storage tanks available at other facilities. If required, vacuum trucks or tankers would be used to transport the recovered oil to these facilities prior to recycling, recovery or final disposal.

Generally, the choice of disposal/recovery of oil-contaminated soil is for soil reclamation at an approved facility. Oily waters and sludges from cleanup activity and from de-contamination of equipment will be transported and separated at an approved recovery facility. Contaminated disposable equipment and adsorbents will be disposed of in an approved landfill.

All wastes generated during response activities shall be placed in appropriate containers. Free oil shall be placed in temporary storage tanks or tank trucks, soil shall be placed in dumpsters or stockpiled on plastic liners, and debris shall be placed in plastic bags, drums, or dumpsters. These wastes will be stored on site until proper disposal requirements are identified.

Following a discharge of oil and the ultimate containment and recovery of liquids and oil-contaminated debris, the terminal will undertake procedures to characterize the resultant materials and to property manage them in an environmentally acceptable manner.

The following procedures related to waste containment and disposal would be followed by applicable terminal personnel and/or by the OSRO:

1) Mitigate Spill or Discharge of Oil

Contain: The spilled or discharged oil will be contained using specialized equipment and materials to prevent free flow and migration into any waterway or groundwater source. The mitigation activities may include the use of containment boom, oil absorbent materials (booms, pads, blanket, stones, sand, etc.), hand tools, pumping devices, personal protective gear and clothing.

Containerize: The recovered liquids and oil-contaminated debris will be collected and placed in secure dikes, berms, drums, dumpsters, tanks, tank trailers, or other compatible containers/vessels to allow safe

temporary accumulation pending further evaluation. A means for either pumping or transporting the materials will be provided to facilitate timely removal when appropriate.

2) Evaluate/Characterize Containerized Materials

Apply Process Knowledge: General management guidelines will be established by qualified individuals based on known constituents, properties, and amounts of recovered oil and oil-contaminated debris.

Provide Laboratory Analysis: Laboratory analysis (i.e. TPH, BTEX, TCLP. flash point, etc.) will be required as necessary to confirm or further identify certain constituents, properties, or levels of contamination to ensure the selection of a proper handling and management method.

3) Choose Appropriate Management Method(s) for Characterized Materials

Reference Regulatory Guidelines: All current applicable Federal, State, and local regulations dealing with the management of recovered materials will be determined through contracted waste management companies.

Consult Waste Management Professionals: Ultimate disposition of the recovered materials will be determined through contracted waste management companies.

Implement Final Disposal by Qualified Consultant/Facility: If appropriate, the materials will be reclaimed, recycled, or treated for reuse (on-site or off-site). If materials are deemed as non-recoverable waste they will be stabilized, landfilled, roasted, burned, incinerated, or treated based on their characterization.

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Section 4 – Response Actions – Petroleum Spills

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SECTION 4 – RESPONSE ACTIONS – Petroleum Spills

4.1 Initial Discharge Detection

Three methods of discharge detection may be used to identify a potential spill from equipment or storage at the Sparks Terminal site as follows:

Method 1

Inspection of terminal facilities and equipment is undertaken physically throughout daily operations at the terminal site and truck loading procedures are monitored physically throughout the loading process. Any major spill or leak discovered by personnel would trigger immediate response action, and shutdown and isolation of the affected equipment, as quickly as possible, with appropriate containment, recovery and clean-up actions being implemented based on the nature of the incident.

Method 2

(b) (7)(F)

Method 3

Any abnormal conditions at the terminal site, which is reported by the public, other agencies or companies via the company emergency response number after hours or during daily operations would be investigated immediately. Appropriate shutdown and isolation actions would be undertaken as quickly as possible, if a leak or spill is found to have occurred.

4.2 Initial Response Actions

In the initial stages of an incident, several steps must be taken to insure that an incident and the impact of an incident are minimized.

Every incident will be different, with different issues, impacts and concerns. The initial response listed below set out general steps to taken, to protect life, health, property, and the environment; however, employees should use their best judgment and, if necessary, take other actions to prevent further damage, as required.

As all terminal personnel carry cell phones, personnel are to report any spill or discharge by telephone immediately, to the terminal manager or designate. The Terminal Manager, as Incident Commander and QI for OPR, will notify other on-site emergency response team members and will activate this spill response plan.

Initial Response Actions to be implemented can include but not be limited to:

- **Evacuating others from the affected area.** Implement first aid for any serious injuries. Summon additional help as needed
- **Identifying the source, assessing the nature of the problem and the hazards involved** taking all necessary action to protect both yourself and others.
- **Eliminating ignition sources, if possible and safe to do so**. Take note of any other safety considerations prior to securing the source
- **Initiating appropriate emergency shutdown** of all affected equipment, as follows:

  Tank overfill or failure

  - **Shut down any deliveries** into the tank
  - **Check all secondary containment devices for integrity**, (i.e. berms, containment dykes, etc.)
  - **Check berm drain or runoff valves** and close any that may be open
  - **Transfer out of tank**, as required, if conditions are safe

  Truck Rack Overflow or Failure

  - **Shut down all loading operations**, pump motors and loading valves
  - **Stop all traffic** from entering rack or hazardous area
  - **If a line leak**, close off riser valves and /or tank valves

- **Clean area with absorbent material** or perform other appropriate actions to recovered spilled product

Line Leak / Pump Leak / Manifold Leak

- **Shutdown affected pump,** and de-energize affected equipment
- **Isolate leaking line or manifold** with appropriate block valves
- **Check any secondary containment around the equipment for integrity**, to limit migration of the spilled material.

- **Account for all personnel**, and ensure they are safe
- **Immediately secure the incident site** from visitors, media, and unauthorized personnel, as best possible
- **Stay in communication.** Station yourself where you may remain in contact via radio and telephone
- **Request additional internal or external support personnel** and emergency equipment to assist in site security and initial response to the emergency.

4.3 Response Actions - General

Priority Actions

Actions taken in the first hours of a petroleum spill are critical to the success of the response.

The Incident Commander is responsible for defining critical issues related to the emergency. Once the important issues have been identified, objectives can be determined and necessary resources and personnel can be mobilized.

The first priority in any petroleum spill is the protection of the public and the safety of emergency personnel. Once safety is assured and the site is secured, efforts shall be made to contain the spill as effectively as possible to protection property and the environment in the surrounding area.

Containment and Recovery

The type of containment and recovery efforts undertaken depend on the type of spill. Containment and recovery efforts will focus on minimizing the effects of the spill on the surrounding area. Should it become apparent that the entire spill cannot be contained, procedures for the protection of sensitive areas shall be considered.

Clean-up

Cleanup activities will be undertaken after containment and recovery actions are completed. Cleanup and disposal of contaminated material and site remediation efforts will be undertaken to restore the spill site in compliance with government agency and stakeholder requirements.

Response actions to be undertaken for petroleum spills in various conditions that may be encountered along the pipeline systems are presented in the following sections.

Response Equipment

Nearly all response operations require the use of similar small equipment, tools and other items, both general and emergency specific These items include, but are not limited to:

- standard tool kit: wrenches, pliers, hammers, saws, etc.
- personal protective equipment - boots, hardhats, chemical-resistant goggles, oil-resistant clothing and gloves (saranex, pvc, etc.)
- plywood, plastic sheeting and other materials that can be used to set up small containment barriers

- pumps, skimmers, hoses, containment boom and associated equipment
- shovels, rakes and other tools to aid manual containment, clean-up and recovery
- drums, pails and tanks to store recovered materials and wastes
- air monitoring equipment: combustible gas indicators, oxygen monitors, draeger tubes, organic vapor monitors, etc.
- standard first aid kits, EMS personnel for medical monitoring (site-by-site basis)
- fire suppression equipment, such as fire extinguishers
- decontamination supplies: brushes, wading/portable pools, hoses, trash cans/drums, drum liners, portable sprayers, poly sheeting, tables, stools, boot jacks, wash tubs (do not use detergents or soaps in decontamination as adverse reactions with contaminants may occur)
- binoculars, cameras, still and video for photo documentation, and
- personnel shelters, office trailers, admin support equipment and personnel

Large machinery and equipment that may be used in most response operations can include but not be limited to:

- bulldozers, bobcats, backhoes and trackhoes
- dump trucks
- vacuum Trucks and tanker trucks
- boats
- trailers
- skid tanks

Listings of available equipment and resources for response to an emergency at the terminal are contained in **Appendix D** of this Emergency Response Plan

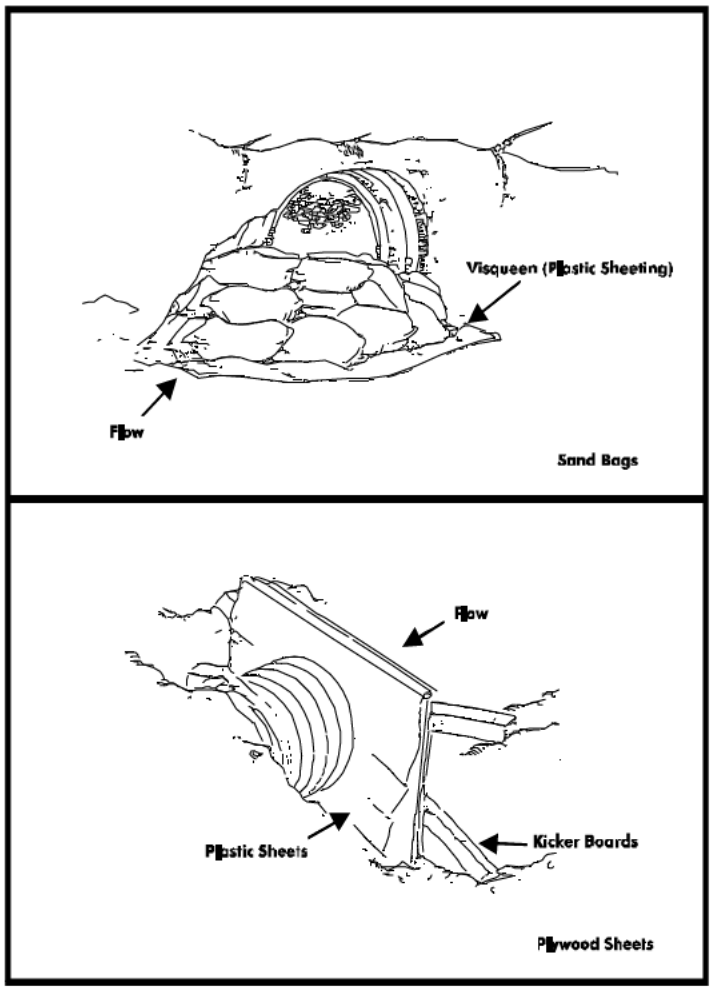
4.4 Spills on Land

The movement and spread of oil on land is usually slower than the movement of oil on water, depending on spill amount and terrain. The control and containment of oil on land is typically accomplished through the use of berms, blocking devices and interception trenches.

Blocking Devices

It may be necessary to block drains and culverts as well, including storm water drains and sewer drains on streets. Drawings illustrating these techniques are located in **FIGURE 8.1**.

Figure 8.1 – Culvert Blocking Techniques



Berms

Berms are designed to control the movement of petroleum on land by limiting migration. Issues related to use of berming include permeability of the material used to construct the berm, and the permeability of soil below where the spill has occurred. Anticipated rainfall and the potential for flooding must also be taken into consideration when deciding between berms and other land containment methods.

Sorbents

In some cases, sorbents may be used to control the movement of oil on land. This may not always be possible due to the characteristics of the terrain, the product, or the presence of explosive vapors. Response time and availability may be a limiting factor with these types of products as well.

A summery of land containment options is presented below

Table 4.1 - LAND CONTAINMENT OPTIONS

Land Containment Options

Containment Method	Technique Description	Comments
Earth or Sand Berms	Earth or sand at or near the site is used to contain spilled material on flat or sloped surfaces. Sandbags filled with earth or sand are used to contain spill.	Sufficient dry earth, gravel, or sand must be available to contain spill. Earth may be frozen, depending on season. Surface disturbance to remove earth or sand may result in erosion, especially on steep slopes. Work crews and / or earth-moving equipment are required to build dike.
Sorbent Dike	Sorbent material is used to contain spill.	Useful only in small spills, as purchase of large quantities of sorbent is expensive and impractical. Contaminated sorbent may need to be replaced or squeezed out during incident. Contaminated sorbents must be disposed in compliance with government legislation. Sufficient sorbent or sorbent boom, work crews, and storage containers or a lined storage area for contaminated sorbents must be available to build sorbent dike.

Cont'd

Table 4.1 - LAND CONTAINMENT OPTIONS CONT'D

Land Containment Options		
Containment Method	**Technique Description**	**Comments**
Trench or Sump	A trench or sump is excavated downslope on sloping terrain to limit surface or subsurface spill movement. Work crews and / or earth-moving equipment are required to build trench or sump, as well as plastic or other impermeable sheeting for a trench liner.	Trenching would be impractical in most places within the terminal, due to subsurface installations which are present. Trenching may be possible for spills which reach land outside the terminal (Check for subsurface utilities) Clean topsoil should be removed before trench construction. Frozen soil, bedrock close to the surface or soil type (e.g., sand) may make this option impractical. Surface disturbance to remove earth or sand may result in erosion or further penetration in sandy soil.

Recovery

Once containment operations are complete, recovery of spilled material will be initiated using mechanical recovery techniques. A summary of common land recovery options is presented in Table 4.2.

Cleanup

Cleanup methods undertaken at a spill site will depend on site conditions, time of year, area of contamination, type of contamination present, and equipment available. Common land cleanup options are presented in Table 4.3.

Table 4.2 - LAND RECOVERY OPTIONS

Land Recovery Options

Recovery Method	Technique Description	Comments
Vacuum Truck	A vacuum truck is used to recover spilled material from a dike or trench in areas accessible by trucks or heavy equipment.	A vacuum truck and operator are required to undertake this method. The method depends on site access. Surface disturbance and soil damage may result from movement of the vacuum truck to and from the site. Topsoil may need to be stripped into the site before undertaking recovery activities.
Pumping Spilled Material into Storage	A pump is used to recover spilled material from a dike or trench in areas not accessible by vacuum trucks.	Pumps must be safe for use at the spill site, and compatible with the product to be pumped. Surface disturbance and soil damage may result from movement of the pump and storage equipment to the site. Skid tanks, tanker trucks, port-a-tanks, fuel bladders, permanent tanks, or a lined excavated area must be available to provide storage for the recovered material. A work crew and power supply for the pump must also be available.

Table 4.3 - LAND CLEANUP OPTIONS

Land Cleanup Options

Cleanup Method	Technique Description	Comments
Excavation of Soil	Earth-moving equipment is used to remove large volumes of spill - contaminated mud, gravel, soil, or vegetation Rubber-tire front-end loader or backhoe will cause less surface disturbance than bulldozers or trackhoes Bulldozers and front-end loaders can be used for removal of shallow contamination (<1-6 feet), while backhoes or trackhoes can remove contamination to greater depths(6 to 10 feet).	Surface disturbance and soil damage may result from movement of equipment to and from the site. Topsoil may need to be stripped into the site before excavation activities are undertaken. Removal of soil may result in increased erosion potential, removal of microorganisms in soil, mixing of topsoil and subsoil, and loss of soil productivity. A bulldozer, backhoe, or trackhoe and operator are required to undertake this method. Trucks to remove excavated soil or a lined excavated storage area on-site are required to store material.
High Pressure Water Washing	Water is used to scour petroleum coatings from rocks, gravel, and man-made structures. Scoured material is directed to collection areas for recovery by skimmer, vacuum trucks or pumping into storage facilities. Equipment will freeze in winter.	A slight slope at site aids collection of petroleum/water mixture. Method requires site access and quantities of water. The method could generate contaminated water requiring treatment. Technique may disturb soil, vegetation, and microorganisms at site, and disperse contaminants over wider area. Pressurized water washing equipment, a work crew, pumps and a power supply are required to undertake this method. A lined, excavated area or storage tanks may be required to hold water for treatment or testing.
Low Pressure Water Flushing	Low pressure flushing is used to wash petroleum from contaminated mud, gravel, soil, or vegetation. Equipment may freeze in winter.	Method requires large quantities of water. The method could generate contaminated water requiring treatment. Technique may disturb soil, vegetation, and microorganisms at site but to a lesser extent than high pressure water washing. Pumps, a power supply, hoses, and a work crew, are required to undertake this method. A lined, excavated area or storage tanks may be required to hold water for treatment or testing.

Land Cleanup Options

Cleanup Method	Technique Description	Comments
Sorbents	Sorbent material laid on surface to pick up small pools of petroleum from mud, boulders, rock, or man-made structures.	Normally used for final cleanup of small amounts of contamination left on site. Cleanup is labour-intensive and time-consuming. Not effective on weathered oil or in cold weather. Minimal surface disturbance, other than foot traffic. Sorbents must be disposed of in compliance with government legislation. Sufficient sorbent or sorbent boom, work crews, and storage containers or a lined storage area for contaminated sorbents must be available.
Manual Cleanup	A work crew and hand tools are used to clean up areas not accessible by heavy equipment.	Manual cleanup can be used in areas where contamination is light, the spill area is small, or where use of heavy equipment in the spill site would cause significant damage. Manual cleanup can be time-consuming and labour-intensive, especially for large areas. Method will remove the top layer of soil from the affected site, possibly lowering productivity. A work crew with hand tools is required to undertake this method. A lined storage area or storage drums are also required to store contaminated material before disposal.
Steam Cleaning	Steam is used to remove petroleum coatings from boulders, rocks and man-made structures. Recovered material is flushed to a collection area for collection by skimmers, vacuum truck, or pumping to a storage facility.	Steam cleaning equipment must be able to access site. Hot steam will damage vegetation and sterilize microorganisms at shallow soil depths. A steam truck or steaming equipment and power supply, work crew, and water supply is required. A lined, excavated area or storage tanks may be required to hold water for treatment or testing.

Land Cleanup Options cont'd

Cleanup Method	Technique Description	Comments
Sand Blasting	Blasting grit is used to scour thin coatings of petroleum from man-made structures.	Sand blasting equipment must be able to access site. Sufficient supply of blasting grit must be available. Blasting grit may contaminate environment and require storage before disposal. Contamination may be driven farther into surface of the structure. Pressurized blasting equipment, a work crew, blasting grit and power supply are required to undertake method. Drums or a lugger bucket, or other secure containment facilities may be required to store sand / petroleum mixture.

4.5 Spills in Urban Areas

Response to oil spills in urban settings is similar in many ways to other response operations on land. However, there are several additional important factors involved in urban responses that must be considered:

Surface Concerns

- **If spilled product is still on the surface, attempt to confine the spill to the smallest area possible, and prevent the spill from migrating away from the site, or below ground**

  Seal all storm and sewer drains. Do not flush product into the drains.

  Damming and berming of streets may be necessary. Whenever possible, use impermeable materials or liners for dams and berms. Remember that spilled petroleum products may permeate most asphalt and black top streets, causing deterioration of the road surface.

Storm Drains and Sewers

- **Storm drains and sewers will allow migration of product below ground and make the movement of product difficult to track**

  Local sewer and water authorities should be notified whenever the potential exists for petroleum to enter these systems (See Section 5 of this ERP for contacts for the City of Sparks). Ensure that air monitoring and sampling is conducted at all drains in the immediate vicinity of the spill. Remember that subsurface systems do not always follow expected flow patterns or the surface gradient.

- **Oil flowing through storm and sewer systems presents increased fire and potential explosion hazards, due to the confined space**

  Local fire and police departments should be notified whenever the potential exists for oil to enter these systems. These agencies will be able to conduct any needed evacuations and local notifications as well as provide ventilation of the underground systems, if necessary.

- **Responses involving storm and sewer systems present confined space safety hazards**

  Entries to these areas should be prohibited unless conducted by trained teams. Prior to any entries, confined space issues must be addressed in the Site Safety Plan, procedures for air monitoring must be implemented and rescue teams must be in place.

- **Once the path of flow is determined, prepare for containment and recovery operations at the point where flow returns to the surface, if this occurs.**

City of Sparks - Public Works

The City of Sparks, Public Works has contingency plans for spills which may reach their sewer systems. If there is a release of product into the storm drain, the city has detailed maps of the storm sewer system and can assist in opening and monitoring appropriate manholes downstream of the spill site, to either plug the line with sand or an inflatable line plug.

For information on plans resources and capabilities, refer to the contacts for the City of Sparks, contained within Section 5 of this Emergency Response Plan.

4.6 Spills on Water

Containment

Spills of petroleum on water will spread outward on the watercourse from the origin of the spill, eventually achieving a stable thickness on the watercourse. Spills on rivers, creeks, or streams will flow downstream, contaminating riverbanks and vegetation, affecting wildlife, fish, and water users in the area of the spill.

