SOUTHERN PORTS AUTHORITY
PORT OF ESPERANCE

SPILL PROCEDURE

D16/20

Document Users	**:**	**ALL PERSONNEL**
Responsible Person	**:**	**ENVIRONMENT MANAGER**
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4	AL			15/08/2011	Review and significant edits: added reference to spill kit for minor spills in PoE fuel truck
5	AL			10/03/2015	Reference to INX, new logo
6	AL			12/05/2015	Oil spill on unsealed areas
7	AL			26/05/2016	Inclusion of spill container
8	CA	AL		18/08/2016	Information about absorbents and large berth-side oil spill kits, update procedure steps and update to be more in line with procedure template. Update other documents with HPRM document numbers
9	AL			22/06/2018	Review and update logos

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ABBREVIATIONS AND DEFINITIONS

Term	Description
DER	Department of Environment Regulation
DoT	Department of Transport
HAZMAT	Hazardous Materials
Major spill	Requires response from the Emergency Response Team. Has an extreme risk of impact.
Minor spill	Can be cleaned up within the work area with available equipment. Has a low risk of impact.
PoE	Port of Esperance
SDS	Safety Data Sheet
Significant spill	Requires specialist equipment, personnel or other work areas to assist with the clean-up. Has a high risk of impact

1. PURPOSE

It is the responsibility of all personnel to prevent spills through appropriate material storage and handling practices but should these controls fail, this procedure is needed to provide guidance on:

- Responding safely to stopping, containing and clean-up of spills of liquid or solid goods; and
- Ensure there is compliance with regulatory and customer requirements.

2. SCOPE

This procedure has implications to all Southern Port Authority – Port of Esperance (PoE) employees and contractors that may be required to respond to spillage or loss of containment of liquids or solids at PoE controlled areas and covers the following activities:

- Clean-up of spilt oil and fuel;
- Clean-up of mineral concentrates
- Clean-up of any other liquid or solid waste

This procedure excludes:

- Oil spills to the marine environment, since this is covered in the PoE Oil Spill Contingency Plan (D16/6470);
- Spills that trigger actions requiring an emergency response are described in the Emergency Response Plan (D16/3660).

3. HEALTH, SAFETY AND ENVIRONMENT CONSIDERATIONS

The procedure assumes staff are aware of general safe work practices (e.g. manual handling and use of SDS). In the event of a spill, it is the responsibility of all personnel to protect their own safety and that of others by assessing the HSE risks of the spilt material including:

- If appropriate safety precautions are not known for the spilt substance, refer to SDS for materials handled at PoE on Chem Alert (PoE intranet) or seek advice from the work area supervisor, Team Leader, or the Environment Manager and Occupational Health and Safety Officer;
- If the material cannot be identified or is a dangerous goods, contact the Team Leader, Terminal Manager and Harbour Master who may invoke the Emergency Response Plan (D16/3660) if required;
- Hazards associated with any dangerous goods, may necessitate a response by specialised response teams, i.e. HAZMAT;
- If the material has strong odours or vapours, work upwind of the spill site. It may be necessary to use respiratory protection and have first aid resources at hand and is mandatory when toxic vapours may be present. Only when all hazards have been assessed as safe, proceed; and

- Be aware of where you are placing your feet and try not to step on the slippery oily surface oily surface

4. ROLES AND RESPONSIBILITIES

Role	Responsibility
All	Any significant spills should be reported to the incident controller. In the marine environment this is the Harbour Master (HM), in any landside spills the Terminal Manager (TM) is the incident controller. Either the HM, TM or their reports must notify the Environment Department as soon as practicable (before COB) and complete an INX report to trigger further investigation.
Emergency Response Team	Maintain Emergency Response Plan (D16/3660), Oil Spill Contingency Plan and ensure all safety/spill response equipment is maintained.
Environmental Manager	Follow up non-conformance to ensure legal obligations are met including notification of DER within 24 hours and check clean-up is suffice.
Terminal Supervisor/Harbour Master	Supervise landside spill response, raise incident report form and submit to Environment Department.
Harbour Maste	Supervise waterside spill response, raise incident report form and submit to Environment Department.

