





# EMERGENCY SPILLAGE GUIDE

1.0 INTRODUCTION	Page 2
2.0 DISCHARGES OF SPILLAGE DOWN DRAIN	Page 3
3.0 EMERGENCY MATERIALS AND EQUIPMENT	Page 4
3.1 Sand and earth	Page 4
3.2 Proprietary absorbents	Page 4
3.3 Sealing devices and sealants for leaking containers	Page 4
3.4 Drain seals	Page 4
3.5 Booms	Page 5
3.6 Personal Protective Equipment	Page 5
4.0 TRAINING	Page 6
5.0 HAZARDOUS CLINICAL WASTE SPILLAGES	Page 7
6.0 OIL SPILLAGES	Page 8
7.0 CHEMICAL SPILLAGES	Page 9
8.0 BIOLOGICALLY HAZARDOUS MATERIAL SPILLAGES	Page 10-11
9.0 BEST PRACTICES	Page 12-13
9.0 POINTS OF CONTACT	Page 15
10.0 REFERENCE SOURCES	Page 16



# EMERGENCY SPILLAGE GUIDE

## 1.0 INTRODUCTION

The purpose of this guide is to provide the requisite guidance and information to staff, in order to effectively deal with spillages of all descriptions, and to ameliorate 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 emphasised. This will form part of any risk assessment made of the use, handling and storage of any hazardous substance used in healthcare, teaching and research environments, and is a legal requirement of the Control of Substances Hazardous to Health Regulations 2002 and Management of Health and Safety at Work Regulations 1999.

The effects of potentially disastrous spillage incidents to the environment can be substantially reduced by systematically prepared and tested procedures and plans. An efficient Emergency Spillage Guide, properly executed, could turn a potential disaster into a less serious incident. There are therefore sound reasons for preparing emergency spillage guides, which 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 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 Company Policies and Procedures where further information can be obtained, particularly in an emergency situation.

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



# EMERGENCY SPILLAGE GUIDE

## 2.0 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 1991. 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, by the use of 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 – Scottish Water and EA 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.

It is customary to differentiate the drainage systems on sites by marking the manhole covers of the surface/storm water drains in blue, and foul water in red, ideally the direction of flow should also be shown.

The protection of water resources is the responsibility of EA. Under the Water Resources Act 1991, (The Water Resources Act 1991 is an Act of the Parliament of the United Kingdom that regulates water resources, water quality and pollution, and flood defence. Part II of the Act provides the general structure for the management of water resources.) 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. EA should be informed immediately if an unauthorised discharge occurs.

**Note: consents are not issued to cover spillage.**

Emergency Hotline to report environmental incidents

T: 0800 0933 507      email: [info@nadc.org.uk](mailto:info@nadc.org.uk)

**Do not hose the spillage down or use any detergents**



# EMERGENCY SPILLAGE GUIDE

## 3.0 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 pollution incident response plan should identify pollution prevention equipment and materials and their location. The Environment Agency and Fire Service does have emergency equipment and facilities, but these may not always be available.

### 3.1. Sand and earth

These are versatile containment materials which may be used to soak up spillages of oil and chemicals and used in sand bags 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 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, sheets, pillows or a loose powder. Although most absorbents are designed for hydrocarbon spills, products are available for chemical spills.

### 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 or clamp which is put over the damaged area like a plaster, or they may be pre-shaped, inserted into the damaged area and then inflated. Leak sealing putties are also available, ready-made or supplied in a dry powder form for mixing with water. 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, which may provide a significant volume of containment. Drain seals should be kept in a readily accessible location, 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.

### 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.

### 3.6. Personal Protective Equipment

In addition to the above suitable personal protective equipment (PPE) such as gloves, gauntlets, goggles, visors, wellington boots, etc. should also be provided in a convenient location, 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



# EMERGENCY SPILLAGE GUIDE

## 4.0 TRAINING

It is essential that staff understand their responsibilities for site / departmental safety, spill control and environmental protection. Key staff should be familiar with drainage systems and all staff should have access to important telephone numbers such as the Emergency Services and E.A.