The rate of spill movement will depend on the current and the time of year. Current will flow fastest in the deepest channels in the river, and slower in shallower areas. Flow in a watercourse will also be higher in the spring, because of snowmelt entering the watercourse from the surrounding area. River currents in summer and fall will be generally lower than in the spring. Wind and wave action will also affect the rate and direction of spill travel.

Containment on water must be undertaken as quickly as possible as the spilled material has the potential to migrate a great distance and contaminate a large area, based on the current present in the watercourse.

Appropriate containment actions on water are based on the size of the watercourse, watercourse velocity, and time of year. Most containment actions on a watercourse will focus on use of a containment device or structure to limit and influence the movement of petroleum floating on the top of the water.

Dams, Weirs and Berms

Dams and weirs are used to block the flow of water and product completely or are constructed with a provision for the water to flow through or under the dam while the oil is contained at the structure.

Berms are designed to control the flow of water and oil by diversion or overflow. Their primary use is on shallow streams and rivers with limited water flow and narrow beds or channels. They are also used in areas where containment boom is unavailable. Anticipated rainfall and the potential for flooding must be taken into consideration when deciding between berms and the different types of dams.

Dams may also be built of sorbent materials. These types of dams are useful in areas where a traditional earthen dam is impractical. This may be due to water depth, steepness of banks, and availability of construction equipment or width of the flood plain created by damming. Sorbent dams are labor intensive and require periodic replacement of sorbents. Care should be taken to ensure worker safety, as these dams require extensive work in and around the water.

Diagrams showing basic dams and berms are located in **FIGURES 4.2 & 4.3.**

Figure 4.2 - Dam or Weir Construction – in stream

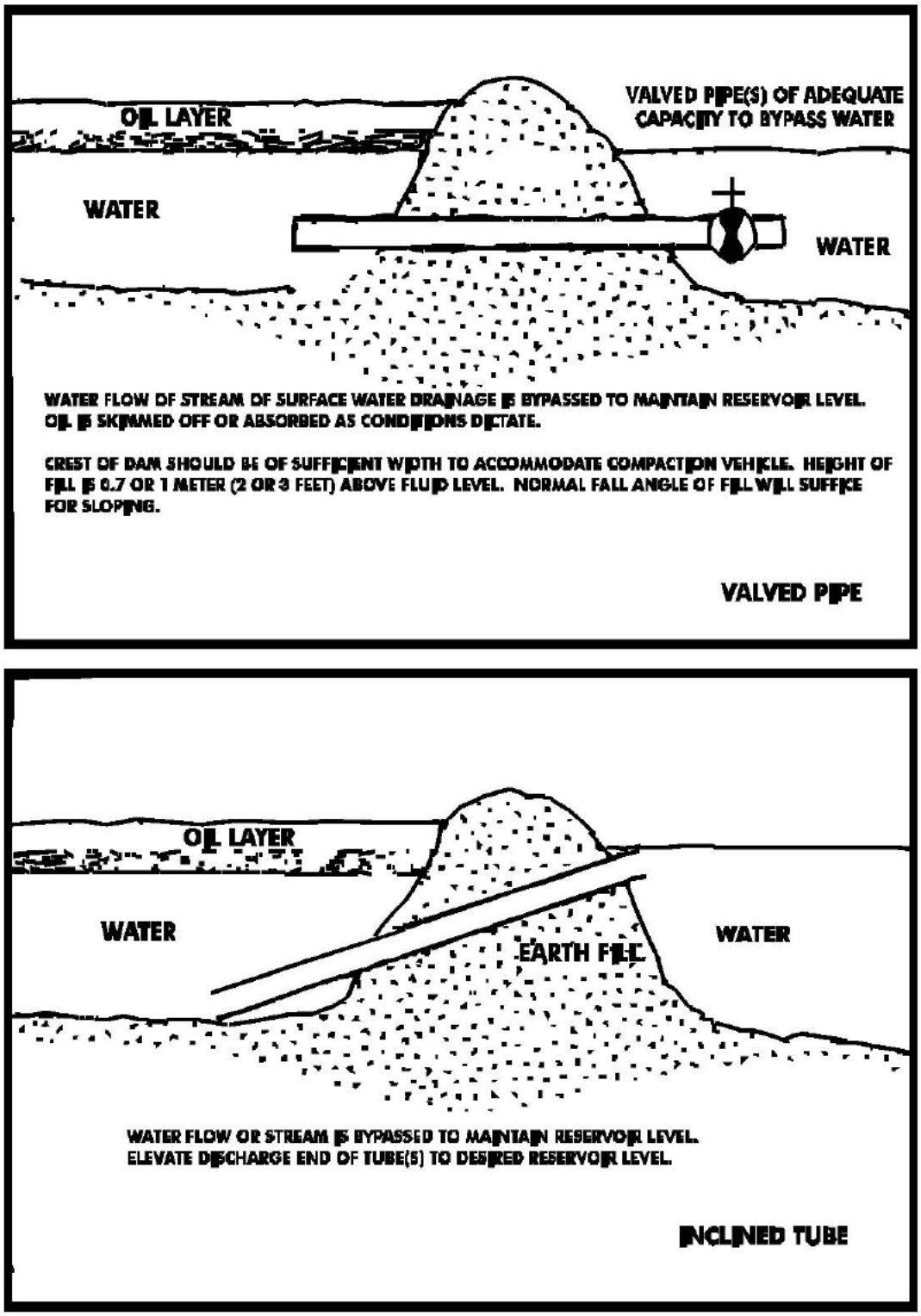
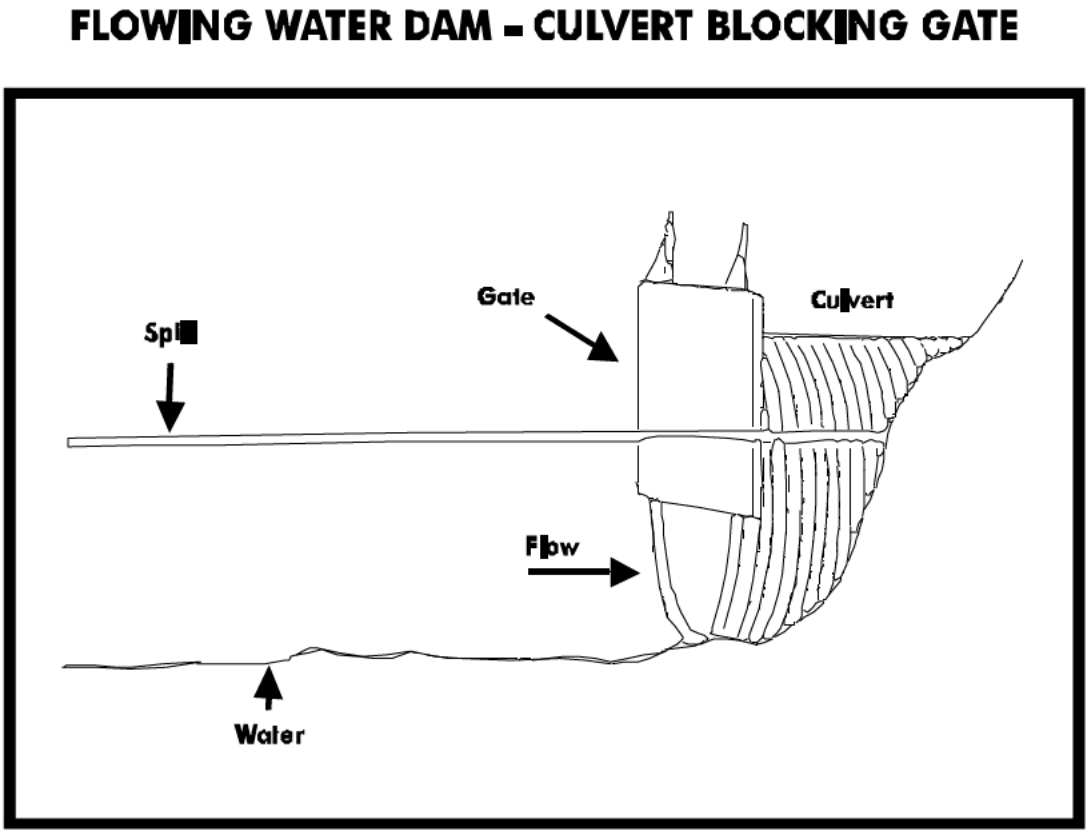


Figure 4.3 – Dam or Weir Construction - Culverts



Containment Boom

A floating boom may be used as one method of containment, usually on large watercourses.

A boom consists of a material which floats on water, such as styrofoam or foam rubber, wrapped in a material which is oil resistant to limit contamination to the boom. A weighted skirt attached to the bottom of the boom extends below the surface of the water 6 to 12 inches to prevent petroleum from moving under the boom. The boom is deployed into the water at an angle to the shore, and is used to divert petroleum toward the shore to allow recovery of the spilled material.

Many different types of boom exist, for use in a watercourse. When choosing the type of boom to deploy, the following criteria should be considered:

- **Flexibility** (preferred for currents >1 mph, areas with wave action, strong winds)
- **Easily visible in daylight** (boom lights at night)
- **Smooth surfaces** (ease of cleaning)
- **Few external components** (ease of cleaning)

- **Puncture resistant** (high debris areas)
- **Anchor points** (easy to secure during deployment)
- **Easily transported and handled**
- **Easy to assemble, deploy and retrieve**
- **End connectors the same** (ASTM, universal slide, etc.) (refer to **FIGURE 4.**)

Boom failure refers to situations where floating petroleum escapes either over or under the boom. Boom failure may be the result of design flaws, improper deployment methods, high river velocities or currents, or external forces acting on the boom.

The most common types of boom failure are:

Entrainment	▪ Turbulence due to high current at the upstream edge of the oil contained by the boom causes droplets of oil to break free and pass under the boom. ▪ Entrained oil resurfaces downstream of the boom. This can be prevented by deploying boom at an angle into the current, as opposed to straight across a fast flowing river (ie. 90 degrees to the shoreline.
Submergence	▪ Boom failure related to current speed. ▪ Boom's buoyancy is overcome by the force of the current, and the boom or parts of the boom submerge, allowing oil to pass over the freeboard
Splash Over	▪ Boom failure caused by wind-generated waves. ▪ Short interval between waves and their steepness cause oil to pass over the boom's freeboard
Planing	▪ Boom Failure occurs when wind and current act in opposition to each other, "flattening" the boom on the water's surface. ▪ Oil may pass over or under the boom in this instance ▪ Planing is a particular problem with fence boom deployed in other than calm water.

The angle of deployment for the boom depends on the current in the river. (See Figure 4.4 and Table 4.3 for typical deployment angles.) Ways of measuring or estimating slick movement in a watercourse are presented in the **Predicting Slick Movement in Water** section and **Table 4.3** below.

A boom which is deployed at too wide an angle in relation to the shore for the current may fail, allowing petroleum to flow under the skirt and escape downstream, or may break away from mooring pins holding the boom in place and be washed away. As a general rule, the angle of the boom should be narrower in relation to the shore as the current gets faster.

Multiple ropes and shoreline pins have traditionally been used to secure boom in place in a watercourse, and to keep the containment boom straight when facing into the pressure of the current. This method of securing the boom have caused some safety concerns in the past, due to the complex procedures required to deploy and secure multiple ropes and to retrieve the boom after deployment is complete. More recently, boom deflection devices have been developed which allow the boom to remain secure in the current, with the minimal number of ropes secured to the shoreline.

A helicopter or fixed wing aircraft may be used to determine the location, rate of spill movement, and extent of the spill more quickly than ground observation. An aerial survey using Geographical Positioning System (GPS) coordinates can allow the perimeter of the spill to be determined and mapped. Small pockets of spilled material along a shoreline can also be identified quickly, and the effectiveness of boom placement can be assessed, by identifying any petroleum surfacing downstream of booms.

Figure 4.4 – Typical Boom Deployment Angles in various Currents

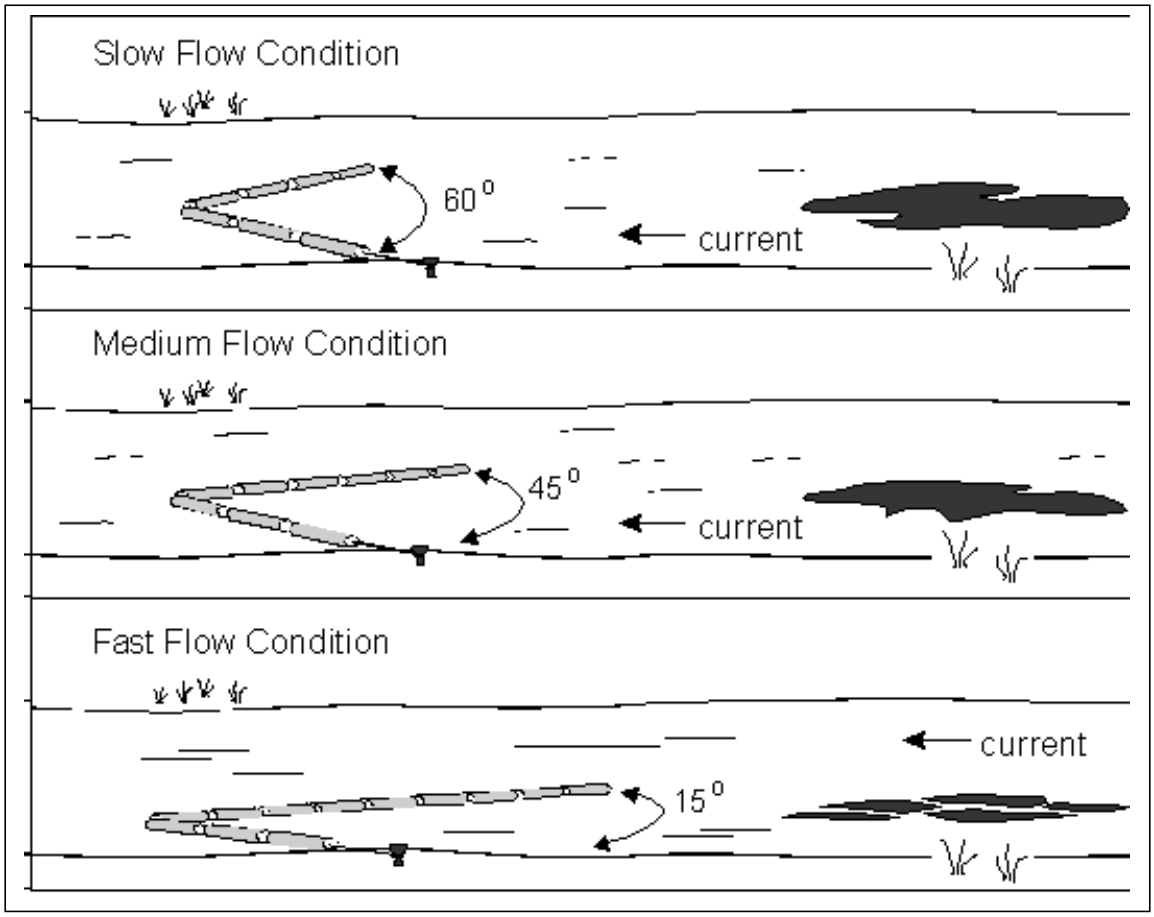


Table 4.3 - ESTIMATING SURFACE CURRENT SPEED AND BOOM DEPLOYMENT ANGLE

Time Required For Object To Travel 30 meters (100 feet) (seconds)	Surface Current Speed			Boom Angle
	(km/hr)	(m/s)	(miles/hour)	(degrees)
216	0.5	0.14	0.3	60°
108	1.0	0.28	0.6	60°
72	1.5	0.42	0.9	60°
54	2.0	0.56	1.2	45°
43	2.5	0.69	1.5	45°
36	3.0	0.83	1.9	45°
31	3.5	0.97	2.1	15°
27	4.0	1.11	2.5	15°
24	4.5	1.25	2.8	15°
22	5.0	1.39	3.1	15°
18	6.0	1.67	3.7	15°

NOTE: In currents faster than 6 km/h (3.7 mi./hr.), or in excessively turbulent waters, the use of containment booms may well be impractical, and other containment or protection methods such as the use of diversion or exclusion booms may be required.

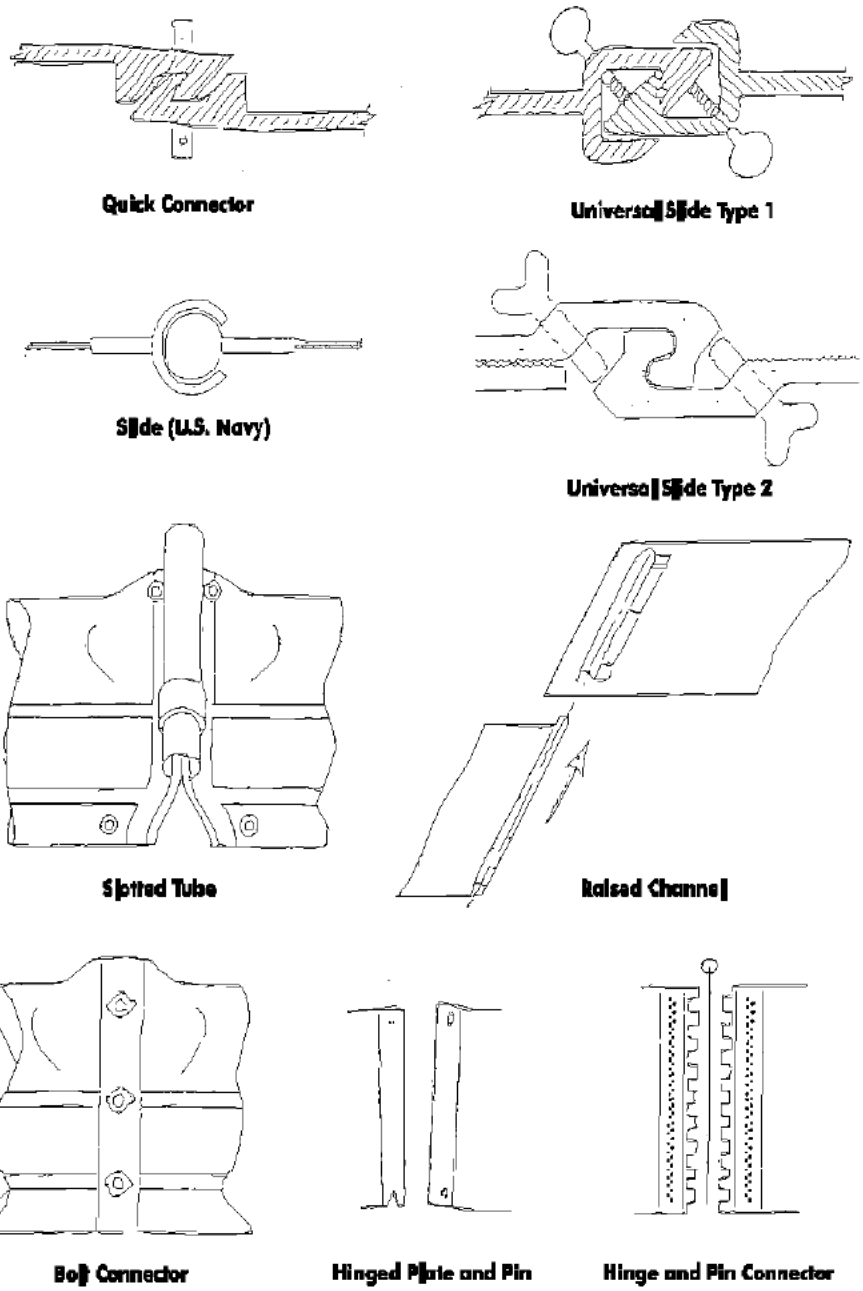
Sorbent Boom

Sorbent booms are available, consisting of oleophilic sorbent pad usually placed within a string of socks for easy deployment or simply tied together to contain the spilled petroleum material. Sorbent boom may be placed on a slow flowing creek or stream to pick up oil sheen. It may be usually used as a backup for hard boom, collecting oil that entrains as a result of water currents. However, sorbent boom is fragile and should not be used on fast flowing watercourses, as it can break or part easily

NOTE:

Sorbent boom cannot be used as exclusion, deflection or containment boom on moving water with additional backing (eg. wire mesh) to add strength to the material, if feasible. Also, sorbent boom has no skirt and simply floats on the surface of the water, potentially allowing the oil to be swept under and past it.