5. SPILL RESPONE PROCEDURE

Once the safety risks of the spilt product have been assessed, the following guidance to mitigate the spill should be considered along with the specific circumstances of the spill, before deciding how best to stop, contain and recover the spillage.

5.1 Stop the Leak at the Source

Following assessment of safety risks of the material, consider actions required to control the source of the spill this will include:

a. Plugging the hole or shutting the valve / tap;

b. Identify any other reasonable actions that may control the source including repositioning the container. Note for spills from containerised goods, the containers should be positioned onto the spill trailer (refer to Appendix 1 for further details).

5.2 Contain the Spill

- Identify proximity of sensitive receptors including the workforce, the surrounding community or the ocean. Also consider the location of ignition sources or incompatible chemicals that may increase the risks presented by the spill.

- Contain the spill by using absorbent material from oil spill response kits whose locations are shown in the Figure below and detailed in Table 1

Figure 1: Location of Oil Spill Kits at PoE Note: Locations of oil spill kits are marked with yellow triangles

- The kits include: Oil absorbent booms, pillows and pads, kitty litter and peat. Additional consumables are kept in Stores. Materials from these kits can also be used to contain other spills but be aware the absorbent materials DO NOT ABSORB WATER (hydrophobic).

Table 1 Spill kit details

Spill Kit Size	Location	Max. Absorbent Capacity
Small	Fuel Bowser – Stores	
	Fuel Bowser – Cosmos Pad	
	Fuel Bowser – Container Hardstand	
	Fuel Bowser – Viento Yard	
	Waste Oil Tank in Maintenance Yard	
	Iron Ore -Shed 3 Western End	
	Iron Ore - Shed 1 Western End	
	PoE Fuel Truck	
Large	Berth 1	770 L
	Berth 2	770 L
	Berth 3	770 L

Some options for containing a spill include:

a. Creating an earthen perimeter bund or using oil absorbant booms to act as a barrier;

b. Preventing access into stormwater drains by:
   i. Using drain covers over pits (drain covers found in all small oil spill kits.;
   ii. Plugging the stormwater pipe using inflatable fenders;
c. Use of absorbent pads around the edge of the hydrocarbon spill;
d. Use of hydrophobic booms to restrict the flow of liquid and keep it pooled within the booms;

e. Redirecting the flow of material to an area that poses less safety or environmental risk;

f. Identify any other reasonable actions that may improve containment.

- As a last resort, other materials such as sand may be used. Avoid using these materials as they create a large amount of contaminated waste.

- For a solids spill, dust suppression measures may be required if dust is an issue.

5.3 Clean-up the Spill

Once the source of the spill has been controlled and the spill contained (immediate threat to the environment has been minimised) the rest of the spill will need to be cleaned-up.

- For oil/fuel spills, continue to use absorbent materials from oil spill kits around site. Used and contaminated absorbent materials should be collected in either 220L drums or in lined skip bins (depending on the size of the clean-up. This applies for spills on sealed and gravel areas.

- Spills on gravel areas – clean-up will include the absorbent materials used AND any contaminated soil in the area will need to be scraped up and stockpiled on the southern side of Shed 3. When stockpiling, ALL contaminated soil from an oil/fuel spill (hydrocarbon contaminated) MUST be placed on a tarpaulin, and also be covered in a tarpaulin to prevent further contamination. Notify the Environmental Deparmtnet of the stockpile to ensure likely contaminants are known help organise treatment, reuse or disposal.

