



## **SPILL CONTINGENCY AND EMERGENCY RESPONSE PLAN**



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# SPILL CONTINGENCY PLAN

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## 1. Intent

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; and
- Identify the reporting procedures in the event of a spill.

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

## 2. Material Safety Data Sheets (MSDS)

A register with details of all hazardous materials must be included in the Health and Safety File. The supplier of these hazardous materials must provide Material Safety Data Sheets (MSDS) for all products which must be displayed where hazardous materials are stored. 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 Contractor 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**

Hazardous materials should be managed as follows:

- Proper designated areas and storage facilities must be provided for all hazardous materials to prevent 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 be capable of containing 110% of the maximum volumes stored to ensure that soil or watercourses are not polluted in the event of a spill in the storage areas;
- Rainwater contained within the bund wall is to be regarded as potentially contaminated and must not be released into the environment, unless it is established by chemical analysis (e.g. COD) that the water is not contaminated;
- Mixing of volumes of bitumen and asphalt cement must take place in a controlled environment on a designated impermeable surface equipped with an SOG trap. The trap must not overflow and the waste captured must be disposed of at a registered landfill site or recycled;
- The Depot Manager 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 Depot Manager 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;
- 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;
- Vehicles transporting dangerous or hazardous chemicals may only be washed in a designated washing bay, equipped with an SOG trap;
- 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/bitumen mixers to shield the soil or vegetation below; and

- Where possible, oil should be recycled.

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:***

- A list of emergency contacts and numbers for important on-site staff and their roles, chemical spill response agencies, waste companies, and necessary authorities must be displayed and communicated to all employees. A secondary staff member must be appointed to co-ordinate responses to spills and emergencies in the absence of the Depot Manager;
- 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(s) that are 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 at each depot shall include operational procedures, emergency procedures, safe working procedures, information on specific hazards, first aid and fire-fighting, and proper use of PPE;
- Unauthorized persons shall not be permitted access to storage areas;
- Instructions and phone numbers shall be posted publicly regarding the report of a spill, particularly in residential areas; and
- Routine sampling schedules (including groundwater monitoring where necessary) 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 hazardous substances that are used to the local environment through discharge to stormwater systems, watercourses and beaches;
- Employees must be educated on the nature of the product with regard to spills – Some of this information should be included in the Material Safety Data Sheet (MSDS); and
- Employees must be educated on the toxicity of stored fuels and oils to humans, plants and animals. Petroleum contains a mixture of compounds that are hazardous to organism 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:***

- Proper procedures must be in place for handling and storage of the hazardous materials. E.g. Portable equipment (e.g. generators and pumps) should be placed on impervious surfaces, alternatively adequate drip trays need to be provided; and 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;
- Workers must know and follow all procedures;
- All employees must attend the procedural training as procedures may change;
- All procedures and records must be checked to verify compliance and record all findings.

# ENVIRONMENTAL EMERGENCY RESPONSE PLAN

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## 1. Intent

The environmental emergency procedures for all sites must ensure appropriate responses to unexpected / accidental actions / incidents that could cause environmental impacts. Such incidents may include:

- Accidental discharges to water (i.e. into the watercourse / stormwater systems) and land;
- Accidental spillage of hazardous substances (typically oil, petrol, diesel and bituminous products);
- Accidental toxic emissions into the air; and
- Specific environmental and ecosystem effects from accidental releases or incidents.

## 2. Response Procedure

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

- Isolate and demarcate the area to protect all employees or visitors to the site;
- Immediately contain the spill to the 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, for example paint, bitumen or diesel;
- Identify the source of the spill and stop the leak if possible, and safe to do so;
- Remove any sources of ignition;
- Assess the level of the spill;
- Report spill to ECO and KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA);
- Locate spill kit where applicable or wait for the hazmat service provider/fuel company to arrive to assist;
- Consult the Material Safety Data Sheets (MSDSs): MSDS are used to determine the necessary PPE required for a response to spill situations ( for example protective suits, boots, gloves and/or respiratory protection);
- Identify method of cleanup and potential hazards;
- Protect stormwater 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;
- All hazardous waste must be contained in separated designated containers and disposed of at registered landfill sites;
- In the event of small spills, arrangements for remediation must be made immediately;
- 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; and
  - Mitigation measures taken.

- Where relevant, record in non-compliance register;
- The Contractor must retain Safe Disposal Certificates for any materials associated with chemicals/chemical spills disposed to landfill, to submit to EDTEA
- Adjustments should be made, if necessary, to the operational and emergency procedures and the Environmental Management System to prevent future occurrences; and
- In the event of a significant spill, the Contractor is to raise an incident report and report to relevant authorities i.e. EDTEA, and Department of Water and Sanitation (DWS) should it be required.

### **3. Spill Response Supplies**

An emergency spill kit (e.g. Drizit kit) and designated hazardous waste bin must be available and visible at each site. The following supplies should be maintained and records of inspections should be kept at all times:

- Spill kits;
- Sorbents, including hydrocarbon absorbent;
- Absorption pads and booms;
- Personal protective equipment (PPE);
- Caution tape and cones; and
- Tools, particularly a spade or scoop, and drums.

### **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.