Figure 4.5 – Containment Boom – Typical Connector Configurations



Booming Techniques

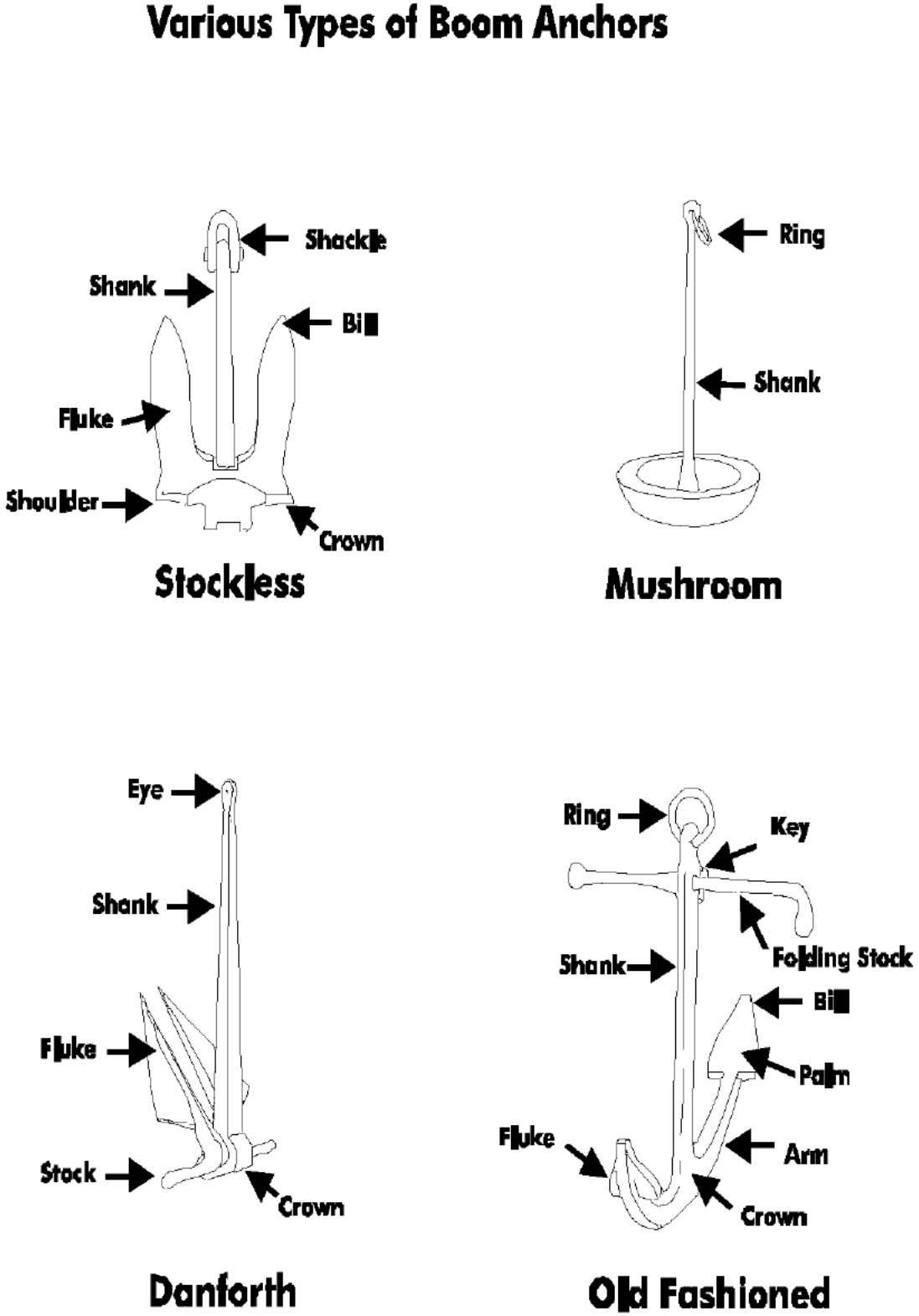
Boom is used to influence the movement of oil by several different methods. These include the following techniques.

TYPE	GENERAL DESCRIPTION	BEST USE
Exclusion Booming	▪ Used to protect areas that would be harmed or destroyed by contact with oil.	▪ Typically conducted to protect environmentally sensitive areas and economically sensitive areas such as recreational beaches ▪ Used to prevent the possibility of petroleum entry into irrigation system inlets and drinking water and other intakes
Diversion Booming	▪ Used to particularly on water with current speeds in excess of one mile per hour. Diversion booming can be accomplished with a single length of boom in slower, narrow channels, or several hundred feet of boom may be deployed in a cascade arrangement on wider, faster waters.	▪ Direct the movement of oil from one location to another, to facilitate recovery
Containment Booming	▪ Used to prevent further movement of the petroleum downstream	▪ In calm water to trap oil facilitate recovery operations

Boom Anchoring

Booms may be anchored to the waterbody's bottom, anchored to the shoreline, or secured by staking systems. Typical anchors are shown in **FIGURE 4.6**

Figure 4.6 – Types of Anchors for Boom Deployment



Predicting Slick Movement in Water

For spills that reach water, oil spill trajectories must be calculated in order to predict distance that the slick will travel, and the location with time, to allow appropriate work site to be chosen, which take into account both the time required to mobilize equipment to the site, and the time required to deploy equipment in a safe manner..

Assume that the slick travels at the same rate as the water. In order to calculate trajectories, the following information is required:

- Time elapsed since spill reached water
- Spill travel time
- Responder/equipment travel time (time required to arrive at selected response site), and
- Equipment deployment time (time required to safely deploy equipment at selected response site)

Methods to estimate spill travel time or flow rate:

- Contact the City, Water Power Company, or Army Corp of Engineers for the latest flow measurements of the impacted waterway. Flow readings obtained may have to be converted from flow (cubic feet per minute) to velocity (miles per hour). Also, the measured flow rate represents total flow within the stream/river bed at the gauging point; surface flow conditions at the actual response location may vary significantly

- Use a drift float (driftwood or stick). Record elapsed time for the object to travel 100 feet. An alternate method is to tie a drift float to a 100-foot length of line and record the amount of time required for the object to travel to the end of the line. Utilize the following formula to calculate velocity

  (100/time in seconds) x 0.6818 = current speed in MPH

  Similar information is also presented in Table 4.3 above.

Slick Trajectory Formula

Utilize the following formula to calculate maximum distance the slick will travel prior to deployment of response equipment:

Distance traveled = (Elapsed time + responder/equipment travel time + deployment time) x spill travel time.

By calculating slick trajectories, with assistance from overview maps of the areas and environmental sensitivity information, it can be determined which areas may be impacted and which worksites should be activated in

order to ensure that response tactics are completed prior to the spill impacting that area.

Factors that must be considered when selecting a work site include:

- accessibility
- seasonal changes
- safety consideration
- environmental/economic sensitivities, and
- public access

Recovery

A variety of common techniques for recovering spilled oil from water and adjoining shorelines are available. Details of these techniques are noted below, in Table 4.5.

Skimmers

Suction recovery methods involve the use of **pumps, vacuum trucks and *skimmers***. Pumps and vac trucks are used to actually move the product from the water to a storage device while skimmers are devices used to increase the efficiency of the oil recovery rate, by skimming oil floating on the surface of the water. Skimmers fall into four major categories:

- **Oleophilic** (oil-adhering) Surfaces (ropes, belts and discs)
- **Weir** (simple, self-leveling, vortex assisted, auger assisted)
- **Vacuum** (simple suction)
- **Hydrodynamic** (vortex, hydro cyclone, water jet)

Within each category there are several varieties, sizes, etc, available from various manufacturers. For most applications, either the weir or vacuum skimmers are appropriate. However, oleophilic skimmers are particularly useful in areas with large amounts of floating debris or ice. Each skimmer has advantages and disadvantages

The following factors affect the performance of a skimmer:

Oil type, viscosity and condition: Most skimmers operate fairly well in un-weathered, medium viscosity oils. Very light and very heavy oils cause reductions in skimmer efficiency. Likewise, oils that are weathered become less viscous due to light end loss and are not as easily skimmed as un-weathered oils.

***Winds, waves and currents*:** Except in rare instances, the effects of wind, wave action and currents serve to reduce the effectiveness of skimmers by moving oil over, under or around skimmers, or, by moving the skimmer's oil/water interface into less effective positions.

Air and water temperature: Low air and water temperatures cause an increase in the viscosity of oil with a resultant decrease in skimmer efficiency. Ice may form as a result of low temperatures reducing skimmer efficiency or causing skimmer freeze-up.

Slick thickness: A primary factor in the efficiency of all skimmers, oil thickness is particularly important with weir and suction skimmers. The basic rule is: the thicker the slick, the higher the recovery rate.

Debris: Most skimmers operate best in debris-free environments. Disc and drum skimmers are the least affected by debris. Weir and suction skimmers are sensitive to damage and clogging from debris and require tending in high debris areas.

Cleanup

Cleanup methods undertaken at a spill site will depend on site conditions, area of contamination, type of contamination, and equipment available. Common cleanup options for watercourses are presented in Table 4.6.

Table 4.5 - WATERCOURSE RECOVERY OPTIONS

Watercourse Recovery Options

Recovery Method	Technique Description	Comments
Vacuum Truck	A vacuum truck is used to recover free petroleum from water in areas accessible by trucks or heavy equipment.	A vacuum truck and operator are required to undertake this method. Use of the method is subject to site access. Surface disturbance and soil damage may result from movement of the vacuum truck to and from the site. Topsoil may need to be stripped into the site before undertaking recovery activities.
Pumping of Spilled Material into Storage	A pump is used to recover free petroleum from the watercourse in areas not accessible by vacuum trucks.	Pumps must be safe for use at the spill site, and be compatible with the product to be pumped. Surface disturbance and soil damage may result from movement of the pump and storage equipment to the site. Technique will generate large volumes of contaminated water which will require storage. Skid tanks, tanker trucks, port-a-tanks, fuel bladders, permanent tanks, or a lined excavated area must be available to provide storage for the recovered material. A work crew and power supply for the pump must also be available.
Skimmers	Mechanical devices are used to skim petroleum from water surface or remove petroleum / water mixture for storage.	Skimmer will need sufficient water depth to float. Weir skimmers work best on thicker layers of petroleum in flowing water. Will generate large quantities of water / petroleum mixture. Drum or disc skimmers will pick up thinner layers of oil on slow moving water. Debris and vegetation may clog skimmer, making oil pickup difficult. A suction, floating weir, disc or drum skimmer, pump and work crew are required to undertake method. A secure storage facility (tanker, portable tanks, fuel bladders or excavated, lined storage site) is also required.

Table 4.6 - WATERCOURSE CLEANUP OPTIONS

Watercourse Cleanup Options		
Clean-up Method	**Technique Description**	**Comments**
Manual Cleanup	A work crew and hand tools are used to clean up watercourses and shoreline areas. Manual recovery is used to remove oil and oily debris from the shore and shallow water.	Manual cleanup can be time-consuming and labour-intensive, especially for large areas. Muddy or unstable soils may make this method difficult. not effective for recovery of large quantities of oil. Slip, trip and fall injuries are common in this type of work. All necessary safety precautions should be undertaken for personnel who work in or near the water. Contaminated land and water vegetation can be removed manually, and will revegetate the following year if root systems are not damaged. Large amounts of vegetation may be difficult to remove or clean. A work crew with hand tools is required to undertake this method. A lined storage area, lugger buckets, or storage drums are also required to store contaminated material before disposal.
Low Pressure Water Flushing	Low pressure flushing is used to wash petroleum from contaminated mud, gravel, soil or vegetation along shoreline, downstream to a collection point.	Technique may disturb soil, vegetation and microorganisms at site. Pumps, a power supply, hoses, and a work crew, are required to undertake this method. A lined, excavated area or storage tanks may be required to hold water for treatment or testing.
Sorbents (particulate sorbent, sorbent pads, sorbent sweeps (pom-poms or mops), and sorbent booms)	Method is used in isolated areas to clean up small amounts of spilled petroleum. Primarily used for shoreline cleanup and to remove small amounts of spilled petroleum remaining on a watercourse. adsorbent materials trap materials on their surface while absorbent materials trap materials within their structure	Cleanup is labour-intensive and time-consuming. Minimal surface disturbance, other than foot traffic. Sorbents are not effective on weathered oil or in cold weather. Particulate sorbents are the most difficult to use effectively due to difficulty in containing and recovering all of the particulate material Sorbents must be disposed of in compliance with government legislation. Sufficient sorbent, work crews, and storage containers or a lined storage area for contaminated sorbents must be available.

Watercourse Cleanup Options

Clean-up Method	Technique Description	Comments
Sorbents cont'd		Sorbent pads and sweep are useful in that they may be used on the water surface, they can be used to wipe and scrub surfaces and they can be used to reduce the spread of contamination in areas where workers are present.

4.7 Tankage

Spills from tankage at a facility may occur due to leaks in piping or equipment, or leaks in the storage tank or associated hatches and flanges on the tank. Tanks may also rupture, due to damage caused by excessive hydraulic pressure, mechanical damage, or damage caused by severe weather conditions.

If tanks are overfilled, excess petroleum may also be released from the unloading facility, spilling into secondary containment, onto the ground, or flowing across the ground to enter a watercourse.

Specific response procedures for spills from a leak of rupture from a tank containing petroleum would depend on the nature and location of the release. If petroleum released from tankage migrates from the facility, additional complexity may be added to the response, requiring land containment or water containment efforts to be implemented as well.

Appropriate containment, recovery and clean-up procedures described in Section 4.4 for land spills shall apply to spills from tankage into secondary containment or onto land. For spills from tankage that reach a watercourse, appropriate procedures described in Section 4.6 for water spills shall apply.

For other specialized procedures for spills of petroleum materials, refer to other appropriate procedures contained in Section 4.

4.8 Tanker Loading Facilities

Spills of petroleum may occur at a tanker unloading facility due to leakage from the vehicle, and/or associated piping on the vehicle. Transfer hoses connected during the unloading process may also leak due to cracks or holes. If connections are not made properly, connectors could release under pressure, spilling petroleum onto the ground.

Spills could also occur at the facility due to leaks in piping racking or equipment, or leaks in the storage tanks associated with the facility. If tanks are overfilled, excess petroleum may also be released from the unloading facility, spilling into secondary containment, onto the ground, or flowing across the ground to enter a watercourse.

Specific response procedures for spills from a leak of spill of petroleum at a tanker unloading facility would depend on the nature and location of the release. If petroleum released from a tanker loading facility migrates from the facility, additional complexity may be added to the response, requiring land containment or water containment efforts to be implemented as well.

For smaller spills from vehicles or piping which occur on land, sorbent materials may be used to undertake containment, recovery and clean-up. For larger spills, dykes, trenches or other land containment methods may be better suited, with product recovery using pumps or vacuum trucks. (See Section 4.4, for a listing of various land containment, recovery and clean-up methods.)

For spills from a tanker unloading facility which reach a watercourse, appropriate procedures described in Section 4.6 for water spills shall apply.

For other specialized procedures for spills of petroleum materials, refer to other appropriate procedures contained in Section 4.

4.9 Site Protection

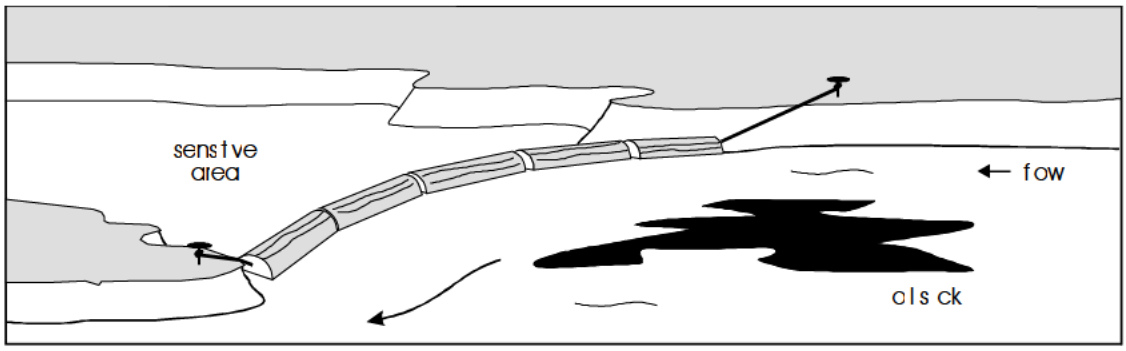
In emergency operations where the spilled material cannot be contained completely or where sensitive areas may be threatened by the spill, the Incident Commander shall determine whether any site protection actions must be implemented to limit damage to sensitive areas.

Sensitive areas may include community water supplies, special habitat, historical sites, shorelines, or other specially designated areas. Environmentally sensitive areas such as waterfowl staging sites, nesting habitat, and domestic fishing areas should also be given high priority for site protection.

High Consequence Areas (HCA's) identified in the area surrounding an emergency site in the United States shall be assessed for potential impacts from the emergency, and shall be given a high priority for site protection.

The Incident Commander should refer to company environmental sensitivity maps, the Truckee River Geographic Response Plan and other available reference information, and include consultation with local authorities, as appropriate, to determine if sensitive areas are at risk from the spill or associated containment, recovery, and cleanup activities.

A summary of various site protection options is presented in Table 4.7 and Figure 4.7.



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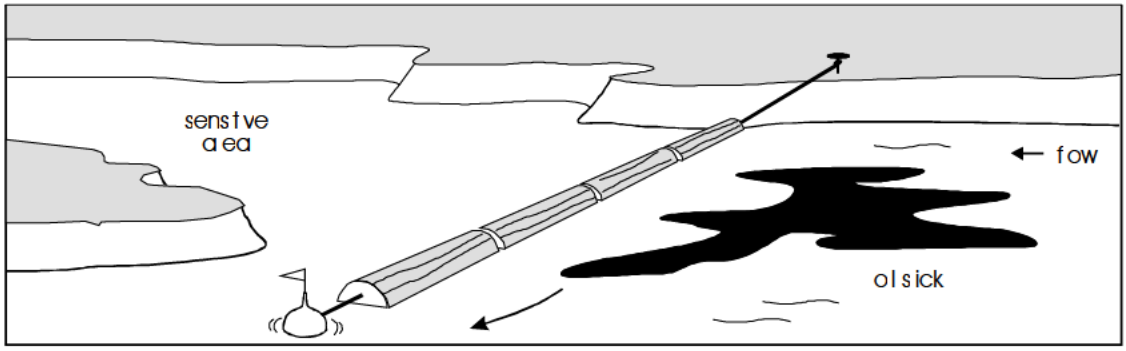

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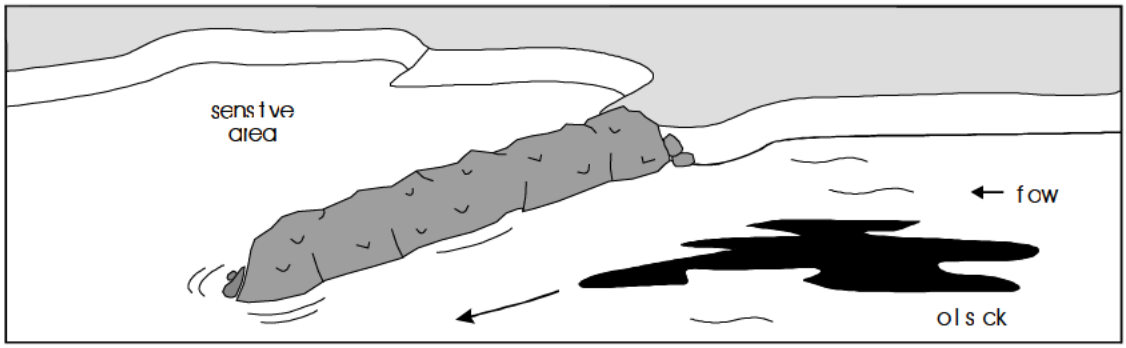

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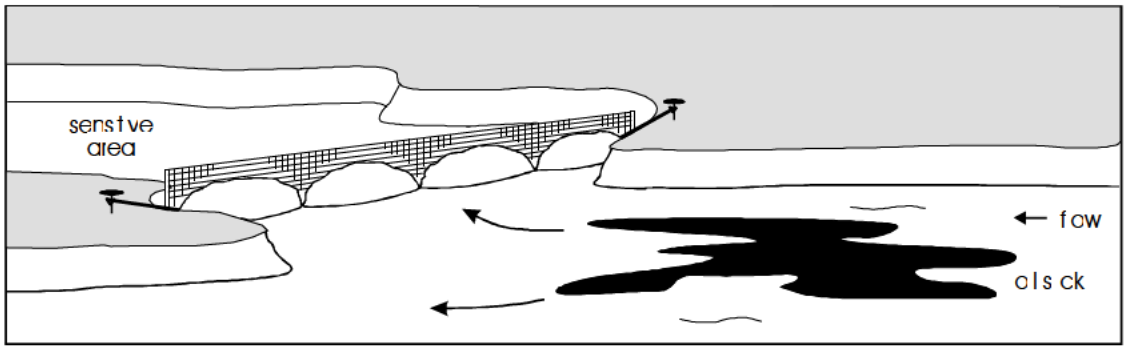

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So bent Boom

Figure 4.7 - SITE PROTECTION TECHNIQUES

Table 4.7 - SITE PROTECTION OPTIONS

Site Protection Options

Containment Method	Technique Description	Comments
Exclusion Boom	Exclusion booms are used across river or creek mouths, small bays, or around sensitive areas to prevent spilled material from entering the area.	Fast current, river turbulence, or breaking waves may cause the protected area to be contaminated, making this method impractical. A work crew with a river containment boom and associated equipment (anchors, cables, shoreline pins, rope) is required to undertake this method. Boats may also be required.
Diversion Boom	The boom is deployed at an angle to the approaching slick to divert the slick away from the sensitive area.	Fast current, river turbulence, or breaking waves may cause the protected area to be contaminated making this method impractical. There may be possible heavy shoreline contamination downstream of sensitive area. A work crew with river containment boom and associated equipment (anchors, cables, shoreline pins, rope) is required for this method. Boats may also be required.
Sorbent Boom	A sorbent boom is used on calm waters to exclude sheen-type slicks from sensitive areas. Chicken wire or a containment boom may be used to back-up the sorbent boom.	Sorbent boom use is only viable in low flow watercourses, as the boom is not very sturdy and breaks easily (chicken wire or containment boom may be used behind a sorbent boom to reinforce the sorbent boom and prevent breakage). A sorbent boom will pick up sheen, but not large amounts of petroleum. A sorbent boom also has no skirt allowing large amounts of petroleum to easily flow under it. A sorbent boom is not very effective in cold weather. Large amounts of sorbent boom are expensive and must be replaced in the watercourse when saturated. Used sorbent must be stored and disposed of in compliance with government legislation. A sorbent boom, work crew, and possibly boats may be required to undertake this method.
Earth Berm / Dike	Earth berms or dikes are	Earth berms or dikes are used to protect

Site Protection Options

Containment Method	Technique Description	Comments
	used across a waterway or on land to deflect spill material away from a sensitive area toward a location where spilled material can be contained and recovered.	sensitive areas on land and wide, shallow streams and rivers with relatively calm water. Sufficient dry earth, gravel, or sand must be available to contain spill. Earth may be frozen, dependent on season. Installation of berm causes significant disturbance to excavation and construction sites and may result in disturbance to streams. A berm can create eddy conditions between the berm and shoreline (the berm should not be located immediately upstream of sensitive area). A work crew or earth-moving equipment and operators are required to undertake this method of protection.
Scare Guns	Scare guns are propane or air-powered devices which emit a loud noise at timed intervals. Scare guns scare birds and prevent them from landing at a contaminated site, or scare wildlife away from a site.	Scare guns must be moved frequently to ensure that birds or wildlife do not become accustomed to the noise. Propane scare guns should be placed well away from the spill site as a safety measure. Scare guns must be obtained from suppliers to undertake this method. Some government agencies and spill cooperatives have scare guns available for use.