Having taken steps to create spill contingency plans and purchasing the relevant products, it is essential that relevant staff are trained to ensure that, in the event of a spill, damage and environmental impacts are kept to a minimum.

Regular spill response training and spill control exercises are essential to ensure that key staff are familiar with the emergency procedures and when and how to use pollution control equipment in the event of a spillage.

Major pollution incidents can in many cases be prevented if appropriate pollution prevention measures are taken at an early stage. Planning is the key to success, and both preventative measures and incident response strategies need to be carefully addressed

The objective of the spillage response training is to give attendees the skills and requisite knowledge to physically deal with emergency situations, spillages, staff safety, and environmental pollution prevention.

Practical training covers the use of drain blockers, spill kit materials and other equipment and also includes simulated spillage exercises to provide 'hands on experience'.

It is also a requirement for ISO 14001-2015 accreditation Environmental Management System that training and awareness competencies with respect to emergency preparedness is given.



# EMERGENCY SPILLAGE GUIDE

## 5.0 HAZARDOUS CLINICAL WASTE SPILLAGES

All spillages of hazardous clinical waste must be cleaned without delay. Waste spillages should not be left unattended or unsecured. The following procedure should be adopted when dealing with hazardous clinical waste spillages :

Proprietary spillage kits ( such as 'Micro - Touch Clean Up Pack' ) should be used

Use a container of disinfectant granules to absorb spillage

Thoroughly cover the spillage with disinfectant granules and leave for ten minutes

Put on apron and gloves from the spillage kit

Use the scoop and paper towel from the kit to mop up the spillage and place ALL debris, paper and finally the scoop into the yellow plastic bag provided.

In the case of the spillage resulting in an accident, the spilt or damaged bag or container must be re-bagged, using a EArate yellow bag and retained for investigation by the Waste Manager, Infection Control Nurse and Health and Safety Adviser.

Wash area with water, place gloves and apron in yellow bag, seal and label yellow bag, and place in hazardous clinical waste container.

No attempt should be made to clean up spillages with bare hands, appropriate Personal Protective Equipment, such as gloves and apron etc. **MUST** be used.

Personnel should visually check for sharps in the waste, if found, these should be carefully disposed of into a sharps container. All soiled materials used to clear the spillage should be placed in a yellow hazardous clinical waste bag, secured and labelled, and disposed of as hazardous clinical waste in the normal manner



# EMERGENCY SPILLAGE GUIDE

## 6.0 FUEL OIL SPILLAGES

In the event of any spillage regardless of quantity the depot 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.

### THE FOLLOWING ACTION MUST BE UNDERTAKEN AS SOON AS POSSIBLE:

- 1 Wear suitable P.P.E. protection if appropriate.
- 2 Isolate the source of the spillage if possible.
- 3 Do not hose the spillage down or use any detergents.
- 4 Try to contain the spillage by placing absorbent materials such as granules, pads, sand, earth and booms around the edge of the spillage, in order to prevent it spreading.
- 5 Place rubber mats or proprietary flexible drain covers over gullies, in order to prevent spilt contaminants entering drainage system.
- 6 Continue to apply absorbent products until liquid is absorbed and contained.
- 7 Inform your immediate superior.

### Spillage Prevention Checklist :

Ensure the ullage of the receiving tank is sufficient to receive the total amount of fuel oil being delivered, and where possible have the delivery note signed by the customer to assert this.

If the ullage is tight for the volume to be delivered, check that the readings on the gauges and the dipsticks are accurate. Contact customer if in doubt.

Check the conditions of the hose visually.

Make sure all connections are tight 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, if in doubt contact your depot.

Slow down discharge towards end of delivery.

Remember that interconnected tanks take time to balance.

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. If the customer is available they must remain by the tank and if possible in view. If you cannot get access to the tank or the customer is not available you must contact your depot before making the delivery.



# EMERGENCY SPILLAGE GUIDE

## 7.0 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 also the composition of the spilled chemical, however the following general principles will be applicable to all chemical spillage incidents.

