SPILLAGE GUIDE

I. Contents

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1. INTRODUCTION

The purpose of this guide is to provide the requisite guidance and information to staff, to effectively deal with spillages of all descriptions, and to bring environmental impacts to the lowest practicable level, and in particular aqueous discharges to main sewage systems and controlled watercourses. The need for detailed and careful planning of any procedures likely to be needed in the event of a spillage cannot be over emphasized. This will form part of any risk assessment made of the use, handling and storage of any hazardous substance used in our working environments and is a legal requirement of the Control of Substances Hazardous to Health Regulations and Management of Health and Safety at Work Regulation.

The effects of potentially disastrous spillage incidents to the environment can be substantially reduced by systematically prepared procedures and plans. This efficient Emergency Spillage Guide, properly executed, could turn a potential disaster into a less serious incident. The reasons for preparing an emergency spillage guide, include the following:

- It reduces the thinking time required after a spillage incident has occurred;
- It helps to make systematic, orderly and effective what would otherwise be arbitrary, chaotic and ineffective;
- It is good business management and forms an integral part of the company's Environmental Management System documentation;
- It helps to contain the spillage incident, to minimise potential effects on people and the extent of the damages to resources and the environment.

The Emergency Spillage Guide examines the implications of a wide range of pollution incident emergencies. Where appropriate, specific reference has been made to specific legislation, guidance documents and Policies and Procedures where further information can be obtained, particularly in an emergency.

The Emergency Spillage Guide Plan will be reviewed periodically in the light of operational experience, and revised and amended accordingly, to meet changing circumstances.

2. DISCHARGES OF SPILLAGES DOWN DRAINS

Following a spillage of a chemical / hazardous aqueous liquid, it is tempting to wash it with water hoses into the drainage system leading to the main sewers.

In some cases, where the material spilt is relatively non-toxic and water-soluble this may be appropriate. However, great care should be used in adopting this procedure as statutory requirements can easily be infringed. The main statutes relating to discharges to sewer are the ***Water Industry Act***. Legal responsibility for the safe containment and disposal of any chemical spillage lies with the producer of the waste. If a spill should occur immediate action should be taken to contain the chemical, using spill kits, absorbent materials such as sand, earth or vermiculite, and the use of proprietary booms, to prevent it from entering any drain or watercourse. Do not hose the spillage down or use any detergents. If an unplanned discharge of hazardous substances occurs, the local sewerage undertaker - Yorkshire Water and the Environment Agency should be informed as soon as possible, to enable them to protect sewer workers and minimise the effect of the spillage on the treatment works.

This is particularly important when the drain is a surface water drain, which discharges directly to a water course. The protection of water resources is the responsibility of the Environment Agency. Under the ***Water Resources Act***, their consent is required for any discharge to a river, lake, or other water course. If a spill should occur, immediate action should be taken to contain the spillage, to prevent it from entering any drains or watercourses. The Environment Agency should be informed immediately if an unauthorised discharge occurs.

Do not hose the spillage down or use any detergents

3. EMERGENCY MATERIALS AND EQUIPMENT

A wide variety of products are available to deal with spillages or to contain spills in emergency containment areas, some of which are listed below. Any materials or equipment used must be well maintained and strategically placed at accessible locations, which are clearly marked with durable notices explaining their use. The Environment Agency and Fire Service does have emergency equipment and facilities, but these may not always be available.

3.1 Sand and earth

If available, these are versatile containment materials which may be used to soak up spillages of oil and chemicals and used in sandbags to block off drains or to direct flows to a predetermined collection point. Sand should be kept dry, and a shovel should be available. Contaminated material must be properly disposed of as hazardous waste and must not be washed into the drainage system.

3.2 Proprietary absorbents

These serve a similar purpose to sand. They are available as granules in bags and stored throughout the factory. Although most absorbents are designed for hydrocarbon spills, products are available for chemical spills if these are required in the future.

3.3 Sealing devices and substances for damaged containers

These devices and materials are designed for use when a tank, storage drum, valve or pipe has been punctured or damaged. Leak sealing devices may take the form of a pad and ratchet strap which is put over the damaged area like a plaster, or they may be pre-shaped, inserted into the damaged area strapped. Leak sealing putties are also available. These are applied over the damaged area to form a temporary seal. A more permanent method may be required before moving the damaged vessel.

3.4 Drain seals

There are several different types of drain seal, including those which can be used to seal a drainage grid by covering or blocking the drain, and those which fit in a pipe. The use of a pipe seal may enable the drains to be used as a retention system if available, which may provide a significant volume of containment. Drain seals should be kept in a readily accessible location near or with spill kits, close to where they would be used.

Care should be taken in their installation to avoid exposure to hazardous conditions and to ensure the contained liquid does not overflow from gullies or elsewhere on the drainage system. They are laid over the drain cover to prevent ingress of spillages.

3.5 Booms

Booms designed for use on watercourses may also be used to isolate drains or divert or contain spillages. There are two types of booms. Absorbent booms are filled with absorbent material which can be suitable for hydrocarbons, aqueous chemicals, or both. Plastic physical barrier booms can be inflated with air or water. Other smaller booms can be used for ground spillages and laid tom prevent spillages spreading.

3.6 Personal Protective Equipment

In addition to the above, suitable personal protective equipment (PPE) such as gloves, gauntlets, goggles, visors, wellington boots, etc. are provided, to protect individuals involved in dealing with spillage incidents. Specific incidents may require specialist PPE, such as Respiratory Protective Equipment - RPE, to protect individuals involved in dealing with spillage incidents.

4. DIESEL/OIL SPILLAGES

In the event of any spillage regardless of quantity the factory manager must be informed immediately. If possible, you must also try to contain the spillage and whenever possible prevent it from entering any watercourse, which could lead to a major pollution incident.