4.10 Product Information

Jet-A is transported via the Kinder Morgan North Line to breakout tankage at the Sparks Terminal site. A summary of product characteristics and physical properties is listed on the Material Safety Data Sheet which is included at the end of this section.

NOTE:
for the
Electronic Version
See Separate Exxon PDF format MSDS for "Jet-A"

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: **JET A**
Product Description: Petroleum Hydrocarbons
Product Code: 121012-60
Intended Use: Aviation fuel

COMPANY IDENTIFICATION

Supplier: **EXXON MOBIL CORPORATION**
3225 GALLOWS RD.
FAIRFAX, VA. 22037 USA

24 Hour Health Emergency	609-737-4411
Transportation Emergency Phone	800-424-9300
ExxonMobil Transportation No.	281-834-3296
Product Technical Information	800-662-4525, 800-947-9147
MSDS Internet Address	http://www.exxon.com, http://www.mobil.com

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
KEROSENE	8008-20-6	> 99%

Hazardous Constituent(s) Contained in Complex Substance(s)

Name	CAS#	Concentration*
ETHYL BENZENE	100-41-4	0.1 - 1%
NAPHTHALENE	91-20-3	< 1%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 3 HAZARDS IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Combustible. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an incendiary electrical discharge.

POTENTIAL HEALTH EFFECTS

Irritating to skin. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs. Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. High-pressure injection under skin may cause serious damage.

Target Organs: Lung | Skin |

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

NFPA Hazard ID:	Health:	2	Flammability:	2	Reactivity:	0
HMIS Hazard ID:	Health:	2	Flammability:	2	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

Inhalation

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Skin Contact

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion

Seek immediate medical attention. Do not induce vomiting.

NOTE TO PHYSICIAN

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE

Hydrocarbon Solvents/Petroleum Hydrocarbons- Skin contact may aggravate an existing dermatitis.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Flammable. Hazardous material. Firefighters should consider protective equipment indicated in Section 8. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulfur Oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >38C (100F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 5.0
Autoignition Temperature: 250°C (482°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid all personal contact. Do not siphon by mouth. Use proper bonding and/or grounding procedures. Do not use as a cleaning solvent or other non-motor fuel uses. For use as a motor fuel only. It is dangerous and/or unlawful to put fuel into unapproved containers. Do not fill container while it is in or on a vehicle. Static electricity may ignite vapors and cause fire. Place container on ground when filling and keep nozzle in contact with container. Do not use electronic devices (including but not limited to cellular phones, computers, calculators, pagers or other electronic devices, etc.) in or around any fueling operation or storage area unless the devices are certified intrinsically safe by an approved national testing agency and to the safety standards required by national and/or local laws and regulations. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source).

Static Accumulator: This material is a static accumulator.

STORAGE

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Storage containers should be grounded and bonded. Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES

Exposure limits/standards (Note: Exposure limits are not additive)

Source	Form	Limit / Standard			NOTE	Source
ETHYL BENZENE		TWA	435 mg/m3	100 ppm	N/A	OSHA Z1
ETHYL BENZENE		STEL	125 ppm		N/A	ACGIH
ETHYL BENZENE		TWA	100 ppm		N/A	ACGIH
JET A-1 (NATO F-35)	Vapor and aerosol.	TWA	500 mg/m3	100 ppm	N/A	ExxonMobil
KEROSENE	Stable Aerosol.	TWA	5 mg/m3		N/A	ExxonMobil
KEROSENE	Vapor.	TWA	200 mg/m3		N/A	ExxonMobil
KEROSENE [as total hydrocarbon vapor]	Non-Aerosol	TWA	200 mg/m3		Skin	ACGIH
NAPHTHALENE		TWA	50 mg/m3	10 ppm	N/A	OSHA Z1
NAPHTHALENE		STEL	15 ppm		Skin	ACGIH
NAPHTHALENE		TWA	10 ppm		Skin	ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

Chemical resistant gloves are recommended. If contact with forearms is likely wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid
Color: pale yellow
Odor: Petroleum/Solvent
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 C): 0.775 - 0.83
Flash Point [Method]: >38C (100F) [ASTM D-93]
Flammable Limits (Approximate volume % in air): LEL: 0.7 UEL: 5.0

Autoignition Temperature: 250°C (482°F)
Boiling Point / Range: > 200C (392F)
Vapor Density (Air = 1): N/D
Vapor Pressure: < 0.133 kPa (1 mm Hg) at 20 C
Evaporation Rate (N-Butyl Acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 1.1 cSt (1.1 mm²/sec) at 40 C
Oxidizing Properties: See Sections 3, 15, 16.

OTHER INFORMATION

Freezing Point: -47°C (-53°F)
Melting Point: N/A

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Avoid heat, sparks, open flames and other ignition sources.

MATERIALS TO AVOID: Halogens, Strong Acids, Alkalies, Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m³	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Moderately irritating to skin with prolonged exposure. Based on test data for structurally similar materials.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Vapor/aerosol concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects including death.
Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.
Jet fuel: Some jet fuels have potential in mice to suppress indicators of immune system functionality. The relevance of these effects to humans is uncertain.

Contains:

Kerosene: Carcinogenic in animal tests. Lifetime skin painting tests produced tumors, but the mechanism is due to repeated cycles of skin damage and restorative hyperplasia. This mechanism is considered unlikely in humans where such prolonged skin irritation would not be tolerated. Did not cause mutations In vitro. Inhalation of vapors did not result in reproductive or developmental effects in laboratory animals. Inhalation of high concentrations in animals resulted in respiratory tract irritation, lung changes and some reduction in lung function. Non-sensitizing in animal tests.
NAPHTHALENE: Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.
ETHYLBENZENE: Caused cancer in laboratory animal studies. The relevance of these findings to humans is uncertain.

Additional information is available by request.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ETHYL BENZENE	100-41-4	5
NAPHTHALENE	91-20-3	2, 5

--REGULATORY LISTS SEARCHED--

1 = NTP CARC
2 = NTP SUS
3 = IARC 1
4 = IARC 2A
5 = IARC 2B
6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY

More volatile component -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.

High molecular wt. component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY
Biodegradation:

Majority of components -- Expected to be inherently biodegradable

Atmospheric Oxidation:

More volatile component -- Expected to degrade rapidly in air

BIOACCUMULATION POTENTIAL

Majority of components -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: FUEL, AVIATION, TURBINE ENGINE
Hazard Class & Division: 3
ID Number: 1863
Packing Group: III
Marine Pollutant: MP: 100 %weight PP: 0 %weight
ERG Number: 128
Label(s): 3
Transport Document Name: UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, PG III, MARINE POLLUTANT (Kerosene)

Footnote: The flash point of this material is greater than 100 F. Regulatory classification of this material varies. DOT: Flammable liquid or combustible liquid. OSHA: Combustible liquid. IATA/IMO: Flammable liquid. This material is not regulated under 49 CFR in a container of 119 gallon capacity or less when transported solely by land, as long as the material is not a hazardous waste, a marine pollutant, or specifically listed as a hazardous substance.

LAND (TDG)

Proper Shipping Name: FUEL, AVIATION, TURBINE ENGINE
Hazard Class & Division: 3
UN Number: 1863
Packing Group: III
Special Provisions: 17

SEA (IMDG)

Proper Shipping Name: FUEL, AVIATION, TURBINE ENGINE
Hazard Class & Division: 3
EMS Number: F-E, S-E
UN Number: 1863
Packing Group: III
Marine Pollutant: Yes
Label(s): 3
Transport Document Name: UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, PG III, (38°C c.c.), MARINE POLLUTANT (Kerosene)

AIR (IATA)

Proper Shipping Name: FUEL, AVIATION, TURBINE ENGINE
Hazard Class & Division: 3
UN Number: 1863
Packing Group: III
Label(s) / Mark(s): 3
Transport Document Name: UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, PG III

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Immediate Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ETHYL BENZENE	100-41-4	0.1 - 1%
NAPHTHALENE	91-20-3	< 1%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ETHYL BENZENE	100-41-4	1, 4, 10
KEROSENE	8008-20-6	1, 17, 18, 19
NAPHTHALENE	91-20-3	1, 4, 5, 9, 10

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:
Section 04: First Aid Skin - Header was modified.
Section 06: Notification Procedures - Header was modified.
Section 06: Accidental Release - Protective Measures - Header was modified.
Section 08: Personal Protection - Header was modified.
Section 16: NA Contains was added.
Section 16: NA Contains - Header was added.
Section 04: First Aid Inhalation - Header was modified.
Section 01: Company Contact Methods Sorted by Priority was modified.
Section 06: Protective Measures was modified.
Section 10 Stability and Reactivity - Header was modified.
Section 13: Disposal Recommendations - Note was modified.
Section 13: Empty Container Warning was modified.
Section 09: Color was modified.
Section 09: Evaporation Rate - Header was modified.
Section 08: Personal Protection was modified.
Section 08: Hand Protection was modified.
Section 11: Inhalation Lethality Test Data was modified.
Section 05: Hazardous Combustion Products was modified.
Section 06: Accidental Release - Spill Management - Water was modified.
Section 09: Relative Density - Header was modified.
Section 09: Viscosity was modified.
Section 08: Respiratory Protection was deleted.
Section 14: Transport Document Name was modified.
Section 14: Sea (IMDG) - Header was modified.
Section 14: Label(s) - Header was modified.
Section 14: Marine Pollutant - Header was added.
Section 14: Marine Pollutant was added.
Section 14: Hazard Class was modified.
Section 14: Marine Pollutant - Header was added.
Section 14: Marine Pollutant was added.
Section 14: Label(s) was modified.

Section 14: Transport Document Name was modified.
Section 15: List Citation Table - Header was modified.
Section 16: Water Spill was modified.
Section 08: Exposure limits/standards was deleted.
Section 06: Notification Procedures was modified.
Section 08: Exposure Limits Table was modified.
Section 11: Chronic Tox - Component was modified.
Section 11: Chronic Tox - Product was modified.
Section 08: OEL Table - Notation Column - Header was modified.
Section 08: Exposure Limit Values - Header was modified.
Section 04: First Aid Ingestion - Header was modified.

PRECAUTIONARY LABEL TEXT:
Contains: KEROSENE
WARNING!
HEALTH HAZARDS
Irritating to skin. If swallowed, may be aspirated and cause lung damage. May cause central nervous system depression.
Target Organs: Lung | Skin |

PHYSICAL HAZARDS
Combustible. Material can accumulate static charges which may cause an incendiary electrical discharge.

PRECAUTIONS
Avoid contact with skin. Do not siphon by mouth. Use proper bonding and/or grounding procedures.

FIRST AID
Eye: Flush thoroughly with water. If irritation occurs, get medical assistance.

Oral: Seek immediate medical attention. Do not induce vomiting.

Skin: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse.

FIRE FIGHTING MEDIA
Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

SPILL/LEAK
Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Report spills as required to appropriate authorities. If the Flash Point exceeds the Ambient Temperature by 10 degrees C or more, use containment booms and remove from the surface by skimming or with suitable absorbents when conditions permit. If the Flash Point does not exceed the Ambient Air Temperature by at least 10C, use booms as a barrier to protect shorelines and allow material to evaporate. Seek the advice of a specialist before using dispersants.
Use
Not intended or suitable for use in or around a household or dwelling.

This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights. This product contains a chemical known to the State of California to cause cancer. Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm are created by the combustion of this product.

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Internal Use Only

MHC: 1A, 0, 0, 0, 3, 1 PPEC: C

DGN: 2000276XUS (1005331)

Section 5 – List of Contacts

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Company Contacts

Organization	Phone Number
Qualified Individual (Frank Padilla)	Office: (775) 331-5420 Cell Phone: (775) 745-5273
Alternate QI (Lee Bonham)	Office: (775) 331-5420 Cell Phone: (775) 745-5290
Rob Farmer, Terminal Operator	Office: (775) 331-5420 Cell Phone: (775) 745-5289

Oil Spill Response Organization (OSRO)

Organization	Phone Number
Oil Spill Response Organization (OSRO) **Clean Harbors** **SPARKS SERVICE CENTER** **55 Silicon Drive** **McCarran, NV 89434**	24 Hr. (800) 645-8265 (24 Hr.) local (775) 331-9400 (24 hr.) Fax. (775) 343-1235

Government Agencies

Organization	Phone Number
Federal	
National Response Center (NRC):	1-800-424-8802 (202) 267-2675
Environmental Protection Agency (EPA)	(775) 947-8000 (866) EPA-WEST
Federal On-Scene Coordinator (OSC) and/or Regional Response Center (RRC):	24 Hr. (312) 353-2318
CHEMTREC – Emergency Response Information Service	24 Hr. (800) 424-9300
State / County	
State Division of Environmental Protection	(775) 687-9485
State Division of Emergency Management	(775) 687-4240
Washoe County District Health Department	(775) 328-2400
Washoe County Local Emergency Planning Committee (LEPC):	(775) 337-5898

Government Agencies cont'd

Name / Organization	Phone Number
City of Sparks	
Toby Ebens Head of Environmental Control City of Sparks	(775) 691-9227 (24 hour)
Andy Hummel, P.E. Dept. of Public Works, Engineering City of Sparks 1675 E. Prater Way #106 Sparks, NV 89434	office : (775) 353-2375 cell (775) 690-4383 fax (775) 353-1635 e-mail: ahummel@cityofsparks.us

Local Emergency Agencies

Organization	Phone Number
Local Response Team: Police, Fire and Emergency Medical Services	9-1-1
Fire Department:	(775) 353-2266 (day) (775) 353-2259 (night) 24 Hr. 911
Police Department:	(775) 353-2231 24 Hr. 911
Hospitals:	
Northern Nevada Medical Center	(775) 331-7000
St. Mary's Regional Medical Center	(775) 770-3000
Washoe Medical Center	(775) 982-4100

Other Companies

Organization	Phone Number
Kinder Morgan LLC	(775) 358-6971
Buckeye / WestPac	(866) 541-8380 (760) 802-1535 (901) 331-8532
Reno / Tahoe Airport	(775) 691-5312

Other Organizations

Organization	Phone Number
Local Water Supply System: Truckee Meadows Water Authority	(775) 691-9227
Weather Report: (NOAA)	(202) 482-6090
Local Television/Radio Station for Evacuation Notification: Channel 11 – Fox – KRXI	(775) 856-1100

Other Contacts

Organization	Phone Number
5. Insurance Representative	
Cottrell Fox Executive Vice President J.W. Terrill Insurance, Benefits & Risk Management 825 Maryville Centre Drive Chesterfield, MO 63017	(314) 594-2700

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Section 6 – Training

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SECTION 6 – TRAINING

6.1 Training Requirements

Company Responsibilities - General

Training is essential to the readiness and effectiveness of the terminal's on-site emergency response team. The Oil Pollution Act of 1990 (OPA 90) requires specific response training for all personnel involved in an oil spill response operation.

In addition, facility owners or operators are responsible for ensuring that personnel are trained to meet all Occupational Safety and Health Administration (OSHA) Safety Requirements, including the Hazardous Waste Operation Standard (29 CFR 1910.120). The latter requirements, commonly called the HAZWOPER regulations, were established to ensure the health and safety of personnel engaged in hazardous substance response and clean-up operations. Besides HAZWOPER regulations, employers must comply with federal regulations contained in 49 CFR Part 172 to train employees handling hazardous materials.

OP Reno LLC shall provide a training program which meets all applicable regulatory requirements and integrates industry practices, company policies, and past experience, using experienced personnel, company documents as well as the Code of Federal Regulations (CFR) for developing training topics.

Each individual with responsibilities under this Plan will be provided with training applicable to that individual's responsibilities and duties. The type and amount of training required of an individual will vary depending upon the complexity and nature of the individual's responsibilities and duties.

The training program shall be delivered using a variety of methods, as appropriate, which may include but not be limited to:

- employee safety meetings
- formal classroom instruction
- on-the-job training.
- contractor / vendor-supplied training
- specialized training for key personnel at commercial training facilities

Driills and exercises will also be conducted that follows the National Preparedness for Response Exercise Program (PREP). Information related to these items is presented in Section 7 of this Emergency Response Plan.

6.2 49 CFR 194 Requirements

All Personnel

As required under 49 CFR 194.117, OP Reno LLC shall conduct training to ensure that all personnel know:

- Their responsibilities under the response plan,
- The name and address of, and the procedure for contacting, the operator on a 24-hour basis, and
- The name of, and procedures for contacting the qualified individual on a 24-hour basis;

Reporting Personnel

For personnel undertaking reporting requirements under this plan, additional training shall be undertaken to ensure that they know:

- The content of the information summary of this response plan,
- The toll-free telephone number of the National Response Center, and
- The internal and external notification process, and applicable telephone numbers

Response Personnel

For personnel engaged in response activities under this plan, training shall be undertaken to ensure that they know:

- The characteristics and hazards of the oil discharged,
- The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions,
- The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage, and
- The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus.

Frequency of Training

Appropriate training shall be conducted for each employee on an annual basis, based on the level of responsibilities identified above.

Training Records

OP Reno LLC shall maintain a training record for each individual that has been trained as required by this section. Training which is undertaken for each employee shall be recorded, using the OP Reno Personnel Training Record Log (See **Appendix C, Form 9** for an example of this form).

These records will maintained as long as the individual who has undertaken the training is assigned duties under the response plan

These records will maintained in the following manner , as required by 49 CFR117 (b) as long as the individual is assigned duties under the response plan:

- Records for OP Reno LLC will be maintained at the operator's headquarters; and
- Records for personnel engaged in response, other than operator personnel (eg. OSRO personnel), shall be maintained as determined by the operator.

Records shall be made available for inspection upon request by the inspecting agency responsible for OPA' 90 compliance.

6.3 OSHA Required Training (29 CFR 1910.120)

General

The Occupational Safety and Health Administration (OSHA) considers petroleum products and gases to be hazardous materials.