- For mineral concentrate spills scrape up the spillage and wash down the affected area. Do not let wash waters enter stormwater drains and contact the Environmental Department to request the most applicable disposal method. Where possible, the material shall be recovered and recycled. This may apply to:

a. ore concentrate

b. sulphur granules

c. chemicals

d. waste oil / grease

- If material cannot be recycled, advice should be sought from the Environment Department on appropriate disposal methods to ensure compliance with the Environment Protection Act

5.4 Restock Kits and Reporting

Any personnel who use spill response equipment must ensure it is appropriately replenished and returned to its storage position prior to resuming work. The Team Leader shall ensure that all spill response equipment is in order, which will be done as part of regular word order process.

Complete internal incident INX reporting (in line with the spill hierarchy) and notify Terminal Supervisor/Harbour Master and Environment Department to allow notification of DER within 24 hours if there is an emission to the environment

5.5 Spill Hierarchy

The spill hierarchy depends on the risks of the spilt material that depend on the type of substance spilt as well as the volume of the spill. The following presents guidance on describing a category for the spill.

5.5.1 Minor spills

A minor spill is typically:

- easily contained and so does not pose a risk to human health or the environment;
- can be cleaned up by an individual or within the work area using spill response equipment;

Note that:

- Providing there is total clean-up of a spill on a sealed area it can be reported in INX as a near miss; and
- If the spill occurs on an unsealed area, it is an emission to land and groundwater and must be reported as an incident.

Oil contamination of unsealed areas on our gravel roads and container storage areas should be avoided. Spillage on an unsealed area is an environmental incident as it may contaminate soil, groundwater and stormwater. Spillage on a sealed area can be bunded, recovered and restricted to a temporary hazard.

5.5.2 Significant spills

A significant spill may:

- Not be readily contained by an individual or within the work area using the available spill response equipment;

- May require the involvement of the site's team members from other work areas.
- Likely to endanger safety, result in pollution or disrupt port operations;
- Is an incident and requires reporting and investigation in INX and if there is an emission requires reporting by the Environment Department to DER or DoT.

5.5.3 Major spills

A major spill typically requires:

- Evacuation of personnel and the involvement of the Emergency Response Team in accordance with the Emergency Response Plan (D16/3660);

Examples of major spills are:

- Oil spill into stormwater system or directly into the ocean;
- Flammable materials that are uncontained;
- Hazardous gases that are filling a confined space;
- Ship loading of dry nickel concentrate resulting in a dust cloud;
- Is an incident and requires reporting and investigation in INX and if there is an emission requires reporting by the Environment Department to DER or DoT.

5.6 Containment Types

There are various types of material storage facilities on site, each providing different levels of material containment.

5.6.1 Primary containment

Primary containment describes the vessel in which the material is contained (e.g. a pipeline, drum, tank or container, or the "Spill Container" (refer to Appendix 1)).

5.6.2 Secondary containment

Secondary containment describes the infrastructure or facilities that surround vessels/containers (e.g. spill trays, concrete bunds).

This type of containment is designed to collect or prevent material from spreading to other work areas.

It is a minimum requirement of AS 1940 that the secondary containment can hold 110% of the volume of the largest container or 25% of the total volume of materials stored in within the facility.

Chemicals that can result in safety or environmental impacts must have secondary containment.

5.6.3 Tertiary containment

Infrastructure often used in work areas that involve large volumes of hazardous materials where secondary containment is not adequate or practically achievable.

This type of containment is designed to capture spills from secondary containment facilities and prevent material causing environmental harm or exiting lease boundaries.

6. OTHER DOCUMENTS AND PROCEDURES

Reference	Author	Title
D16/3660	PoE	Emergency Response Plan
D16/6470	PoE	Oil Spill Contingency Plan
D16/5576	PoE	Environmental Management Plan

7 APPENDICES

APPENDIX 1 THE SPILL CONTAINER

The spill container is used to contain liquid from a leaking container and can be moved by forklift or skel trailer. The leaking container is stacked on top and there are valves on either side of the container to decant liquid into IBCs or other containment for easier storage and transportation. The spill container is stored near the Biosecurity stand on the northwest corner of the sulphur shed.