

SPILL CONTINGENCY PLAN

1 INTRODUCTION

1.1 Objectives

A spill contingency plan is required for all undertakings involving the handling and storage of petroleum products or hazardous materials. Spill preventative measures are the best means of avoiding accidental release of fuel which can adversely affect the environment. This plan is intended to prevent spills and, in the event of a spill, to minimize the impact of the spill on the environment. The purpose of this Spill Contingency Plan is to:

- Facilitate the prompt, efficient and safe clean-up of materials spilled during the construction and operational phases during the development.
- Identify the reporting procedures in the event of a spill

This spill contingency plan is applicable to the developer, the contractors and service providers, employees and visitors to the site.

2 HAZARDOUS MATERIALS INFORMATION (MSDS)

Details of all Hazardous materials must be included in the Health and Safety File as well as displayed where and hazardous materials are stored. The supplier of these hazardous materials must provide Material Safety Data Sheets (MSDS) for all products. The MSDS should include the following information:

- Product and Company Identification;
- Composition/Information on ingredients;
- Hazards Identification;
- First-Aid Measures;
- Fire-fighting measures;
- Handling and storage;
- Exposure control/personal protection;
- Physical and chemical properties;
- Stability and reactivity;
- Toxicological information;
- Ecological information;
- Disposal considerations;
- Transport information;
- Regulatory information; and
- Any other applicable information.

This should be provided free of charge from the supplier. Should a MSDS not be provided, the supplier should issue sufficient information to enable the user to take the necessary measures as regards to health, safety and environmental.

3 HANDLING AND STORAGE

All activities must be appropriately carried out as per the Hazardous Chemical Substances Regulations 1995, Section 14:

Labelling, packaging, transportation and storage

“An employer shall, in order to avoid the spread of contamination of an HCS¹, take steps, as far as is reasonably practicable, to ensure:

- (a) That the HCS in storage or distributed are properly identified, classified and handled in accordance with SABS 072 and SABS 0228;*
- (b) That a container or a vehicle in which an HCS is transported is clearly identified, classified and packed in accordance with SABS 0228 and SABS 0229; and*
- (c) That any container into which an HCS is decanted is clearly labelled with regard to the contents thereof.”*

3.1 Hazardous Materials

Construction Phase

- Proper designated areas and storage facilities must be provided for all hazardous materials to prevent the spread of the spillage into the environment.
- All hazardous materials storage facilities must be located on an impermeable surface and must be enclosed by a sealed bund wall. The bund wall must have the capacity to contain 110% of the maximum volumes stored to ensure that soil or watercourses are not polluted on the event of a spill in the storage areas.
- The contractor must ensure the all Safety, Health and Environmental risks of spills are communicated to all employees. All employees should also receive task specific training for handling of any hazardous material. Casual and contractors labourers' are to be familiarized with all the relevant precautions when they are employed (Occupation Health and Safety Act 85 of 1993, Section 13).
- The contractor should ensure that a site-appropriate spill kit and relevant personal protective equipment (PPE) is readily available in the event of a spill.
- The transfer of fuel must be stopped prior to overflowing, leaving room for expansion.
- Any fuel operated machinery or vehicle is not to be overfilled. All machinery must be maintained in good working order as to prevent soil and groundwater pollution from leaks and spills.
- All hazardous waste must be stored in designated containers and be disposed of at a registered landfill site.
- Smoking must be prohibited near the use of any hazardous material and flammable substances.
- Fire Extinguishers must be readily available where any hazardous materials are being stored or used.
- The area where a spill has occurred must be rehabilitated after the spill has been cleaned up.

- Drip trays should be used under generators and cement mixers to shield the soil or vegetation below.
- Where possible, oil should be recycled.

Operational Phase

Most spills are caused by operator error, poor operation practices and inadequate maintenance. Common operator errors are overfilling, valves left open, poor transfer procedures, lack of product monitoring, and poor maintenance practices. Operational errors can be greatly reduced through:

Task specific training

- Emergency contacts and phone numbers must be displayed. The details of the person responsible for the cleaning up of spills must also be displayed and communicated to all employees. Location of spill kits should be communicated to operating personnel as well as other employees.
- Spill response training will need to be provided for the person that is appointed to attend to spills.
- Task specific training must be provided for those employees monitoring and handling any hazardous material. Proof of this training should be kept in the Health and Safety File
- Safety training on site shall include operational procedures, emergency procedures, safe working procedures, information on specific hazards, first aid and firefighting and proper use of PPE.
- Unauthorized persons shall not be permitted access to the storage areas.
- Instructions and phone numbers shall be posted publicly regarding the report of a spill.
- Routine groundwater monitoring and sampling schedules must be setup and implemented. A competent person must be appointed to undertake these tasks.