OSHA rules identified under 29 CFR 1910.120 require that all company personnel who are expected to respond to and control hazardous discharges undergo formal worker health and safety training before starting work. Company personnel are also required to receive refresher training pursuant to 29 CFR 1910.120, on an annual basis.

Training Responsibilities

The Terminal Manager is responsible for ensuring that all personnel at the Sparks Terminal are trained to meet the Occupational Safety and Health Administration (OSHA) standards for HAZWOPER requirements found in Title 29 CFR 1910.120.

Personnel who fill the On-Scene Incident Command role and all supervisory personnel assigned to periodic field visits to response sites are subject to the federal requirements of 29 CFR 1910.120 and the PREP. They will receive supplemental training to complete the statutory requirements.

Training Curriculum

Training shall be undertaken to meet HAZWOPER requirements, as prescribed in 29 CFR 1910.120 (q), subpart (q)(6)(i) to (q)(6)(v), for all employees who are expected to respond to emergencies based on employee involvement in an emergency.

This includes the First Responder (8 hour), and Incident Commander (24 hour) training requirements, as well as the annual refresher requirements specified in (q)(8)(i).

Employees within OP Reno LLC shall receive different levels of training based on their level of emergency responsibilities. The following table lists the training, by job title, provided to comply with OSHA 1910.120.

Table 6.1 – Key Personnel – Training Levels

Job Title	Response Level	Training (hrs)
LLC Manager	Incident Commander	24
Terminal Manager or designate	Incident Commander	24
Operator	1st Responder, Operations	8

The following outline provides the general content of the required training identified under 29 CFR 1910.120:

- **Introduction to HAZWOPER**
  - 1910.120 requirements, as well as background information on legislation such as the Clean Air Act, Clean Water Act, SARA, CERCLA and related OSHA and DOT regulations

- **Hazard Communications / Worker Right-to-Know requirements**
  - Review of the company Hazard Communication / Worker Right-to-Know program

- **Potential Hazards of Petroleum**
  - Discuss the potential physical hazards and toxic properties of petroleum products handled within the terminal site

- **Sources of Information**
  - Discuss sources of information for chemicals or hazardous materials involved in a leak or spill

- **Notifications and Reporting**
  - Discuss how emergency notifications are received and handled. Discuss emergency notification procedures to be used in the event of an emergency and who should be notified. Discuss reporting of accidents, illnesses, or injuries

- **Safety Procedures and Site Safety and Health Plan**
  - Discuss safety procedures to be followed in an emergency. Discuss development of a Site Safety and Health Plan for an incident

- **Site Risk Assessment**
  - Provide knowledge and competency to identify hazards, and to select proper worker protection at a spill site

- **Monitoring Equipment and Methods**
  - Provide knowledge and competency in selection and use of field monitoring devices

- **Personal Protective Equipment**
  - Provide instruction on selection, care, and use of personal protective equipment

- **Respiratory Protection**
  - Provide knowledge and competency in the purpose, selection, maintenance and use of respiratory protection devices

- **Controlling Spills and Clean-up**
  - Discuss methods to control, contain and clean-up a release, to reduce the effects of the spill. Discuss development of emergency action plans and area specific response procedures. Discuss any special site related environmental hazards

- **Decontamination Procedures / Hygiene Practices**
  - Discuss decontamination procedures required for releases of petroleum hydrocarbons and other potential hygiene practices in an incident

- **Incident Command System**
  - discusses principles and use of Incident Command System (ICS) during an incident

Training Records

Training which is undertaken for each employee shall be recorded, using the OP Reno Personnel Training Record Log (See **Appendix C, Form 9** for an example of this form). These records will maintained as long as the individual who has undertaken the training is assigned duties under the response plan

OSHA training records are kept in the employees training file at the terminal and shall be made available for inspection upon request by the inspecting agency responsible for OSHA compliance

OSHA Training – Other Personnel

Oil Spill Removal Organizations (OSRO's) contracted to respond to an emergency on behalf of OP Reno LLC, or other contract personnel shall be required to provide training programs to their personnel, under 29 CFR 1910.120, which meet or exceed the requirements listed above, as appropriate, based on the OSRO response personnel's or contractors involvement in the emergency.

As per requirements identified in 49 CFR 194.117(c), these requirements would also apply to any volunteers and casual laborers employed during a response, pursuant to 40 CFR Part 311.

6.4 Spill Prevention and Emergency Response Training

49 CFR 195.403 Requirements

As required under 49 CFR 195.403, OP Reno LLC shall conduct training to ensure that all personnel are familiar with proper facility operation to both prevent emergencies and to response to emergencies in an appropriate manner, if one occurs

All applicable employees at the terminal are familiarized with local, state, and federal regulations governing oil spills and the pollution of navigable waters. Training programs and videos have been developed to formally instruct spill response personnel and oil handling personnel, including qualified individuals listed in this plan, and the spill management team.

Training subjects include:

- Understanding proper facility operations at the terminal site, including spill prevention for oil transfers.
- Recognizing conditions that are likely to cause emergencies, predicting the consequences of facility malfunctions or failures and taking appropriate corrective action;
- Understanding conditions that are likely to worsen spill emergencies, including the consequences of facility malfunctions or failures
- Identification of a discharge of oil, including it's hazards and characteristics
- Undertaking equipment shutdown procedures and taking steps necessary to control any accidental release of material to minimize the potential for fire, explosion, toxicity, or environmental damage;
- Learn the potential causes, types, sizes, and consequences of fire and the appropriate use of portable fire extinguishers and other on-site fire control equipment.

Supervisor Training

As required under 49 CFR 195.403 (c), OP Reno LLC shall require and verify through appropriate training that its supervisors maintain a thorough knowledge of required operations, maintenance and emergency response procedures related to terminal operations, as established under 195.402 to ensure compliance with appropriate requirements

Spill Response Training

In addition to the training subjects listed above, to comply with 49 CFR 195.403 requirements, OP Reno LLC will also ensure that spill response personnel receive training in the following subjects:

- Containment and cleanup of oil discharges to the water, including:
    - Selection and placement of boom and absorbents; and

  - Operation of response boats;

- Containment and cleanup of oil discharges to land, including:
  - Cleanup of oil using absorbents; and
  - Construction of temporary containment dikes.

- When to obtain outside contractor assistance and what information to provide them;
- Selection and use of personal protective equipment;
- Proper packaging and disposal of cleanup debris; and

The training will address emergency response procedures, spill characterization and risk assessment, personal protective equipment, decontamination and worker safety, and hazardous material / waste handling at uncontrolled site.

Spill Response training will be reinforced through on-going drills and exercises, to both apply the training which is undertaken, and to evaluate the effectiveness and the condition of both company and OSRO equipment.

For information on spill response drills undertaken by OP Reno LLC under PREP, refer to **Section 7** of this Emergency Response Plan.

Training Records

Satisfactory completion of this training will result in issuance of a certificate of completion.

Training which is undertaken for each employee shall be recorded, using the OP Reno Personnel Training Record Log (See **Appendix C, Form 9** for an example of this form). These records will maintained as long as the individual who has undertaken the training is assigned duties under the response plan

These training records are kept in the employees training file at the terminal and shall be made available for inspection upon request by the inspecting agency responsible for OPA’90 compliance.

6.5 Training – Casual and Temporary Employees

The level of emergency training for casual or temporary employees shall be dependent on the job title / function performed by the individual occupying the job. These employees typically perform the function of an operator and as such are trained, at a minimum, to the first responder level as defined by federal Hazwoper requirements identified in 29 CFR 1910.120

Any casual or temporary employees without Hazwoper documentation shall not allowed to function as responders during an incident.

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Section 7 – Exercises and Drills

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SECTION 7 – Exercises and Drills

7.1 Policies

General Requirements

OP Reno LLC is required to comply with all appropriate regulatory requirements that are identified, to improve response to an incident. These include the use of exercises and drills designed to test company capabilities in an emergency.

As required by 49 CFR 194.107(c)(ix) OP Reno LLC will conduct drills as outlined in the National Preparedness for Response Exercise Program (PREP) guidelines.

National Preparedness For Response Exercise Program (PREP)

The National Preparedness for Response Exercise Program (PREP) was developed to establish a standardized, workable emergency exercise program. The PREP is a multi-agency program to exercise and evaluate government contingency plans and industry spill response plans.

The exercise program meets the mandate of the Oil Pollution Act of 1990 for exercises and represents the minimum guidelines for ensuring overall preparedness within the response community. It satisfies the exercise requirements of the U.S. Coast Guard, the Environmental Protection Agency (EPA), the Pipeline Hazardous Materials Safety Administration (PHMSA), and Bureau of Ocean Energy Management, Regulation, and Enforcement (BOEMRE). Completion of PREP exercises will satisfy all OPA 90 mandated federal oil pollution response exercise requirements, when properly documented.

PREP exercises are viewed as an opportunity for continuous improvement of response plans and the response system as a whole. Plan holders are responsible for addressing any issues that arise from evaluation of the exercises, and for making changes to the response plans necessary to ensure the highest level of preparedness.

PREP is a voluntary program. If a plan holder does not choose to follow the PREP guidelines, the plan holder must meet the exercise requirements mandated by the federal agency with regulatory oversight for the specific type of industry.

All plan holders, whether participating in the PREP or following the exercise mandates of relevant agency regulations, are subject to government initiated unannounced exercises. Unannounced exercises are mandated by OPA 90.

The PREP guidelines became effective January 1, 1994. Training requirements follow the calendar year from January 1 to December 31.

Core Drill and Exercises under PREP include:

Qualified Individual Notifications

In order to fill the role of a **Qualified Individual**, one **must be an English-speaking representative of the operator, located in the U.S. and available on a 24-hour basis**. The person designated as the Qualified Individual must be authorized to activate personnel and equipment maintained by the operator, activate and engage in contracting with OSROs, act as a liaison with the Federal On-Scene Coordinator and obligate funds required to effectuate response activities.

Notification Drills must be conducted 12 times in the triennial cycle (once per quarter). At least once per year the Notification Drill should be conducted during non-business hours.

The objective of this core element is to ensure that the Qualified Individual (or designate) can be reached in a spill response emergency to carry out his or her required duties. Contact by telephone, radio, message (pager or fax) must be made with the QI and confirmation must be received from him or her to satisfy the requirements of a QI Notification Drill.

Self-certification will be used to document the drill. Records will be retained for 3 years.

Spill Management Team (SMT) Tabletops

The SMT is the group of personnel identified to staff the appropriate organizational structure to manage spill response implementation in accordance with the response plan. The SMT must be identified, and the entire expanded SMT must be exercised annually.

A Tabletop Exercise is an exercise of the response plan and the SMT's response efforts without the actual deployment of response equipment. **Tabletop Exercises must be conducted 3 times in the triennial cycle (once per year).** At least one tabletop exercise in a triennial cycle shall involve a worst-case discharge scenario.

The Worst Case Discharge scenario is the largest foreseeable discharge of oil, including a discharge from fire or explosion, in adverse weather conditions. The scenario for the Sparks Terminal is located in Section 8 of of this Emergency Response Plan.

Self-certification will be used as the method to satisfy this portion of PREP. The exercise will be documented and records will be retained for 3 years.

Equipment Deployment Exercises

An equipment deployment exercise is an exercise where response equipment is deployed to a specific site and operated in its normal operating medium. Personnel that would normally operate or supervise the operation of the response equipment must participate in the exercise.

Objectives of this type of exercise should include but not be limited to:

- **demonstrating the ability of personnel** to deploy and operate the equipment, and be involved in a training program.
- **demonstrating that equipment is in good operating condition** appropriate for the intended operating environment, is properly maintained and is functional during the exercise

For the purposes of equipment deployment exercises, the following definitions apply:

Facility Owned and Operated Equipment

Facility owned and operated equipment is that equipment owned by a facility and operated either by the facility's own personnel or other personnel hired by the facility to operate this equipment. Facility-owned deployments should be once per year.

OSRO

An OSRO (Oil Spill Removal Organization) is an entity that provides response resources and could include but not be limited to contractors, cooperatives or in-house response resources established in a geographic area to provide required response resources.

OSROs should be involved in an annual equipment deployment with a minimum amount of equipment and a representative sample of personnel must be present. The personnel and equipment should be exercised on a rotational basis, with the ultimate goal of eventually exercising all of the OSRO's equipment and personnel.

For exercises where OSRO's are involved, equipment deployed must include at least 1,000 feet of each type of boom and one of each type of skimming system.

Equipment deployment exercises must be conducted 3 times in a triennial cycle, using either OSRO and/or facility owned and operated equipment.

Self-certification will be used to satisfy this part of PREP. The exercise will be documented and records will be retained for 3 years.

Internal Unannounced Exercises

Unannounced exercises are those where the exercise participants do not have prior knowledge of the scenario, as would be the situation in an actual spill incident.

Unannounced exercises must be conducted 3 times in the triennial cycle (once per year). Participants cannot have prior knowledge of the scenario. Either a tabletop exercise or equipment deployment exercise may be used as an unannounced exercise.

NOTE:

Response to an actual spill shall be taken as credit for the unannounced exercise requirement, as long as the response was evaluated.

Self-certification will be used to satisfy this part of PREP. The exercise will be documented and records will be retained for 3 years.

External Unannounced Exercises

External exercises are those that extend beyond the internal focus of the plan holder's organization, involve other members of the response community and are initiated by PHMSA. For PHMSA regulated pipelines and other on-shore facilities, the government-initiated unannounced exercise would be limited to 20 annually across the U.S.

A plan holder directed by PHMSA to participate in a government-initiated unannounced exercise is responsible for all the costs associated with participation in the exercise.

A plan holder that has participated in a government-initiated unannounced exercise would not be required to participate in another government-initiated unannounced exercise for at least 36 months from the time of the past exercise.

Certification shall be effectuated by the PHMSA personnel conducting the exercise. PHMSA will provide certification of the exercise date, participants and response zone exercised. Records will be retained for 3 years.

Exercise of Response Plan – Core Elements

As identified in 49 CFR 194, during each triennial cycle all identified components of a plan holder's ERP must be exercised at least once, as identified by PREP. The purpose of this requirement is to ensure that all plan components function adequately for response to an oil spill situation.

The PREP Guidelines manual, published by the U.S. Coast Guard, identify the types of components that must be exercised.

The 15 core elements, as identified by PREP are as follows:

- Organizational Design
  - Notification
  - Staff Mobilization
  - Ability to operate within a response organization
- Operational Response
  - Discharge control
  - Assessment of discharge
  - Containment of discharge
  - Recovery of spilled material
  - Protection of sensitive areas
  - Disposal of recovered material and contaminated debris
- Response Support
  - Communications
  - Transportation
  - Personnel support
  - Equipment and Maintenance Support
  - Procurement
  - Documentation

Based on the type of organization involved, all identified components may not be contained in each organizations response plan. As such, the plan holder shall identify those that are applicable from this list, adding or deleting as appropriate.

Rather than requiring each plan holder to conduct a major exercise every 3 years, the PREP allows for the individual components to be exercised in portions through the required exercises.

The core components to be exercised by OP Reno LLC each triennial cycle are listed in Table 7-1 .

TABLE 7.1
DRILL AND EXERCISE PROGRAM - SUMMARY

	QI NOTIFICATION	TABLETOP	EQUIPMENT INSPECTION	EQUIPMENT DEPLOYMENT	EMERGENCY PROCEDURE
Applicability	Terminal Facility	Facility Emergency Response Team - Pipeline Owner/Operator	Facility owned and operated response equipment.	Facilities with facility owned and operated response equipment.	Facility - Optional
Frequency	Quarterly	Annually	Semi-Annually	PHMSA Regulated Facilities = Annually	As Elected
Initiating Authority	Facility Personnel	As indicated in Section 7.2 of the ERP	As indicated in Section 7.4 of the ERP	As indicated in the ICP. (Company)	Facility Owner/Operator
Participants	Personnel and QI (or designee)	Emergency Response Team as established in the ERP.	Response Equipment	Facility Personnel - ERT Members	Facility Personnel
Scope / Objective	Exercise communications between Facility and QI.	Exercise the ERT's organization, communication and decision making in managing a spill response.	Inspect and test equipment so that it is readily operable and available in an emergency.	Demonstrate ability to deploy and operate equipment as identified in the ERP. Equipment may consist of OSRO owned, operator owned or a combination of both. * If a facility with owned and operated equipment, also identifies OSRO equipment in the response plan, the OSRO must also exercise equipment in accordance with equipment deployment requirements for OSRO owned equipment.	Exercise the emergency procedures for the facility to mitigate or prevent any discharge or a substantial threat of such discharge of oil resulting from facility operational activities associated with oil transfers.
Procedures	Each quarter employee must attempt to make contact with the QI or Alternate QI. Contact can be made by phone, radio, pager, cell, or fax and should establish confirmation on the Notification Drill Record Form. Once per year the notification should be conducted during <u>non</u>-business hours.	Exercise the ERT in a review of: • ERP contents, • proper notifications, • communications systems • ability to access an Oil Spill Removal Organization (OSRO), coordination of internal organization & personnel with responsibility for spill response, • the transition from a local team to a regional or national team as appropriate, • ability to effectively coordinate spill response activity with the government infrastructure. (If government personnel are not participating in the exercise, the SMT should demonstrate knowledge of response	The owner must document all inspections and maintenance on the equipment inspection form. The maintenance program must ensure that the equipment is periodically inspected and maintained in good operating condition in accordance with the manufacturer's recommendations and best commercial practices.	Deploy and operate facility owned and operated response equipment as identified in the ICP. Equipment deployed would be the equipment necessary to respond to an average most-probable discharge at the facility. All facility personnel involved in equipment deployment operations must be included in a comprehensive training program. All of the facility equipment must be included in a comprehensive maintenance program. Credit should be taken for deployment conducted during training.	Conduct an exercise of the facility's emergency procedures to ensure personnel knowledge of actions to be taken to mitigate a spill. This exercise may be a walk-through of emergency procedures. Exercise should involve one or more sections of the emergency procedures for spill mitigation. For example, the exercise

TABLE 7,1
DRILL AND EXERCISE PROGRAM - SUMMARY

	QI NOTIFICATION	TABLETOP	EQUIPMENT INSPECTION	EQUIPMENT DEPLOYMENT	EMERGENCY PROCEDURE
		coordination with government Agencies • ability to access information in the ACP for location of sensitive areas, resources available within the area, unique conditions of area, etc. (This is only applicable if the ACP is available for the exercise.) • at least one SMT tabletop exercise in a triennial cycle would involve simulation of a 'worst-case' (WCD).			may involve a simulation of a response to an oil spill. The facility should ensure that spill mitigation procedures for all contingencies are addressed at the facility at sometime.
Evaluation	The self-evaluation should assess the facility's ability to contact the QI and if it is difficult to make contact a better method of communication should be established.	The plan holder is responsible for carefully examining the effectiveness of the plan for response during the exercise. The plan holder may choose the mechanism for conducting this appraisal, as long as it appropriately measures the plan effectiveness. The plan holder is responsible for addressing issues that arise in the exercise that would lead to improvements in the response plan or any aspect of preparedness for spill response. The plan holder is responsible for incorporating necessary changes to the plan as a result of the exercise.			
Certification	Self-certification takes place when the plan holder declares that they have met the following standards: 1) Completion of the exercise; 2) Conducting the exercise in accordance with the PREP guidelines, meeting all objectives listed; 3) Evaluation of the exercise using a mechanism that appraises the effectiveness of the response or contingency plan.				
Verification	by PHMSA for PHMSA regulated pipelines and facilities.				
Record Retention	Minimum of three years. Records shall be retained at the Sparks facility and copies shall be maintained at the OP Reno LLC Head Office				
Credit	The plan holder should take credit for this exercise when conducted in conjunction with other exercises as long as all objectives are met, the exercise is evaluated, and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated and a proper record is generated.				

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7.2 Exercise Program

General Requirements

OP Reno LLC personnel will conduct an on-going exercise and drill program on a cyclical basis, as identified in Table 7-2 below:

Table 7.2 – Facility Exercise Program

Required Exercises	PHMSA Regulated
QI Notification	Quarterly (4/yr)
ERT Tabletop *	Annually (1/yr)
Equipment Deployment *	Annually (1/yr)
Equipment Inspections	Semi-Annual (2/yr)

***One annual unannounced exercise (Tabletop or Equipment Deployment) is required for each pipeline ERT.** (i.e.: If an unannounced Tabletop Exercise is conducted, the unannounced requirement and the annual Tabletop requirement are both satisfied.)*

Qualified Individual Notification Drills

QI Notification Drills

FREQUENCY: This drill will be done quarterly or routine communication if it occurs on at least a quarterly basis.

SCOPE: Exercise communications between terminal personnel and Qualified Individual.