Spillage Prevention Checklist:

- Ensure the capacity of the receiving tank is sufficient to receive the total amount of diesel or oil being delivered, and where possible have the delivery note signed by the driver to assert this.
- If the capacity is tight for the volume to be delivered, check that the readings on the gauges and the dipsticks are accurate.
- Check the conditions of the hose visually.
- Make sure all connections are secure before commencing delivery.
- Make sure all appropriate valves have been opened before delivery and tank is vented, when making a bulk delivery make sure that the tank vent can cope with the speed of the delivery.
- Slow down discharge towards end of delivery.
- If delivering through an offset fill, make sure there is room in the tank for the delivery and make sure all pipe work is inspected and the other end of the pipe is connected to the tank.

5. CHEMICAL SPILLAGES

The resultant action to be followed in the event of a chemical spillage, will be largely dependent on the volume of the spillage, and the composition of the spilled chemical, however the following general principles will be applicable to all chemical spillage incidents. Chemical spillages should only be small quantities.

All chemical spillages must be cleaned without delay. Chemical spills must not be left unattended or unsecured. In the event of a major chemical spillage the QHSE Manager should be contacted immediately.

The following guidelines should be adopted when dealing with chemical spillages:

- The chemical spillage must be isolated as soon as possible. Where necessary the area may need to be evacuated until the spillage has been cleared.
- Wherever the spillage occurs on site, it is the responsibility of the staff working in that area to clean up the spillage, or the person responsible for the spillage.
- COSHH assessments for the substance(s) spilled must be obtained as soon as possible (these should be kept within the office or with the site supervisor).
- Spillage kits are in every site van and in the factory stores.
- Bunding may be necessary to contain the chemical spillage. Appropriate Personal Protective Equipment (PPE) must be worn, this should be stated on the COSHH assessment.
- The materials used for clearing up the chemical spillage must then be disposed of in accordance with the COSHH assessment form.
- An Incident report form must be completed and returned to the QHSE Manager for adding to the company's incident database.
- In all instances no attempt should be made to clean up spillages with bare hands.

6. REFERENCE SOURCES

Copies of Pollution Prevention Guides may be downloaded from the Environment Agency Webpage. Copies are also available from the QHSE Manager.

7. Glossary of terms

Aquatic environment Refers to all inland surface waters including lakes, rivers, streams, groundwaters and some coastal waters including estuaries and the diverse aquatic life it maintains - plant, invertebrates, fish etc.

Booms There are various types and are used to divert or contain spillages, particularly to prevent spillages entering drains or watercourses.

Chemical spillage A spillage involving the use of chemicals

Documented procedures Written instructions that cover operations and activities associated with identified significant environmental aspects or Environmental Management System controls.

Dip stick A rod inserted in an oil storage tank to measure the depth or quantity of oil/diesel

Drain seals There are several different types of drain seal, including those which can be used to seal a drainage grid by covering or blocking the drain, and those which fit in a pipe.

Ecology Is the study of the balance (Equilibrium) of nature, how plants and animals interact, how they depend on and compete (Ecosystem), how humankind's activities affect and are affected by nature

Environment The surroundings (or external) conditions in which an organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interrelation.

NOTE: Surroundings in this context extend from within an organization to the global system. Environmental Hazard Is an event of continuing process, which if realised will lead to circumstances having the potential to degrade, directly or indirectly, the quality of the environment in the short or longer term.

Environmental Impacts evaluation A documented evaluation of the environmental significance of the environmental impacts of an organisation's activities, products, and services (Both existing and planned).

Environmental Management The management functions (including planning) that develop, implement, and maintain an organisation's environmental policies.

Environmental management system (EMS) The structure, responsibilities, practices, procedures, processes, and resources which enables an organisation to continuously improve its environmental performance.

Environmental Risk Is a measure of potential threats to the environment and combines the probability that events will cause or lead to degradation of the environment and the severity of that degradation. Liabilities such as financial penalties may come from the realisation of environmental risk.

Fauna All animal life

Flora All plant life

Foul water drains That part of the drainage system designed to discharge contaminated water, trade effluent and domestic sewage via main sewage systems and sewage treatment plant.

Fuel Oil Spillage Spillage involving fuel oil, which includes - diesel, light fuel oil and heavy fuel oil, with consequent serious environmental impact on aquatic environment.

Interested parties (or stakeholders) Those with an interest in the environmental impacts of the organisation. Includes - employees, regulators, public, Environmental NGOs,

Prevention of pollution Use of processes, practices, materials, or products that avoid, reduce or control pollution, e.g., conserving energy and water, recycling, minimizing waste, treatment, process changes, control mechanisms, efficient use of resources and material substitution etc.

Personal Protective Equipment – PPE Includes gloves, gauntlets, goggles, visors, aprons, wellington boots, etc. Specific incidents may require specialist PPE, to protect individuals involved in dealing with spillage incidents

Procedures These can be both formal and informal, written, and unwritten (i.e., an accepted working practice) and should be integrated into existing systems whenever possible. They should be understandable, actionable, auditable, and mandatory and describe:

a) responsibility - who will act
b) action - what action will be taken, and
c) recording - how and where the action will be recorded.

Proprietary absorbents These serve a similar purpose to sand and are available as granules, sheets, pillows, or a loose powder.

Register of environmental impacts A list of significant impacts, related to the activities, products, and services of an organisation.

Storm / surface water drains That part of the drainage system is designed to discharge uncontaminated storm / rainwater off grounds, buildings, and roofs, which discharges directly to a watercourse or soak away.

Ullage The quantity that a container lacks if being full - particularly applied to the free space left in an oil storage tank