Awareness of the critical nature of spill prevention

- Employees must be educated on the effects of the fuel to the local environment through discharge to stormwater systems and watercourses.
- Explain the nature of the product with regard to spills – Some of this information should be included in the Material Safety Data Sheet (MSDS).
- Toxicity of stored fuel to humans, plants and animals. Petroleum contains a mixture of compounds that are hazardous to organic health (eg. Benzene which are cancer causing agents, Hydrocarbons which are linked to problems ranging from headaches to respiratory diseases).

Proper and continuous supervision of procedures

- Ensure that proper procedures are in place for handling and storage of the hazardous materials *E.g. When unreeling a fuel transfer hose, the nozzle must be in an upright position and be kept clear of the ground when returned to the storage position.*
- Ensure that workers know and follow all procedures.
- Ensure that all employees attend the procedural training as procedures may change.

- Check all procedure and records to verify compliance and record all findings.

4 EMERGENCY RESPONSE PLAN

4.1 Responsible person

In the event of a spill, the spill is to be reported to the Main Contractor's Site Agent who reports it directly to the fuel company in the event of a diesel spill, to the Project Proponent Project Manager and to the Environmental Control Officer.

The Project Manager shall report the spill to the Safety, Health and Environment Officer.

Where the Project Manager is not available, the spill shall be reported directly to the Safety, Health and Environment Officer.

All employees should be made aware of the procedure in case of a spill. The contractor is responsible for immediately containing the spill and for ensuring that it is adequately cleaned up, with the assistance of the service provider (Fuel Company) if necessary, and the affected area rehabilitated and measures instituted to ensure that such incident does not re-occur.

4.2 Response procedure

In the event of a spill, the following procedure should be followed:

- Isolate the area to protect all employees or visitors to the site.
- Immediately contain spill, to spill area – i.e. ensure that spill does not run/flow away: the most common method is to place either absorbent or non-absorbent dikes around the perimeter of the spill.
- Identify nature of spill e.g. paint, diesel, etc.
- Identify the source of the spill and stop the leak if possible.
- Remove any sources of ignition.
- Assess the level of the spill.
- Report spill to Site Agent who shall contact the service provider/fuel company and advise the Project Manager and the Safety, Health and Environment Officer.
- Locate spill kit where applicable or wait for the service provider/fuel company to arrive to assist.
- Review Material Safety Data Sheets (MSDSs): MSDS are used to determine the necessary PPE required for a response to spill situations (e.g., protective suits, boots, gloves, respiratory protection, etc.).
- Identify method of cleanup and potential hazards.
- Protect storm drains or sewers, or any other point of access to the environment.
- Proceed with recovery of spilled fuel and clean up.
- Arrange for the appropriate disposal of the spilled material.
- In the event of small spills, arrangements for remediation must be made immediately.
- All hazardous waste must be contained in separated designated containers and disposed of at registered landfill sites.

- Spills must not be washed off onto the street, into watercourses or stormwater systems. No spills should be hosed into the natural environment.
- Records of the spill must be maintained in an Incidents register with:
 - Nature of incident
 - Cause of incident
 - Clean up measures
 - Mitigation measures taken
- Where relevant record in non-compliance register.
- The Safety, Health and Environment Officer shall review spill reports.
- Adjustments will be made, if necessary, to the operational and emergency procedures and the Environmental Management System to prevent future occurrences.
- The Environmental Control Officer is to raise incident report and report to relevant authorities i.e. DAEA, DWAF and Pollution Control should it be required.

4.3 Spill Response Supplies

The following supplies should be maintained and records of inspections should be kept at all times:

- Spill kits;
- Sorbents;
- Absorption pads;
- Personal protective equipment (PPE);
- Caution tape and cones; and
- Tools and drums.

4.4 Notification

A list of the appropriate people to be notified in the event of a spill should be available on site with their contact details.

5 CONCLUSION

Any significant spill has the ability to endanger employees' health or lives, create environmental damage and have a large financial impact. Therefore it is imperative that all the necessary precautions are taken to prevent spillage.