OBJECTIVES:

- Demonstrate contact with the designated Qualified Individual
- Demonstrate that company emergency notification procedures function in a proper manner
- Ensure communications equipment (pagers, cell phones, etc) is functioning properly
- The notification drills shall periodically be held outside of normal business hours to provide a broader test of notification procedures

NOTE:
The objective of the QI notification drill is not to verify phone numbers, points of contact or the notification list contained in the plan. However, note should be made of any phone numbers which are incorrect, to ensure they are corrected as required.

RECORDS: Located at the terminal.

CREDIT: Facility may take credit for this exercise in the course of conducting outline business or other drills, provided that the objectives of the drills are met and the drill is properly recorded. Similarly, credit may be received for an actual spill response when these objectives are met and a proper record generated.

Documentation of successful notification of the QI will be undertaken using the **Notification Drill Record Form** and the **Drill Documentation Summary Form** (see **Form 2** and **Form 4** located in **Appendix C** of this Emergency Response Plan.)

IMPORTANT NOTE:

When calling, personnel conducting the exercise should remember to inform the QI that **it is only a drill**.

Requirements can also be satisfied, to obtain quarterly credit for this exercise if an actual spill response and notifications have occurred which meet the specified objectives.

Tabletop Exercises

SPILL MANAGEMENT TEAM TABLETOP EXERCISE

FREQUENCY: Annually

SCOPE: Exercise the Spill Management Team's organization, communication and decision making in managing a spill response.

OBJECTIVES: At least one Spill Management Team Tabletop Exercise in a triennial cycle shall involve simulation of a worst case discharge scenario. Exercise the Spill Management Team in a review of: knowledge of the response plan, proper notifications, communications system, ability to access OSRO, coordination of organization/agency personnel with responsibility for spill response, ability to effectively coordinate spill response activity with National Response System infrastructure, and the ability to access information in Area Contingency Plan for location of sensitive areas, resources available within the Area, unique conditions of Area, etc.

One or more of the following response plan elements shall be exercised in each tabletop drill:

- Notification
- Staff Mobilization
- Ability to operate within a response organization
- Operation within an Incident Command System (ICS) structure.
- Discharge Control
- Incident Assessment
- Containment Procedures
- Recovery Procedures
- Protection of Critical and Sensitive areas
- Disposal of recovered material
- Communications
- Transportation of resources
- Personnel Support
- Equipment Maintenance and Support
- Procurement
- Documentation

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All of the response plan elements listed above must be drilled at least once within the triennial cycle, as specified by the U.S. government. One of the tabletop exercises in a triennial cycle must be a worst-case discharge scenario.

RECORDS: Located at the terminal.

CREDIT: Facility may take credit for this exercise when conducted in conjunction with other drills as long as all objectives are met and a proper record generated. Likewise, credit may be taken for an actual spill response when these objectives are met and a proper record generated.

A Tabletop Exercise is an exercise of response plan procedures and Emergency Response Team (ERT) response efforts without actual deployment of response equipment. The scope of the Tabletop is to exercise the ERT's organization, communication, and decision-making in managing a spill response.

One Tabletop Exercise is required for the facility each year with one exercise in a triennial cycle involving a "worst case" discharge scenario. Documentation of the exercise will be undertaken using the following:

Form 3 - Drill / Exercise Attendance Form

Form 4 - Drill Documentation Summary Form,

Form 5 - Triennial Credit Documentation Form,

Form 7 - Drill / Exercise Evaluation Form

These forms are located in **Appendix C** of this Emergency Response Plan).

Equipment Deployment Drills

EQUIPMENT DEPLOYMENT DRILLS

FREQUENCY: Annually for Facility and/or OSRO equipment or both

SCOPE: Deploy and operate response equipment identified in the response plan. Only a representative sample of each type of equipment or that is necessary to respond to an average most probable discharge, whichever is less, need be deployed. The remainder of the equipment that is not deployed must be included in a training and maintenance program.

OBJECTIVES: Ensure personnel who could operate this equipment are capable of deploying and operating equipment. Ensure equipment is in proper working order, ensure that the response resources participate in annual deployment drills.

Cont'd

Equipment Deployment Drill - Basic Objectives

- Familiarize response personnel with company owned equipment.
- Familiarize response personnel with the characteristics of the deployment location.
- Deploy and visually inspect a representative sample of equipment located in the response zone.
- Practice equipment deployment procedures and strategies.

The objectives listed above are standard for each exercise, and need not be listed on the operator drill evaluation documentation form.

Additional Objectives

- Other objectives which may be added to the deployment drill may include but not be limited to:
- Assessing the suitability of the location for deployment of equipment (e.g. work space, accessibility, ease of deployment, etc.)
- Testing current company equipment under operational conditions.
- Testing new equipment under operational conditions.
- Testing new procedures under operational conditions.
- Demonstrating proficiency in specific aspects of equipment deployment.
- Other specific objectives as identified by the Drill Leader or designated Incident Commander.
- Test capabilities of contractors (OSRO and others) listed in the Zone Response Plan.

RECORDS: Located at the terminal.

CREDIT: Facility may take credit for this exercise when conducted in conjunction with other drills as long as all objectives are met and a proper record generated. Likewise, credit may be taken for an actual spill response when these objectives are met and a proper record generated. The facility may take credit for OSRO equipment deployed for other exercises to the extent of the deployment exercise.

An Equipment Deployment Exercise is an exercise where the response equipment is deployed to a specific site and operated in its normal operating medium.

The scope of this exercise is to demonstrate the ability to deploy and operate facility owned and operated response equipment identified within the Response Plan.

Form 3 - Drill / Exercise Attendance Form
Form 4 - Drill Documentation Summary Form
Form 5 - Triennial Credit Documentation Form
Form 6 – Equipment Deployment Drill Documentation Form

Form 7 - Drill / Exercise Evaluation Form These forms are located in **Appendix C** of this Emergency Response Plan.

Equipment Inspection

EQUIPMENT INSPECTION - (facility owned resources)

FREQUENCY: Semiannually

SCOPE: Inspect and test equipment so that it is readily operable and available in an emergency.

OBJECTIVES: Demonstrate ability of facility personnel to deploy and operate equipment. Ensure equipment is in proper working order. Dysfunctional equipment is to be repaired or replaced within 30 days.

RECORDS - Located at the terminal.

CREDIT: Facility may take credit for equipment inspection when conducted in conjunction with other drills as long as all objectives are met and a proper record generated. Likewise, credit may be taken for an actual spill response when these objectives are met and a proper record generated.

Unannounced Exercise - Annual Requirement

UNANNOUNCED DRILLS

FREQUENCY: Annually - facility is not required to participate in a federal government initiated unannounced drill if they have participated in an unannounced federal or state oil spill response drill within the last 36 months.

SCOPE: Unannounced exercises to be limited in scope, number and duration. Unannounced exercises will be limited to a maximum of four exercises per Area per year, and four hours in duration. Exercises will involve response to a minor spill scenario and equipment deployment.

OBJECTIVES: Conduct proper notifications to respond to unannounced scenario of an average a most probable discharge. Demonstrated equipment deployment is timely, conducted with adequate amounts of equipment for scenario, and properly deployed.

RECORDS: Located at the terminal.

CREDIT: Credit may be taken for an actual spill response when these objectives are met and a proper record generated. Facilities participating in this exercise may also take credit for notification and equipment deployment exercises.

Each year, a tabletop, or one of the equipment deployment exercises will be conducted in an unannounced manner, as per 49 CFR 194 requirements. An unannounced exercise is defined as an exercise where

the participants do not have prior knowledge of the event occurring, as would be the situation in an actual spill.

Area Drills

In addition to the exercise program conducted internally by OP Reno LLC, the company will participate in appropriate exercises conducted by other organizations, including industry and government related exercises in the vicinity of the Sparks Terminal site. The company will determine which exercises are appropriate to participate in, whether government agency or industry led.

7.3 Post Exercise Procedures

Exercise Review

An appropriate post-exercise review shall be conducted after each exercise or drill, to determine whether the exercise objectives have been accomplished, to discuss "lessons learned" and to determine whether any recommendations for improvement need to be made to enhance internal or external response capabilities.

The Terminal Manager or other personnel leading the exercise are responsible for ensuring the post exercise review is conducted. The person who leads the review is responsible for follow up and communication of any corrective measures, areas for improvement, and to develop an action item list to be implemented at a future date.

The Terminal Manager or other personnel leading the exercise are responsible for ensuring that lessons learned affecting the response plan are communicated through the plan update process, back to the Manager, LLC, to ensure necessary modifications are undertaken within the plan.

Exercise Documentation

Results of each exercise shall be documented formally and appropriately, based on the nature of the drill, using company forms that have been created for this purpose, located in **Appendix C of this Emergency Response Plan**

Form 2 - U.S. Notification Drill Record Form,

Form 3 – Drill / Exercise Attendance Form

Form 4 – Drill Documentation Summary Form

Form 5 – Triennial Credit Documentation Form

Form 6 - Equipment Deployment Drill Documentation Form

Form 7 - Drill Exercise Evaluation Form

Personnel in charge of the drill or exercise shall be responsible for documenting the completion of required exercises or drills as well as individual pipeline response personnel's participation in the exercise

Identified company personnel shall undertake follow-up actions in a timely manner, to address the recommendations that have been identified.

Appropriate critiques shall also be conducted in a similar manner if an incident does occur, to evaluate and learn from actual spill response situations.

Record Retention

Records shall be maintained on site at the Sparks Terminal Site. The following records shall be retained and maintained **for no less than three years**:

- Training Records
- U.S. Notification Drill Record Form(s)
- Drill / Exercise Evaluation Form (s)
- Drill Documentation Summary Form(s)
- Triennial Credit Documentation Form(s)
- Equipment Deployment Exercise Form(s)
- Records of Response Equipment Inspections and Inventories

Any supporting documentation related to the records listed above will also be retained, as appropriate.

NOTE:

All forms and supporting documentation related to a particular exercise shall be retained together, as a single package, for ease of reference. Additional photocopies of particular documents or supporting documentation related to an exercise may also be retained separately, as required

Records will be made available to management, the Qualified Individual (QI) and the appropriate regulatory agency upon their request.

7.4 Equipment Inspection and Maintenance

Inspection and Inventory Requirements

Company owned response equipment will be routinely inspected and an equipment inventory will be conducted on an on-going basis, to ensure that all equipment is properly maintained, readily accessible, and is immediately available in the event it is needed.

Inspections and inventory will be conducted twice per year to assess response equipment readiness. The objective of this process will be to verify that all equipment is present and operational and that required quantities of other supplies are maintained within the inventory.

Equipment Inspections and findings will be documented using the Response Equipment Checklist (See Appendix C of this plan, Form 8 for a copy of this checklist)

Inventory and equipment inspections may be undertaken in conjunction with an exercise, or separately, as required. Inspections, inventory and replacement of supplies will also be undertaken after equipment is used to respond to an actual emergency.

During the inventory and inspection process, both visual and operational checks will be performed on response equipment and supplies, as appropriate.

Non-functional or damaged equipment will be identified and repaired or replaced within 30 days from the date of inspection. Supplies which are missing, or which may have expired will be replaced within a similar timeframe.

The Terminal Manager is responsible for ensuring that equipment inspections are carried out, as per identified PREP requirements, twice per year. Records of these inspections will be maintained at the terminal site for a minimum of 5 years.

Maintenance Requirements

Any company response related equipment which requires regular maintenance to ensure proper function will be included as part of a regular maintenance program.

The maintenance program will insure that the equipment is inspected and maintained in good operating condition on an on-going basis, in accordance with the manufacturer's recommendations and best industry practice.

The Terminal Manager is responsible for ensuring that any required equipment maintenance is undertaken. All required maintenance that is undertaken will be documented, and records maintained at the site for a minimum of five years.

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SECTION 8 – Worst Case Discharge

8.1 Worst Case Discharge - Release Calculation

(b) (7)(F)

[redacted]

(b) (7)(F)

(b) (7)(F)

[redacted]

8.2 Worst Case Discharge - Concept of Operations

The following scenario presents a hypothetical concept of operations for a worst-case discharge scenario within the Sparks Terminal Response zone.

INCIDENT

A magnitude 6.5 earthquake strikes the Sparks NV area on Friday evening (1800). The earthquake causes significant damage to Tank 25008 causing it to leak. The earthquake also damages the concrete secondary containment wall surrounding the tank farm.

Approximately (b) (7)(F) of Jet-A are released from the tank, with part of the discharge being contained in the containment system and part of the discharge flowing out of the containment system into site ditches. A portion of the discharged material enters the City of Sparks Storm Drain system. The storm drain system discharges spilled material to the Truckee River.

INITIAL ENVIRONMENTAL CONDITIONS

Weather:	75 ^{O}F, winds from the north at 10 mph.
Forecast:	Sixty percent chance of heavy rains. The forecast remains the same for the next five (5) days.
Land Conditions:	Wet and muddy from rains during the day.
River Conditions:	River current velocity is 1-2 mph at time of incident, with moderate volumes of water present due to rain.

INITIAL RESPONSE

At 18:15 Personnel from a facility located near Sparks terminal, traveling along Nugget Ave. to check for damage to their facility after the earthquake has occurred, note a strong “gasoline or diesel” like odor present in the vicinity of the OP Reno Sparks Terminal site. He also notes what looks like a dark liquid material, visible in one of the site ditches. Stopping his vehicle, he notes the emergency number posted at the terminal site. He then travels to his facility, and phones the emergency number (18:25).

The call is received by the Terminal Manager directly (18:30). The terminal manager notes the information provided by the caller, as well as the phone number of the caller, if he requires further information. (18:35). He then phones the two other operators for the site, to place them on alert, to respond and assist, if an incident has occurred. He then travels to the terminal site, to determine if an incident has occurred (18:40).

Normal travel time from his home for response to the terminal is approximately 45 minutes. Travel is hampered though, and is slow, due to damage to roads in a variety of locations. He arrives at the site in approximately 1.5 hours (20:10)

Taking all necessary precautions, staying upwind where possible and using a gas detector to ensure flammable gas levels are within safe limits, he conducts an initial survey of the site.

He notes that Tank 25008 has split partially, at a plate weld seam and a large volume of Jet-A product has been released from the tank, into the secondary containment berm surrounding the tank. He also notes that a portion of the concrete berm has been damaged by the quake, allowing the product to be slowly released from the bermed area. Due to heavy rains which occurred the previous day, some water is present in the ditch and the Jet-A is found to have migrated along the ditch line toward drop inlets present near the containment wall. These drop inlets lead into the Stormwater Drain System for the City of Sparks.

The Terminal Manager phones the two operators, to respond to the site (20:35). He also notifies Clean Harbors, the contracted OSRO for the Sparks Terminal. (20:40), as well as contractors who can provide earth moving equipment. He also places a large piece of plywood over the storm sewer outlet, weighed down with a couple of small sandbags, as a temporary containment measure.

The Terminal Manager then contacts the LLC Manager, located in St. Louis, Missouri, to inform him of the incident (20:50). The LLC Manager will make additional internal company contacts, and will undertake necessary government reporting requirements.

The Terminal Manager then secures the site, as best possible, and assumes the role in Incident Commander, remaining on-site to await the arrival of additional response personnel. He also checks the integrity of other equipment, to ensure no other leaks or spills have occurred on-site

The LLC Manager ensures that appropriate spill reporting procedures are undertaken to appropriate regulatory authorities, including the Federal National Response Center (NRC), as well as state authorities, appropriate LEPC's and local authorities. As such, at 21:15, the LLC Manager notifies the following of the spill (as outlined in Section 2 Sparks Terminal Emergency Response Plan):

- The National Response Center at 1 (800) 424-8802
- The Nevada Department of Environmental Protection, Bureau of Corrective Actions
- The LEPC contact in Washoe County

The additional terminal operators at 22:00 and initial Clean Harbors equipment and personnel (8 Hazwoper trained personnel) arrive at the site at 22:30, as travel to the site is hampered by damaged roads in the area.

It is determined that the first priority is to use available resources and personnel to prevent product from entering the storm sewer inlet and to contain as much product as possible within the damaged secondary containment area, by constructing a temporary containment patch within the damaged area of the containment berm.

The Incident Commander instructs all responders to actively monitor on-site flammability limits (LELs) Initial teams and team leaders are assigned and directed to their sites with instructions for their tasks.

Initial containment efforts are hampered by the start of rain showers in the area. As work is started on reinforcing and sealing the initial plywood / sandbag structure placed over the sewer outlet, it is noted that the flow of water and liquid has earlier dislodged the plywood allowing product and water to flow into the City of Sparks storm sewer.

The Incident Commander contacts the City of Sparks, Environmental Control Section and the City of Sparks Department of Public Works, to inform them of the discharge into the sewer system. They would activate their contingency plans, for both tracking and controlling a discharge into the storm sewer system. The City of Sparks would liaise with the Sparks Terminal site personnel, for the duration of the incident.

Additional sandbags and fill material is added to the ditch line, to act as a berm to seal the storm sewer drain, and prevent further migration into the storm sewer. Construction of a temporary patch to the berm is also undertaken, to limit further travel of Jet-A product, from within the damaged secondary containment system. The initial containment berm in the ditch line is started at 23:00 and completed by 23:45, while the temporary patch (plywood and fill material) is started at 22:50 and completed at 24:00.

Rain continues through the night. Initial response efforts related to the storm sewer and liaison between Sparks Terminal response personnel and the City of Sparks is hampered, due to the public works crews responding to reports of damage from the earthquake in various locations throughout the city. Site product recovery and monitoring of spill containment efforts continue throughout the night, to determine if further leakage is occurring.

At 08:00 the next morning, a site assessment is undertaken at the Sparks Terminal site. Comparing product inventories within Tank 25008 prior to the earthquake, and product determined to be remaining in the tank. It is estimated that approximately (b) (7)(F) of Jet-A has leaked from the tank, with the majority of the spilled material remaining within the secondary containment berm. Additional Jet-A product remains within the ditch line floating on water contained within the ditch line, which is being recovered using vacuum trucks. It is estimated, however, that a significant quantity of the Jet-A (up to a thousand barrels) may have leaked into the storm sewer system.

A meeting is held with the City of Sparks personnel at 09:00, to discuss the incident. It is determined that the Jet-A product which has leaked through the damaged containment wall and entered the stormwater drain system would flow to the east into the People's Ditch which in turn drains into the North Truckee Drain. The North Truckee Drain turns south for approximately 1 mile before entering the Truckee River immediately upstream of Steamboat Creek.

City of Sparks Environmental Control and Public Works personnel monitoring the storm sewer have determined that Jet-A product is present into People's ditch, due to rains which have swelled the flow within the sewer overnight. They have also noted some Jet-A product further down stream. Installation of sand plugs or inflatable line plugs are discussed as a possible method of containing the product within the sewer. However, it is anticipated that flow of Jet-A product may occur onto the Truckee River as well.

Based on the information provided, the Incident Commander discusses progress related to the spill with the LLC Manager and with Clean Harbors. It is determined that the

incident may require a Level III response, based on the size of the spill, the involvement of outside agencies and the requirement to coordinate with these agencies, as well as the migration of the product through the sewer system to the Truckee River.

The LLC Manager initiates formation of an Incident Command structure for Level III response by contacting other appropriate key personnel within the company, supplemented by outside contract response management personnel. The LLC Manager will make arrangements to travel to the site with key personnel, to assist with response management efforts. Based on the possibility of the Jet-A entering the river, Clean Harbors will also initiate response of additional water containment equipment and personnel, from the Sparks depot and from other Clean Harbors locations, to supplement site operations and to arrange for replacement operational crews to relieve the original operational personnel, who have worked overnight.

While additional resource mobilization efforts are being undertaken, it is determined that a three phase coordinated response will be initiated within Unified Command structure.

In the first phase, containment efforts will be undertaken at the terminal site, to recovery additional amounts of the leaked Jet-A, from the ditch line, from the recovery berm and from the damaged tank. The second phase would be led by the City of Sparks, installing sewer plugs and attempting to recover spilled Jet-A from the sewer system. The third phase would consist of containment and recovery efforts on the Truckee River

It is determined by the members of the Unified Command that initial containment sites should be established within the ditch, and at storm discharge site into the Truckee River, as well as at a designated site in advance of a potential spill front, downstream on the river. Personnel, containment boom and associated equipment from Clean Harbors are mobilized to a site downstream of the spill front, at a sufficient distance to allow set-up to be completed prior to the spill front arriving (approx 11:00). The containment site is chosen based on pre-identified sites contained within the Truckee River Geographic Response Plan, which forms part of the EPA Region IX Regional Contingency Plan.

A helicopter is also mobilized. to visually survey the Truckee River on a regular basis, to determine weather the spill has migrated onto the river, and where the spill front is located. Reporting to the Unified Command will be communicated on a regular basis.