All chemical spillages must be contained and cleaned without delay. Chemical spills must not be left unattended or unsecured. In the event of a major chemical spillage the Health, Safety and Environment Unit 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.

COSHH assessments for the substance(s) spilled must be obtained as soon as possible (these should be kept centrally).

Spillage kits should be held by departments using chemicals.

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 form.

The materials used for clearing up the chemical spillage must then be disposed of in accordance with 'The Waste (England and Wales) Regulations 2011' The area should then be washed down with water.

An Incident report form must be completed and retained.

In all instances no attempt should be made to clean up spillages with bare hands.



# EMERGENCY SPILLAGE GUIDE

## 8.0 BIOLOGICALLY HAZARDOUS MATERIAL SPILLAGES

This would include blood, body fluids, specimens, leakages from hazardous clinical waste bags/containers and cultures of biological agents.

### 8.1 Types of Spillages

- a) If the spillage is contained within a specimen bag, then a senior member of staff of the relevant laboratory should be informed so that the specimen can be dealt with as appropriate.
- b) If a spillage occurs from the specimen bag but is contained within a transport box, then this should be taken to the laboratory concerned and a senior member of staff informed.
- c) If a spillage occurs which results in the contamination of the floor or walls, then the first action to be taken is to prevent the spread of the fluid and to make the area as safe as possible to other members of staff, students and members of the public. The incident should then be reported to the appropriate line manager.

### 8.2 Containment of Spillage

The containment of the spillage is best achieved using either a chlorine releasing, granular disinfectant if available, or absorbent paper hand towels. A sufficient amount of either must be used to absorb the spillage and to stop spread. If possible, a member of staff should then guard the area until such time as the person designated to disinfect the area arrives.

NB

Disinfectant granules (chlorine releasing) must not be used in the containment of urine spillage. Paper towels should be used for this purpose.

### 8.3 Equipment Required

This equipment should be held by Response Team. The person designated to clean the area should be equipped with :

- Disposable gloves
- Goggles (if splashing of material likely)
- Plastic aprons
- Clinical waste bags (yellow)
- Sharps box (if necessary)
- Disinfectant granules,
- Detergent and cleaning equipment to clean the area after removal

### 8.4 Treatment of Spillage

Where the area is treated with disinfectant granules, these should be left for the period of time recommended by the manufacturer.

Appropriate personal protective equipment must be worn. Plastic apron and goggles if necessary, disposable gloves (latex or nitrile). The granules should then be cleared using a disposable plastic scoop and scraper or a dustpan and brush and placed into a waste bag.



# EMERGENCY SPILLAGE GUIDE

If the spillage involves contaminated sharps (e.g. broken glass) the “sharps/granules” should be disposed of into a “sharps bin” using a dustpan and brush without directly handling the sharp object(s).

Gloves should then be removed and disposed of as clinical waste and a clean pair put on.

If there is any evidence of fluid still present then the area of contamination should be re-treated. After the granules have been removed the site should be cleaned with detergent and water and allowed to dry.

All gloves and aprons should be disposed of into a clinical waste bag, which should be securely tied and sent for incineration. If goggles are used, they should be cleaned after use.

Waste bags from which waste has spilled should be placed inside another clinical waste bag or container.

In the event of paper towels being used (e.g. for the containment of urine spills) to contain the spillage:

The area should be flooded with a 1% sodium hypochlorite solution (10,000ppm).

The area should then be left for a period of 20 minutes.

- a) The paper towels should then be removed and placed into a hazardous clinical waste bag while wearing a pair of disposable gloves and other appropriate personal protective equipment and the area re-treated with fresh disinfectant.
- b) The area should be cleaned with detergent and water solution and allowed to dry.
- c) All gloves and aprons should be placed into a hazardous clinical waste bag, which should then be securely tied, labelled and sent for incineration.
- d) An Incident Report Form must then be completed and retained



# EMERGENCY SPILLAGE GUIDE

## 9.0 BEST PRACTICES

Even when not required by environmental regulations, the following best practices are recommended. In some instances, best practices presented here are required by regulations.

