

## **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
- 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 HCS<sup>1</sup>, 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.

### **3.2 Fuel storage: Underground storage tanks**

The design and implementation of the underground storage tanks must comply with SANS 10089-3 and SANS 1535. The additional requirements below must also be considered:

- The conditions of the tank, associated piping and the monitoring wells must be inspected on a regular basis.
- Any storage tanks must be fitted with an overfill protection device.
- All transfer of fuel shall be controlled by a competent person. The attendant must be aware of proper fuel handling procedures to minimize the risk of a spill and shall continuously check the areas adjacent to the storage tanks for possible leaks or spills.
- Absorbent pads should be placed around the fuel inlet prior to dispensing.
- Welding and/or burning operations should not take place within 6 metres of the storage tanks.
- Fire extinguishers must be located at significant points on the site. The worker required to operate the extinguisher must receive firefighting training. Details of this must be included in the Health and Safety File.
- Smoking **WILL NOT** be permitted during or near any fuelling operation. “No Smoking” signs are to be posted around the storage area.

- Written procedures or work instructions are required for the inspection of the underground tanks. Tanks must be dipped daily and reconciled against volume to check the losses that may have occurred due to leakage. The following additional inspections may also be undertaken:
  - Corrosion
  - Damages to the tanks, valves, pipes or hoses
  - Blockages to valves, pipes or hoses
  - Any other factors that may lead to leakage
- Records of these inspections should be kept on site, in the Health and Safety file.
- Access to these tanks should be limited to operating personnel.

## **4 EMERGENCY RESPONSE PLAN**

### **4.1 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.
- Identify the source of the spill and stop the leak if possible.
- Remove any sources of ignition.
- Assess the level of the spill.
- 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.
- Contain the spill: the most common method is to place either absorbent or non-absorbent dikes around the perimeter of the spill.
- 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.
- File a Spill Report and report as necessary to the Department of Water Affairs and eThekweni Municipality (Environmental Section). Records of any environmental incident must be reported to Tongaat Hulett. Records of the spill must be maintained.

#### **4.2 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
- Tools and drums

#### **4.3 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