By 10:00 response personnel prepare to recover free Jet-A within the locations at the terminal site. By 12:00, additional personnel and equipment begin arriving at the incident site for assignments. The contractors use vacuum trucks to begin removing pooled crude oil. Vac trucks will shuttle oil to awaiting tankers and frac tanks. The oil will be transported and stored in tankage at the Sparks Terminal Site as well as in tankage located in adjoining tank farms.

By the end of the day, the LLC Manager arrives with additional personnel arrive to establish the company Incident Command organization. The LLC Manager will assume the role of Incident Commander, while the Terminal Manager will assume the role of Operations Chief, coordinating all company and OSRO operational response to the incident. The Incident Commander will coordinate higher level liaison with government agencies, and other involved stakeholders, as well as forming a support structure (Finance, Logistics, Planning, Safety, Media Relations. Liaison) to assist the Operations Chief in his duties. The Incident Commander will also continue to coordinate with the

Unified Command, to ensure all parallel actions undertaken by various agencies are properly coordinated with company actions throughout the incident.

An initial company command post is established at Sparks Terminal. With expansion of the emergency organization, additional space is procured at a nearby hotel for the duration of the incident.

Communications between response sites will be maintained by cell phone communications.

The Operations Section Chief and designated Safety Officer works with the contractors to ensure that the appropriate HAZWOPER information has been communicated to all personnel and that safe operating practices are being followed.

Joint press conferences, with all involved agencies participating are held as required to present details of the day's incident, response objectives, and anticipated continuing activities.

RESPONSE OPERATIONS

During the first week of operations response operations would consist of:

1. Management: Emergency response personnel would initiate response to the spill and prepare a site safety plan. Company personnel would oversee all company and contractor operations.

2. Incident Command: The Incident Commander would establish an ICS based emergency organizational structure and unified command with the federal and state on-scene representatives.

3. Response Equipment and Manpower: Company manpower and equipment resources would provide initial response capabilities, supplemented by OSRO resources and local contractors (see Appendix D of the Sparks Terminal Emergency Response Plan for the listing of qualified contractors), to meet tier response requirements identified in 49 CFR 194.

4. Terminal Containment: Containment berms would be established to contain the spill within the secondary containment system or ditch line, using plywood, soil, sand bags or other barricade materials to confine the spill within areas where product recovery procedures may be initiated. Other land containment procedures would be undertaken, as required.

5. Water Containment: Containment boom, and deflection boom would be used, as appropriate, to contain the spill, deflect oil for containment and limit spill movement with wind or current on the watercourse,

6. Recovery: Skimmers and vacuum trucks would be utilized, as appropriate, to recover trapped Jet-A. Sorbent booms and pads will be utilized to absorb residual oil. Earth moving equipment or manual recovery efforts would be used to remove crude oil stranded on the shoreline and at the leak site.

Recovered Jet-A would be stored on-site, for later transport, or taken via tanker trucks or vacuum trucks for storage in tankage.

Backhoes and bulldozers are also used to remove contaminated soil and other materials, as required. The soil would be transferred to dump trucks, which will transport the material to a temporary or permanent disposal site.

7. Exclusion Booming: Exclusion boom would be placed around all water intakes, egressing streams, recreation areas, and other appropriate environmentally sensitive areas which are identified to be at risk, as required. Sorbent booms and pads will be used as back up to the exclusion booms. These areas will be closely monitored and be given high cleanup priority.

8. Storage and Disposal: Sorbents and oiled debris would be containerized for temporary storage prior to disposal. In consultation with appropriate personnel within the jurisdiction involved, necessary approvals and permits would be obtained, and proper disposal of contaminated soils, debris and sorbent materials that are collected, would be undertaken.

9. Terminal Repair: Damage incurred and requirements would be assessed. Appropriate repair or replacement of equipment would be initiated

10. Riverbank, Reservoir, and Leak Area Cleanup: The Company, in cooperation with regulatory agencies, would review various cleanup techniques to determine the method(s) that will be used depending on the soil conditions. This cleanup will be initiated upon approval.

11. Wildlife Protection and Rehabilitation: The company would coordinate wildlife protection and rehabilitation with appropriate wildlife regulatory authorities.

12. Monitoring: Surveillance would be performed during daylight hours to monitor spill movement and identify areas impacted by the spilled product. Verification and adjustment of predictions on spill trajectories will be made as necessary, and incorporated into response planning. Regulatory agency personnel would be invited to participate in the effort. Sampling and monitoring would be performed as necessary, to monitor the response/cleanup progress.

13. Public Relations: Public Information personnel will make press releases, as necessary, to keep the public informed of the oil spill and progress of the cleanup operations.

During the second through third week response operations would consist of:

1. Additional on and off-site clean-up and recovery activities as required.

2. Insurance and claims adjustment is undertaken and claims against the company are reviewed and/or settled related to the incident.

3. Sampling and analysis programs continue, as required. Interim reports are made to appropriate regulatory agencies.

Subsequent operations:

1. The unified command consisting of the company Incident Commander, the City of Sparks, the Federal representative, the state representative assess the progress of spill clean-up and recovery efforts, to determine if free product and contaminated soil removal has been undertaken sufficiently and disposal has been undertaken appropriately, to meet government requirements. A request to cease clean-up operations is made to the appropriate regulatory agencies.

After Response operations are completed:

1. The Incident Commander convenes a post incident review with the appropriate operations personnel. The objectives of the meeting would be to determine what could have been done to prevent the incident and how they could have improved their response/clean-up activities. The Incident Commander presents a report listing the materials and expendables used during the spill response and subsequent clean-up operations.

2. All spill clean-up material inventories are to be replaced.

3. The Liaison Officer, the Safety Officer and/or the Environmental Unit Leader makes the appropriate post incident reports to the federal, state, and local agencies.

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Appendix A

Glossary

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Glossary

ACOE..... U.S. Army Corps of Engineers
ACP ..... Area Contingency Plan
ANPRM..... Advanced Notice of Proposed Rulemaking
AST …….. Aboveground Storage Tank
ASTM..... American Society of Testing Materials
BBL ..... Barrel
BBLS ..... Barrels
BOEMRE…….. Bureau of Ocean Energy Management, Regulation, and Enforcement
BPD ..... Barrels per Day
BPH ..... Barrels per Hour
.CAER..... Community Awareness Emergency Response (CMA)
CERCLA ..... Comprehensive Environmental Response, Compensation & Liability Act of 1980, as amended
CFR ..... Code of Federal Regulations
CWA ..... Clean Water Act of 1977 (Federal)
DOC ..... Department of Commerce
DOI ..... Department of the Interior
DOT ..... Department of Transportation
EOC ..... Emergency Operations Center
EPA..... U. S. Environmental Protection Agency
EPCRA ..... Emergency Planning and Community Right-to-Know Act
ERT..... Emergency Response Team
FEMA..... Federal Emergency Management Administration
FOSC..... Federal On-Scene Coordinator
FR ……. ..... Federal Register
FRP..... Facility Response Plan
GAL..... Gallon
GIS..... Geographic Information System
GPM..... Gallons Per Minute
HAZMAT ..... Hazardous Materials Response
HAZWOPER..... Hazardous Waste Operations and Emergency Response
IC ..... Incident Commander
ICP..... Incident Command Post
ICS..... Incident Command System
LEL ..... Lower Explosive Limit
LEPC ..... Local Emergency Planning Committee
LEPD ..... Local Emergency Planning District
MOU ..... Memorandum of Understanding
MSDS ..... Material Safety Data Sheets
NCP ..... National Contingency Plan
NDEP..... Nevada Department of Environmental Protection
NIIMS..... National Interagency Incident Management System
NIOSH ..... National Institute for Occupational Safety and Health

NOAA..... National Oceanic and Atmospheric Administration
NRDA..... National Resource Damage Assessment
NRC ..... National Response Center
NRS ..... National Response System
NRT ..... National Response Team
OPA 90 ..... Federal Oil Pollution Act of 1990
OPR ..... OP Reno LLC (abbreviation)
OSC ..... On-Scene Coordinator/Commander
OSHA..... Occupational Safety and Health Administration
OSRO ..... Oil Spill Response / Removal Organization
P/L ..... Pipeline
PCW ……. Petroleum Contact Water
PPE..... Personal Protective Equipment
PHMSA ..... Pipeline Hazardous Material Safety Administration (DOT)
PREP ..... National Preparedness for Response Exercise Program
QI ..... Qualified Individual
RA ..... Regional Administrator
RCC ..... Regional Response Center
RCRA..... Resource Conservation and Recovery Act of 1976
RCP ..... Regional Contingency Plan
RRT ..... Regional Response Team
SARA ..... Superfund Amendments and Reauthorization Act
SCBA ..... Self-Contained Breathing Apparatus
SDWA ..... Safe Drinking Water Act of 1986
SERC..... State Emergency Response Commission
SI ..... Surface Water Impoundment
SIC ..... Standard Industrial Classification
SOSC..... State On-Scene Coordinator
SPCC..... Spill Prevention Control, and Countermeasures Plan
TEAP ..... Transportation Emergency Action Plan
ULSD …… Ultra Low Sulphur Diesel
USCG ..... U. S. Coast Guard
USDOT ..... U. S. Department of Transportation
USGS..... U. S. Geological Survey (USDOI)
WCD ..... Worst Case Discharge
WHMIS ..... Workplace Hazardous Materials Information System

Appendix B

Regulatory Cross Reference

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APPENDIX B

Regulatory Cross Reference
OP Reno LLC – Sparks Terminal
Emergency Response Plan

OPA 90 Plan Requirements as outlined in the Interim Final Rule issued as 49 CFR Part 194, Appendix A by PHMSA and RSPA in the United States.

Section 1 - Information Summary

Requirement	Location in Response Plan
General (Core) Plan	
a.1 Name and address of operator	Information Summary (front of plan)
a.2 Listing of response zones including county(s) and state(s) b.1 Information summary for the core plan	Information Summary (front of plan) Information Summary (front of plan)
b.2 Name and telephone no. of qualified individual available on 24 hour basis	Information Summary (front of plan)
b.3 Description of response zone, including county(s) and state(s) in which a worst case discharge could cause harm	Information Summary (front of plan)
b.4 List of line sections contained in the response zone	Information Summary (front of plan) Section 1.2
b.5 Basis for determination of significant and substantive harm	Information Summary (front of plan)
b.6 Type of oil and the volume of worst case discharge	Information Summary (front of plan)

Section 2 - Notification Procedures

Requirement	Location in Response Plan
a. Notification requirements that apply to each area of pipeline operation	Section 2
b. Checklist of notifications required by operator or qualified individual by response plan, in order of priority	Section 2 Table 2.1 Figure 2.1
c. Names of persons to be notified of a discharge	Section 2.2
d. Procedures for notifying qualified individuals	Section 2.2
e. Primary and secondary communication methods by which notifications can be made	Section 2.2
f. Information to be provided in the notification, including: Name of pipeline Time of discharge Location of discharge Name of oil involved Reason for discharge Estimated volume of oil discharged Weather conditions on-scene Actions to be taken by persons on-scene	Appendix C - Forms

Section 3 - Spill Detection and On-Scene Spill Mitigation Procedures

Requirement	Location in Response Plan
a. Methods of initial discharge detection	Section 4.1
b. Procedures, listed in order of priority that personnel are required to follow in responding to a pipeline emergency to mitigate or prevent any discharge from the pipeline.	Section 4.2
c. A list of equipment that may be needed for response activities on land and navigable waters: 1. Transfer hoses and connection equipment 2. Portable pumps and ancillary equipment 3. Facilities available to transfer and receive oil from a leaking pipeline	Sections 4.3 to 4.9 Appendix D (Equipment Lists)
d. Identification of the availability, location and contact telephone numbers to obtain equipment for response activities on a 24 hour basis	Section 5 (Contacts), Appendix D (Equipment Lists)
e. Identification of personnel and their location, telephone numbers and responsibility for use of equipment in response activities on a 24 hour basis	Section 5 (Contacts), Appendix D (Equipment Lists)

Section 4 - Response Activities

Requirement	Location in Response Plan
a. Responsibilities of and actions to be taken by, operating personnel to initiate and supervise response actions pending the arrival of the qualified individual or other response resources identified in the response plan	Section 2 Section 3 Section 4
b. The qualified individual's responsibilities and authority including notification of response resources identified in the plan	Section 3.5
c. Procedures for coordinating the actions of the operator or qualified individual with the action of the Federal On-Scene Coordinator responsible for monitoring or directing the actions	Section 3.7
d. Oil spill response organizations available, through contract or other approved means, to respond to a worst case discharge to the maximum extent possible	Section 5 (Contacts), Appendix D (Equipment Lists)
e. For each organization identified under paragraph (d) of this section, a listing of: 1. Equipment and supplies available 2. Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization for the first 7 days of the response.	Appendix D (Equipment Lists)

Section 5 - List of Contacts

Requirement	Location in Response Plan
a. A list of persons the plan requires the operator to contact	Section 2 Section 5
b. Qualified individuals for the operator's area of operations	Information Summary Front of Plan
c. Applicable insurance representatives or surveyors for the operator's area of operations	Section 5 (Contacts)
d. Persons or organizations to be notified for activation of response resources	Section 5 (Contacts), Appendix D (Equipment Lists)

Section 6 - Training Procedures

Requirement	Location in Response Plan
a. Training procedures and programs	Section 6

Section 7 - Drill Procedures

Requirement	Location in Response Plan
a. Announced and unannounced drills	Section 7
b. Types of drills and their frequencies. For example, drills could be described as follows: 1. Manned pipeline emergency procedures and qualified individual notification drills conducted quarterly. 2. Drills involving emergency actions be assigned operating or maintenance personnel and notification of the qualified individual on pipeline facilties which are normally unmanned, conducted quarterly 3. Shore based spill management team tabletop drills conducted yearly 4. Oil spill removal organization field equipment deployment drills conducted yearly 5. A drill that exercises the entire response plan for each response zone, would be conducted at least once every three years	Section 7.2

Section 8 - Response Plan Review and Update Procedures

Requirement	Location in Response Plan
a. Procedures to meet 49 CFR 194.121	Section 1.4
b. Procedures to review the plan after a worst case discharge and to evaluate and record the plan's effectiveness	Section 1.4

Section 9 - Response Zone Appendices

(Note: Only one response zone is identified within the Sparks Terminal Emergency Response Plan

Requirement	Location in Response Plan
Each response zone appendix would provide the following information:	
a. The name and telephone number of the qualified individual	Information Summary (Front of Plan)
b. Notification procedures	Section 2
c. Spill detection and mitigation procedures	Section 4.1
d. Name, address and telephone number of the spill response organization	Appendix D (Equipment Lists)
e. Response activities and response resources including: 1. Equipment and resources necessary to meet 49 CFR 194.115 2. The trained personnel necessary to sustain operation of the equipment and to support the oil spill removal organization and spill management team for the first 7 days of operation	Appendix D Section 8
f. Names and telephone numbers of federal, state and local agencies which the operator expects to assume pollution response responsibilities	Section 2.3 Section 5
g. The worst case discharge volume	Section 8.1
h. The method used to determine the worst case discharge volume, with calculations	Section 8.1
l. A map that clearly shows the following: 1. The location of the worst case discharge 2. The distance between each line section in the response zone: I) Each potentially affected public drinking water intake, lake, river and stream within a radius of five miles of the line section ii) Each potentially affected environmentally sensitive area within a radius of one mile of the line section	Section 8.1 Appendix E (Reference and Maps)
j. A piping diagram and plan-profile drawing of each line section, which may be kept separate from the response plan if the location is identified	Separate in Sparks Terminal FRP and SPCC documents
k. For every oil transported by each pipeline in the response zone, emergency response data that: 1. Includes the name, description, physical and chemical characteristics, health and safety hazards, and initial spill handling and fire fighting methods 2. Meets 29 CFR 1910.1200 or 49 CFR 172.602	Section 4.10

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Appendix C

Forms

OP Reno - Forms

Form 1 – Spill Response Notification Form
Form 2 – Notification Drill Record Form
Form 3 – Drill Exercise Attendance Form
Form 4 – Drill Documentation Summary Form
Form 5 – Triennial Credit Documentation Form
Form 6 – Equipment Deployment Drill Documentation Form
Form 7 – Drill Exercise Evaluation Form
Form 8 – Equipment Inventory / Inspection Log Form
Form 9 – Personnel Response Training Log

Form 1
Revision 1 – August, 2010

OP Reno Spill Response Notification Form

Reporter's Last Name: _____ First: _____ M.I.: ___
Position: _____
Phone Number: Day_____ Evening _____

Company: **OP Reno LLC**
Organization **Petroleum Bulk Storage & Distribution Facility**
Address: **525 Nugget Avenue** City: **Sparks** State: **Nevada** Zip: **89431**

Were Materials Discharged? _____(Y/N)
Confidential? _____(Y/N)
Meeting Federal Obligations to Report? _____(Y/N) Date Called: _____
Calling for Responsible Party? _____(Y/N) Time Called: _____

Incident Description

Source and/or Cause of Incident: _____
_____
_____
_____

Date of Incident: _____
Time of Incident: _____(AM/PM)
Incident Address/Location: _____
_____
Nearest City: _____ State: _____
County: _____ Zip: _____
Distance from City: _____ Units of Measure: _____
Direction from City: _____ Section: _____
Township: _____ Borough: _____
Container Type: _____ Tank Oil Storage Capacity_____
Units of Measure: _____ Facility Oil Storage Capacity: _____
Units of Measure: _____
Facility Latitude: __ Degrees __ Minutes __ Seconds
Facility Longitude: __ Degrees __ Minutes __ Seconds

Continued on next page

Material Discharged

CHRIS Code	Discharged quantity	Unit of measure	Material Discharged in water	Quantity	Unit of measure

WEATHER CONDITIONS *(if important to the incident)*								
Weather		**Clear**		**Cloudy**		**Raining**		**Snowing**
Wind Speed		**Calm**		**Light**		**Medium**		**Strong**
Wind Direction from:	**N**	**NW**	**W**	**SW**	**S**	**SE**	**E**	**NE**

Response Action

Actions Taken to Correct, Control or Mitigate Incident: _____

_____

_____

_____

Impact

Number of Injuries: _____ Number of Deaths: _____

Were there Evacuations? _____(Y/N) Number Evacuated: _____

Was there any Damage? _____(Y/N)

Damage in Dollars (approximate): _____

Medium Affected: _____

Description: _____

More Information about Medium: _____

_____

Additional Information

Any information about the incident not recorded elsewhere in the report: _____

_____

_____

Caller Notifications

EPA? _____(Y/N) USCG? _____(Y/N) State _____(Y/N)

Other _____(Y/N) Describe: _____

_____

Note: Do not delay spill notification to collect the information in this list.

OP Reno LLC – Sparks Terminal
NOTIFICATION DRILL RECORD FORM

SCENARIO NAME:	DATE OF DRILL:
WHAT IS THE SCENARIO TO BE REPORTED:	

DRILL OBJECTIVES

Drill Leader		Drill Leader Call Back Telephone Number	

NOTIFICATIONS MADE DURING DRILL

		Time drill was started:	A.M. / P.M.
Time of Contact	Person Making Contact	Person contacted	Remarks

Post-Exercise comments (Drill Leader)

Drill Leader Signature: _____ Date: _____

Cont'd

NOTIFICATION DRILL RECORD FORM

Post-Exercise comments (Qualified Individual)
Qualified Individual Signature: _____ Date: _____

Key Recommendation Summary – Action Items

Recommendation	Action By	Deadline Date

OP Reno LLC – Sparks Terminal

Form 3

DRILL / EXERCISE ATTENDANCE FORM

Drill / Exercise Name ________________ Date: ____________

Location: _____________________

Page __ of __

Name of Participant	Company or Agency	Job Title	No. of Hours Training

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Form 4

OP Reno LLC – Sparks Terminal
DRILL DOCUMENTATION SUMMARY FORM

DRILL / EXERCISE NAME:		DRILL DATE:	

Drill Leader:		Qualified Individual:	
Telephone No.		Telephone No.	
Drill Location:			

	Type of Drill or Exercise (Check all applicable items)
	Notification Drill
	Level I Tabletop Exercise
	Level II Tabletop Exercise
	Level III Tabletop Exercise
	Equipment Deployment Exercise (Company)
	Equipment Deployment Exercise (OSRO)
	Area Exercise (Multi-company or Government)
	Unannounced Exercise
	Triennial Cycle requirements exercised (fill out Triennial Credit Documentation Form)
	Eqipment Inspection Undertaken
	Drill / Exercise undertaken by third party
	Actual Response to incident (considered as fulfilling specified exercise requirement for this period) Name and Date of Incident :
	Other (specify):

	Attached Documentation (check all that apply)
	Incident Command System (ICS) Forms
	Drill / Exercise Attendance Form
	Drill / Exercise Evaluation Form
	Triennial Credit Documentation Form
	Equipment Deployment Documentation Form
	Other (Specify) :

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Form 5

OP Reno LLC – Sparks Terminal
TRIENNIAL CREDIT DOCUMENTATION FORM

(to be completed after every deployment or tabletop exercise)

Drill / Exercise Name:		Drill Date:	

Response Plan Elements

Each of the following elements must be drilled at least once in the triennial (3 year) cycle during a tabletop or deployment exercise. Some of the elements (eg. notifications) may require more frequent drills as specified in the Emergency Response Plan.