### Vehicle and Equipment Fuelling

Your facility may have a fuelling system (diesel, petrol, etc.) for vehicles or equipment that involves aboveground storage tanks. To minimise the potential for fuel spills and leaks and reduce their potential to enter the surface water sewer system, implement the following best practices:

Cover catch basins with storm drain covers while fuelling.

Make certain that spill kits containing dry, absorbent materials for spill response are located near the area of fuelling and that staff are trained in their use.

Ensure that the transfer of fuel from/to fuel tanks and/or aboveground storage tanks is monitored by an attendant.

Provide spill response training for personnel.

Post signs that give fuelling instructions, spill response procedures, emergency contact information and best practices.

Check loading/unloading equipment (valves, pumps, flanges, and connections) regularly for leaks. Replace worn or broken equipment.

### Outdoor Handling of Material

To minimise the likelihood of discharge of pollutants to surface drains from outdoor loading and unloading of material involving aboveground storage tanks, adhere to the following best practices:

Avoid transferring materials close to storm drain inlets.

Transfer liquids only in paved areas. Portland cement paving should be used if the liquid is asphalt reactive.

Provide contractors and haulers with copies of pertinent best management practices (BMPs). Require contractor/hauler adherence to BMP specifications. Verify proper waste disposal practices of contractors.

Protect all loading/unloading activities from rainfall, run-on and wind dispersal to the maximum extent practicable.

Viable options include conducting loading/unloading under existing cover, or moving indoors.

Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.

Clean up minor spills immediately.

Conduct regular inspections of storage and containment equipment and promptly correct deficiencies to this equipment as necessary.

### Outdoor Storage of Material

Storing material outdoors, whether it is equipment, chemicals or containers, can result in potential surface water contamination. Follow these best practices to minimise potential impacts to surface water runoff:

Avoid dispensing from drums positioned horizontally in cradles. Dispensing materials from upright drums equipped with hand pumps is preferred. Always use drip pans and self-closing spigots if dispensing from horizontally positioned drums.

Store drums and containers on pallets or other structures to keep the container out of contact with storm water.



# EMERGENCY SPILLAGE GUIDE

Store all materials in their original containers or containers approved for that use. Ensure that all containers are appropriately sealed. Store empty containers indoors or under cover before moving them off-site.

Properly label all chemical containers with information, including their contents, hazards, spill response and first aid procedures, manufacturer's name and address, and storage requirements. Maintain copies of MSDS on file for any materials stored and/or handled.

Reduce the quantities of chemicals stored outside to the minimum volume required based on variables such as release potential, usage, storage capacity, and chemical shelf life.

Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.

Post signs at all chemical storage locations in clearly visible locations noting the materials stored, emergency contacts, and spill cleanup procedures.

Perform and document periodic inspections in a logbook. Inspection items should include the following: external corrosion, structural failure, spills and overfills due to operator failure, failure of piping system (pipes, pumps, flanges, couplings, hoses, and valves), visually inspect new tanks or containers for loose fittings, poor welds, and improper or poorly fitted gaskets, and inspect tank foundations and storage area coatings.

Whenever possible store materials under a roof or otherwise cover stored materials to minimise surface water impacts. Make sure waste container covers are closed except when adding trash to prevent infiltration and subsequent release of oils to receiving waters.

## **Waste Handling and Disposal**

Best practices related to waste handling and disposal include the following suggested activities:

Perform regular housekeeping activities in waste storage areas.

Reuse or recycle materials whenever possible.

Inspect waste management areas for spills and waste management containers for leaks.

Track waste generated, evaluate the process generating the waste and look for ways to reduce waste generation.

Characterise waste streams.

Find substitutes for harmful chemicals; properly dispose of unusable chemical inventory.

## **Segregate and ERate wastes.**

Do not dispose of liquid wastes such as oils or hazardous materials into dumpsters.

Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may be likely to occur.

Equip waste transport vehicles with spill containment equipment.

Perform and document in a logbook periodic inspections of hazardous and non-hazardous waste storage areas.