Which Triennial requirements were exercised during this drill?	
Organizational Elements	
	Notifications
	Personnel mobilization
	Use of Incident Command System (ICS) Organizational structure
Operational Elements	
	Incident Assessment
	Operational Spill Control
	Protection of Critical or Sensitive Area
	Spill Containment
	Spill Recovery
	Waste Management
Support Elements	
	Contract personnel & OSRO mobilization
	Documentation
	Equipment Maintenance and Support
	Mobilization of Equipment and Resources
	Procurement
	Testing of communications capabilities

Tabletop Exercises

one of the annual tabletop exercises undertaken in the triennial (3 year) must exercise a worst case discharge scenario

	Discharge volume exercised was less than worst case discharge Volume used:
	Worst Case Discharge Scenario
	A tabletop exercise was not undertaken as part of this drill

Cont'd on Back

TRIENNIAL CREDIT DOCUMENTATION FORM cont'd

Unannounced Exercises
one of the annual equipment exercises undertaken in the triennial (3 year) cycle must be an unannounced exercise

	Tabletop exercise:
	Equipment Deployment exercise
	This drill was not an unannounced exercise

Form 6

OP Reno LLC – Sparks Terminal

Equipment Deployment Drill Documentation Form

(to be completed after equipment deployment in an exercise or actual response)

Drill / Incident Name:		**Date:**	
Location:			

Check all that apply:			
	Drill		Response to actual emergency
	Terminal Equipment Deployment		OSRO Equipment Deployment
	at the terminal site		at a third party facility
	along a river or creek		at an outside location (eg. river, park, etc.)

Brief Drill description:

_____

_____

_____

_____

Deployment Location	
Name of Facility or Location:	
Address or Site Description	
Watercourse involved: (if applicable)	
Contact Name for Location	
Telephone Number:	

Additional Documentation attached to this form			
	Drill Plan		Other (Specify below)
	Drill Evaluation Form		
	Training Records (Contractor)		
	Inspection / Maintenance Records (Contractor)		

Cont'd

EQUIPMENT DEPLOYMENT DRILL DOCUMENTATION FORM cont'd
Page 2 of 2

Drill Resource Summary (use one form for company equipment used and an additional form for each contractor)

Resource Supplier for Drill	
Address	
Contact Name	
Telephone Number:	

Qty.	Description	Qty.	Description

Add Additional Sheets as required

Form 7

OP Reno LLC – Sparks Terminal
DRILL / EXERCISE EVALUATION FORM

(to be filled out by the drill leader after completion of the drill or exercise)

Drill / Exercise Name:		**Date:**	
Location:			

Drill / Exercise Objectives (NOTE: (there can be less objectives than indicated below)		
Was the Objective Accomplished?	**YES**	**NO**
1.		
2.		
3.		
4.		
5.		
6.		

If certain objective(s) above were not accomplished, list the reason below:

_____

_____

_____

_____

_____

_____

Exercise / Drill Comments and Recommendations

Please provide appropriate comments below which relate to this drill, and recommendations for areas of improvement, as required. (NOTE: comments may be positive or negative, and not all items will apply to every drill)

Drill Planning

Was sufficient planning undertaken to meet the objectives of the exercise?

___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Were items missed in the planning phase of the exercise, which should be considered in future exercises? ___ **Yes** ___ **No** ____ **N/A**

Comments: _____

_____

_____

Was the scenario used realistic? Did it allow the objectives of the exercise to be accomplished? ___ **Yes** ___ **No** ____ **N/A**

Comments: _____

_____

_____

Were all required resources (manuals, maps, , drawings, photographs, forms and other required reference materials) available for use during the exercise (if required)

___ **Yes** ___ **No** ____ **N/A**

Comments: _____

_____

_____

Recommendations for Future Improvements in Exercise Planning

_____

_____

_____

_____

_____

_____

Exercise / Drill Comments and Recommendations

Please provide appropriate comments below which relate to this drill, and recommendations for areas of improvement, as required. (NOTE: comments may be positive or negative, and not all items will apply to every drill)

Reference Materials

Was the Emergency Response Plan (ERP) used during the exercise? Did it help in undertaking the exercise objectives, or was it a hindrance? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Were any deficiencies, problems or incorrect information noted in the ERP, which should be considered in future revisions? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Were other company reference materials used during the exercise? Were they useful in meeting the exercise objectives? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Were any deficiencies, problems or incorrect information noted in other company reference materials, which should be considered in future revisions?
___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Recommendations for Future Improvements in Reference Materials

_____

_____

_____

_____

_____

Exercise / Drill Comments and Recommendations

Please provide appropriate comments below which relate to this drill, and recommendations for areas of improvement, as required. (NOTE: comments may be positive or negative, and not all items will apply to every drill)

Emergency Notification

Were internal notifications completed successfully? Were any delays encountered, which could be avoidable in future? ___ **Yes** ___ **No** ___ **N/A**

Comments:

_____

_____

_____

Were required external notifications to government or outside agencies properly identified or undertaken, based on the exercise objectives? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Were required contractors contacted in a timely manner, based on the objectives of the exercise? ___ **Yes** ___ **No** ___ **N/A**

Comments:

_____

_____

_____

Did all notifications proceed in an orderly fashion? Was any confusion evident regarding notification responsibilities, or notification procedures?

___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Recommendations for Future Improvements in Emergency Notification

_____

_____

_____

_____

Exercise / Drill Comments and Recommendations

Please provide appropriate comments below which relate to this drill, and recommendations for areas of improvement, as required. (NOTE: comments may be positive or negative, and not all items will apply to every drill)

Emergency Organization

Were all personnel aware of who was in charge during the exercise?
___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Were all personnel aware of their own responsibilities, and how they functioned within the organization? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Was there a clear understanding of what authority key personnel had to make decisions? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Was an Incident Command System (ICS) structure used during the exercise? How did it function? Were any deficiencies noted? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Did the emergency personnel involved in the exercise function as a team? Were any deficiencies noted? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Recommendations for Future Improvements in Emergency Organization

_____

_____

_____

Exercise / Drill Comments and Recommendations

Please provide appropriate comments below which relate to this drill, and recommendations for areas of improvement, as required. (NOTE: comments may be positive or negative, and not all items will apply to every drill)

Equipment Deployment

Did equipment used function in a correct manner, or were deficiencies noted?
___ Yes ___ No ___ N/A

Comments: _____

_____

_____

Were any deployment procedures or techniques used during the exercise found to be deficient? **___ Yes ___ No ___ N/A**

Comments: _____

_____

_____

Was the equipment deployment undertaken in a safe manner? Were safety deficiencies noted? **___ Yes ___ No ___ N/A**

Comments: _____

_____

_____

Did deployment personnel exhibit appropriate knowledge of equipment usage and deployment strategy, and did they function as a team? **___ Yes ___ No ___ N/A**

Comments: _____

_____

_____

Recommendations for Future Improvements in Equipment Deployment

_____

_____

_____

_____

_____

_____

Exercise / Drill Comments and Recommendations

Please provide appropriate comments below which relate to this drill, and recommendations for areas of improvement, as required. (NOTE: comments may be positive or negative, and not all items will apply to every drill)

General Exercise Comments

Was the simulated response effort organized and orderly? ___ **Yes** ___ **No** ___ **N/A**

Comments: _____

_____

_____

Was the response team in command of the situation?

Comments: _____

_____

_____

What strong points were noted during the exercise?

Comments: _____

_____

_____

_____

_____

_____

_____

_____

What areas were noted where improvement is required?

Comments: _____

_____

_____

_____

_____

_____

_____

ACTION ITEMS RESULTING FROM EXERCISE

Recommendation	Action By	Deadline Date

Signatures

Drill Leader _____ Qualified Individual _____

Date: _____ Date: _____

OP RENO LLC – SPARKS TERMINAL FORM 8
Equipment Inventory and Inspection Log Form
(TO BE PERFORMED TWICE PER YEAR)

Inspector: _____ **Date:**_____

Equipment Type	Description - Model, Style, Size, Capacity	Quantity on inventory	Unit	Quantity Found	Location / Operational Status / Comments
ITEMS NOTED ON INVENTORY (RESPONSE PLAN)					
Axe		2			
Booms	Absorbent 8"x10 foot	30	lengths		300 feet total
Brooms		2			
Drums	55 gallon, Open Top	3			
First Aid Kit	50 Unit	1			
Fire Extinguisher	Dry Chemical 20 lb. Type ABC	2			
Flashlight	Battery operated	3			
Pitchforks		5			
Rakes		5			
Rope	5/16" Polypropylene	500	feet		
Rope	5/8" Polypropylene	300	feet		
Sand Bags	empty	200			
Sand Bags	filled	12			
Shovels	Round Point	5			
Shovels	Square Point	5			
Sledgehammer	12 lb	2			
Sorbent (Bundles)	Sorbent Pads 18" X 18" 100/bundle	20	bundles		
Sorbent (Bundles)	Sorbent Pads 36" X 36" 100/bundle	3	bundles		
Stakes	Metal, Heavy Duty, 36"	24			
Trash Bags	Large	2	boxes		
Wheelbarrows		2			
OTHER ITEMS FOUND					

ACTION ITEMS NOTED FROM INSPECTION

Recommendation	Action By	Deadline Date

Forward to qualified Individual upon completion, for review and final filing

Reviewed by:

Qualified Individual _____ Date: _____

OP Reno LLC – Sparks Terminal
PERSONNEL RESPONSE TRAINING LOG

Personnel training log will be maintained to include a record of all formal response training received by each employee. All entries will be logged using the following format:

Name	Response training/date and number of hours	Prevention training/date and number of hours

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Appendix D

Equipment Lists

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Sparks Terminal – Personnel and Equipment

The following OP Reno Terminal Emergency Response Personnel duties involve responding to emergencies, including oil spills at the facility:

Date of Last Update: June 2010

Name	Phone	Response time	Responsibility during response action	Response training type/date
Frank Padilla Terminal Manager	W 775-331-5420 C 775-745-5273	<1 Hour	Qualified Individual. Incident Commander in charge of response actions	OSHA Trained On file at facility
Lee Bonham Terminal Operator	W 775-331-5420 C 775-745-5290	< 1 Hour	Operations, spill response and support Alternate QI	OSHA Trained On file at facility
Rob Farmer Terminal Operator	W 775-331-5420 C 775-745-5289	< 1 Hour	Operations, spill response and support	OSHA Trained On file at facility

Note: When employed at the terminal, the above personnel response time would be approximately 5 minutes after being notified of the incident.

Sparks Terminal – Emergency Equipment List

Equipment Type	Description - Model, Style, Size, Capacity	Qty	Unit	Location	Operational Status / Comments
Axe		2			
Booms	Absorbent 8"x10 foot	30	lengths		300 feet total
Brooms		2			
Drums	55 gallon, Open Top	3			
First Aid Kit	50 Unit	1			
Fire Extinguisher	Dry Chemical 20 lb. Type ABC	2			
Flashlight	Battery operated	3			
Pitchforks		5			
Rakes		5			
Rope	5/16" Polypropylene	500	feet		
Rope	5/8" Polypropylene	300	feet		
Sand Bags	empty	200			
Sand Bags	filled	12			
Shovels	Round Point	5			
Shovels	Square Point	5			
Sledgehammer	12 lb	2			
Sorbent (Bundles)	Sorbent Pads 18" X 18" 100/bundle	20	bundles		
Sorbent (Bundles)	Sorbent Pads 36" X 36" 100/bundle	3	bundles		
Stakes	Metal, Heavy Duty, 36"	24			
Trash Bags	Large	2	boxes		
Wheelbarrows		2			

EMERGENCY RESPONSE CONTRACTORS

Date of Last Update: June, 2010

Contractor	Phone	Response time	Contract responsibility
Clean Harbors	800-645-8265 775-331-9400	1 Hour	OSRO, respond with equipment, supplies, personnel, etc to an oil spill beyond the capabilities of the terminal

CLEAN HARBORS

SPARKS SERVICE CENTER **24-Hr.: 775-331-9400**
55 Silicon Drive **24-Hr.: 800-645-8265**
McCarran, NV 89434 **Fax: 775-343-1235**

Leif Hammond, General Manager EPA / Federal ID #: N/A

Personnel Authorized to release equipment / materials / manpower, etc:

Leif Hammond
David Walizer
Greg Reed
Shawna Franceschini

40-Hour OSHA Trained Personnel:

Supervisor	3
Foreman	4
Equipment Operator	8
Field Technician	11

EQUIPMENT LIST

Qty	Item Description	Location	Capacity / Size / Key Features
	Vessels & Marine Support Equipment		
1	Power Workboat, Alweld	Sparks	16', 25 HP, NV 2440 KX, V312
	Motor Vehicles & Vacuum Equipment		
3	Vacuum Truck, Straight	Sparks	3000 Gal
3	Gap Vac, Volvo	Sparks	
3	Stake Body/Utility Truck, Ford	Sparks	Ford
13	Crew Cab Pickup	Sparks	F-250
1	Jetter Combo Unit	Sparks	Sewer Jetter with 1200 gallon vacuum tank
7	Tractors - 3 Axle	Sparks	Whites and Peterbulit
1	Straight Roll Off Truck	Sparks	Peterbuilt
3	Roll Off trailer	Sparks	Fontan and Ace
2	Truck and Trailer Combo	Sparks	Transfer rig with dump beds
	Pumps and Pressure Equipment		
2	Pressure Washer, Alkota	Sparks	Hotsy, 2500 psi
4	Hydro Blaster	Sparks	10K
1	Trash Pump (Gas)	Sparks	2' – 100 gallon per minute
2	Trash Pump (Gas)	Sparks	3' – 150 gallon per minute
2	Trash Pump (Gas)	Sparks	4" – 400 gallon per minute
1	Double Diaphragm Pump	Sparks	2', Chemical
3	Double Diaphragm - pneumatic	Sparks	2', Steel
4	Double Diaphragm - pneumatic	Sparks	3', Steel

Cont'd

CLEAN HARBORS - EQUIPMENT LIST cont'd

Qty	Item Description	Location	Capacity / Size / Key Features
	Oil Spill Containment Booms		
2500	Feet, - Oil Containment Boom	Sparks	18', American Marine, On Trailer
	Environmental Monitoring Equipment		
4	5-Gas Meter	Sparks	MSA Sirius w/ Automated Calibration
2	4-Gas Meter	Sparks	MSA / Gastech
	Recovery Equipment		
2	Skimmer – 26"	Benicia	Pneumatic Drum – 26"
1	Skimmer – 36"	San Jose	Pneumatic Drum – 36"
	Beach or Earth Cleaning and Excavating Equipment		
	Generators / Compressors / Light Towers		
1	Air Compressor	Sparks	185 CFM
1	Air Compressor	Sparks	165 CFM
	Health and Safety Equipment		
4	SCBA Units	Sparks	MSA
2	4 Man Breathing System	Sparks	MSA
2	Coppus Blower	Sparks	Pneumatic
	Communications		
	Miscellaneous		
	14' Boom Trailer	Sparks	
	35' Emergency Response Trailer	Sparks	
	21' Emergency Response Trailer	Sparks	Wells cargo

Appendix E

Reference Information and Maps

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Environmental Sensitivity Information
OP Reno LLC - Sparks Terminal

General Information

Information related to Environmental Sensitivity for the Sparks Terminal Response Zone is contained on the following pages.

The following information was derived from, and is consistent with the latest information contained within the Truckee River Geographic Response Plan, and associated detail maps. The Truckee River Geographic Response Plan is the Inland Zone Area Contingency Plan identified under section 1005.02.2(b) of EPA Region IX Regional Contingency Plan for the area where the Sparks terminal is located.

Land Impacts - Local

Land Usage Surrounding the Sparks Terminal

The area surrounding the terminal is occupied by industrial/commercial sites.

Water Impacts

Nearest Navigable Waterbody

The **Truckee River** is located approximately 1.0 mile south of the terminal's southerly fence line.

Potential Access Point(s) to the Waterbody

All spills outside of secondary containment at the terminal would migrate in a southerly direction through drainage systems. If a spill has the potential to migrate off-site, it may reach a storm water outfall.

The stormwater drain system would flow to the east into the People's Ditch which in turn drains into the North Truckee Drain. The North Truckee Drain turns south for approximately 1 mile before entering the Truckee River immediately upstream of Steamboat Creek.

Sensitive areas potentially affected are anticipated to be on the Truckee River downstream of the North Truckee Drain.

Truckee River - Area Hydrology

The City of Sparks is included in the eastern portion of the Truckee Meadows Basin. The Truckee Meadows Basin is a bowl-shaped valley, approximately 10 miles wide and 16 miles long, containing the cities of Reno and Sparks. Several tributaries enter the Truckee River along this portion of the basin with the most important being Steamboat Creek. On the east side of the Truckee Meadows at Vista, the Truckee River enters the lower Truckee River canyon, which cuts through the Virginia range.

Nearly 2.5 miles after leaving the Truckee Meadows, the Truckee River comes abreast of Lockwood. Some 11.4 miles beyond this point the Truckee River passes Sierra Pacific Power Company's Tracy-Park power station cooling ponds and 3.6 miles beyond this the river reaches Derby Dam.

From the Derby Dam, the Truckee Canal takes off, first paralleling the river towards the east, then turning southward along the east side of the Lahontan Valley and crossing into the Carson River Basin, heading towards the lower Carson River where it empties into the Lahontan Reservoir.

The Truckee River continues for about 9.2 miles below the Derby Dam and enters the Pyramid Lake Paiute Indian Reservation. Some 1.8 miles after entering the Pyramid Lake Paiute Indian Reservation, the Truckee River passes Wadsworth. Near Wadsworth, the river turns from its eastward flow and heads northward. Approximately 14.5 miles below Wadsworth is the Numana Dam, which is a diversion dam for irrigation on the reservation.

Approximately 3.5 miles downstream of Numana Dam is Nixon and just over four miles below Nixon is the Marble Bluff Dam. About four miles below Marble Bluff Dam, the Truckee River enters its terminus location, Pyramid Lake.

Environmental Sensitivity

Vulnerability to Wetlands or Other Sensitive Environments: A review of Truckee River Emergency Response Detail Maps (Detail Maps 5 through 9) show that a single sensitive species (**Northwestern Pond Turtle**) is identified on Detail Map 5 (see Appendix B). A review of the Emergency Response Site Strategies Sheets (Sites 11 through 14 in Appendix B) shows that **no sensitive resources are identified**.

Vulnerability to Fish and Wildlife: Fish and wildlife are present and need to be considered when dealing with an oil spill.

Vulnerability of Lakes and Streams: There are several creeks that flow into the Truckee River with **Steamboat Creek** being the most significant. **Truckee River discharges into the Pyramid Lake**.

Vulnerability of Endangered Flora and Fauna: A review of Truckee River Emergency Response Detail Maps (Detail Maps 5 through 9) show that a single sensitive species (**Northwestern Pond Turtle**) is identified on Detail Map 5 (see Appendix B). A review of the Emergency Response Site Strategies Sheets (Sites 11 through 14 in Appendix B) shows that no sensitive resources are identified.

Vulnerability of Water Intakes (drinking, cooling, or other): No drinking water or cooling water intakes are located downstream of the Truckee River from where a discharge from the terminal would enter the Truckee River. There may be some water intakes associated with the irrigation of agriculture crops.

Vulnerability of Schools: There are no schools within the planning distance of the terminal that could be vulnerable from a spill.

Vulnerability to Medical Facilities: There are no medical facilities within the planning distance of the terminal that could be vulnerable from a discharge caused by the terminal.

Vulnerability to Residential Areas: There are no residential areas within the planning distance of the terminal that could be vulnerable from a discharge caused by the terminal.

Vulnerability to Businesses: There are no businesses within the planning distance of the terminal that could be vulnerable from a discharge caused by the terminal.

Vulnerability of Recreational Areas: No recreational areas are identified within the planning distance along the Truckee River.

Vulnerability of Transportation Routes: No transportation routes are identified within the planning distance along the Truckee River.

Vulnerability of Utilities: No utilities are identified within the planning distance along the Truckee River.

Vulnerability of Other Areas of Economic Importance: The Truckee River is utilized as a **source for irrigation water and fishing**.

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