Inspection items should include the following: external corrosion, structural failure, spills and overfills due to operator error, failure of piping system (pipes, pumps, flanges, couplings, hoses, and valves), visually inspect new tanks or containers for loose fittings, poor welds, and improper or poorly fitted gaskets, and inspect tank foundations and storage area coatings.



# EMERGENCY SPILLAGE GUIDE

Ten questions for assessing the adequacy of a contingency plan

**1/ Has there been a realistic assessment of the nature and size of the possible threat, and of the resources most at risk, bearing in mind the probable movement of any oil spilled?**

**2/ Have priorities for protection been agreed, taking into account the viability of the various protection and clean-up options?**

**3/ Has a strategy for protecting and cleaning the various areas been agreed and clearly explained?**

**4/ Has the necessary organisation been outlined and the responsibilities of all those involved been clearly stated with no 'grey areas' - will all who have a task to perform be aware of what is expected of them?**

**5/ Are the levels of equipment, materials and manpower sufficient to deal with the anticipated size of spill. If not, have back-up resources been identified and, where necessary, have mechanisms for obtaining their release and entry to the country been established?**

**6/ Have temporary storage sites and final disposal routes for collected oil and debris been identified?**

**7/ Are the alerting and initial evaluation procedures fully explained as well as arrangements for continual review of the progress and effectiveness of the clean-up operation?**

**8/ Have the arrangements for ensuring effective communication been described?**

**9/ Have all aspects of the plan been tested and nothing significant found lacking?**

**10/ Is the plan compatible with plans for adjacent areas and other activities?**



# EMERGENCY SPILLAGE GUIDE

## 9.0 POINTS OF CONTACT

**N.A.D.C.** **0800 0933 507**

**EA (24hr Pollution Hotline)** **0800 80 70 60**

**Fire and Rescue Service** **999**

**Police** **999**





# EMERGENCY SPILLAGE GUIDE

## 10.0 REFERENCE SOURCES

### Principal Legislation

#### Statutes :

Petroleum (Consolidation) Act 1928	Public Health Act 1936
Control of Pollution Act 1974	Health and Safety at Work etc. Act 1974
Control of Pollution (Amendment) Act 1989	Environmental Protection Act 1990
Water Industry Act 1991	Water Resources Act 1991
Radioactive Substances Act 1993	Environment Act 1995

#### **The Environmental Damage (Prevention and Remediation) Regulations 2009**

#### Statutory Instruments :

Highly Flammable Liquids and Liquefied Petroleum Gas Regulations 1972  
Radioactive Substances (Hospitals) Exemption Order 1990  
Environmental Protection (Duty of Care) Regulations 1991  
Controlled Waste Regulations 1992  
Planning (Hazardous Substances) Regulations 1992  
Waste Management Licensing Regulations 1994  
Chemicals (Hazard Information and Packaging for Supply) Regulations 1994  
Classification, Packaging and Labelling of Dangerous Substances Regulations 1994  
Special Waste Regulations (Scotland)  
Hazardous Waste (England and Wales) Regulations 2005  
Radioactive Material (Road Transport)(Great Britain) Regulations 1996  
Road Traffic (Carriage of Dangerous Substances in Packages) Regulations 1996  
Control of Substances Hazardous to Health Regulations 2002  
Management of Health and Safety at Work Regulations 1999  
Ionising Radiations Regulations 1999  
Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations 1996

#### Other Guidance:

Pollution Prevention Guide PPG2: Above ground oil storage tanks - Environment Agency.  
Pollution Prevention Guide PPG3: The use and design of oil separators in surface water drainage systems - Environment Agency  
Pollution Prevention Guide PPG21: Safe storage and disposal of used oils - Environment Agency.  
Pollution Prevention Guide PPG13: High pressure water and steam cleaners - Environment Agency  
Pollution Prevention Guide PPG21: Pollution incident response planning - Environment Agency (revised February 2004)  
Pollution Prevention Guide PPG25: Hospitals and Healthcare Establishments - Environment Agency.  
Pollution Prevention Guide PPG26: Storage and handling of drums and intermediate bulk containers - Environment Agency.