Peterborough Spill Response

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1. Scope

This work instruction is required to ensure that in the event of a spillage of milk, cream, chemicals, oil or other potentially polluting material, the appropriate action is taken to clean up the spill and prevent pollution.

2. Responsibility

All staff

3. Introduction

The materials stored on site have the potential to cause significant harm to the environment if allowed to escape to surface water drains (Painted Blue), watercourses or to the ground. They may also overwhelm the offsite effluent treatment works and prevent proper treatment of the effluent if allowed to enter the foul drainage system (Painted Red) in large quantities

Spillages of oil, chemicals or fuel present an obvious threat of pollution to the environment. However, liquids that are non-hazardous to human health, such as milk and milk products, may cause serious environmental problems, as can the water run-off that is generated in the event of a fire.

IT IS OUR LEGAL RESPONSIBILITY TO TAKE ALL NECESSARY STEPS TO PREVENT POLLUTION OCCURING.

A site plan showing the site drainage system, location of all storage facilities and the location of all spill kits, shut off valves is maintained on site and regularly reviewed and updated.

At the time of a spill response, health and safety issues must also be considered prior to the commencement of the clean-up procedure. Such as if the spill is chemical are the MSDS (COSHH) sheets available, for the advice on handling spilt chemicals, any associated risks and all necessary PPE. Ensure that anyone affected by the spillage, either directly or indirectly, receives the appropriate first aid / decontamination. If necessary, contact the emergency services for advice.

The most senior person present shall assess the situation and decide whether to summon the assistance of the emergency services. If time available this may involve seeking advice from senior management.

4. Overview to spill response

There are 7 steps for spill response, these are as follows:

- Assess the risk – to human health, the environment and to property.
- Select appropriate Personal Protective Equipment.
- Confine the spill
- Stop the Source
- Evaluate the incident / implement clean up.

- Decontamination.
- Completion of required reports.

In the event of a spill, all staff must contact a manager or supervisor WITHOUT DELAY.

Site drains are marked to assist in the identification of foul and surface water drains. All Foul water drains (drains running to DAF plant) are painted RED. All surface water drains are painted BLUE.

4.1. Step 1 – Assess the Risk

Identify the nature of the material that has been spilt – if this involves chemicals you may need to refer to the container label or consult the MSDS (COSHH sheets).

Determine how much liquid has been spilt and where the liquid is running to.

Determine as to whether the spill response team are required to give assistance.

4.2. Step 2 – Select PPE

Always ensure that anyone dealing with the spill is wearing the appropriate Personal Protective Equipment (PPE) A generic supply of PPE is present in the IBC spill kits in a grab bag for ease of use.

4.3. Step 3 – Confine the Spill

Always isolate spilt material using drain covers and booms to prevent the spilt material spreading, and/or entering the site drains or ground. You can find these in the spill kits located around the site.

If the liquid is running to a non-hard standing area (i.e. ground not covered by concrete or tarmac, such as grass verges) and could enter the ground, action must be taken immediately to limit this escape, provided there is no risk to human health.

If large quantities of spilt material have entered the foul water system (red drain) then immediate action must be taken to divert the material or to contain it, to avoid the overloading of the DAF plant.
By a large quantity of material, it means above 10,000 litres of milk or 2,000 litres of cream or 50 litres of chemical.
If this were to occur the sewage undertaker – Anglian Water Services Limited must be informed immediately. The telephone number of Anglian Water Services Limited is available in the site Crisis Management document.
The site has in place 3 envirovalves that enables the site to minimise the likelihood of the spilt liquid going off site via either the foul sewer or site soakaways. The envirovalves can be activated by either automated or manual means.
If spilt material has entered the surface water system (blue drains) then the Environment Agency must be informed immediately. The telephone number of Environment Agency is available on the site Crisis Management document.

4.4. Step 4 – Stop the Source

When a spill is detected the source of this spill must be identified and rectified immediately, provided there is no threat to human health or personal injury. This may involve:

- Shutting off a valve or turning off a tap.
- Re-routing liquids.
- Making containers safe or plugging holes.
- Rectifying failing bunds.
- Transferring containers to a bunded area.

After isolation and containment of the spill, the clean-up actions described below should then be followed to clear up the spilt material. The necessary actions differ depending on whether the material is milk or milk products, fuel, oil or chemicals.

Clean up absorbents used for fuel, oil and chemicals must always be dealt with as hazardous waste.

4.5. Step 5 and 6 - Spill Clean-up Plan and Decontamination

4.5.1. Milk/Cream/Milk Products

An inventory of bulk milk and milk product storage facilities are listed below in Table 1.

All milk spills should be cleaned up using dry clean – up materials / methods wherever possible.

Milk, even in small quantities, must never be allowed to enter surface water drains (Marked blue).

Small quantities may enter foul drains (marked red) although this should be avoided wherever possible in order to ensure that the site does not exceed its effluent discharge consent.

Large quantities of spilt milk should always be isolated from the site drainage system and cleaned up.

The spilt liquid should be absorbed using the grey universal spill kit material or other absorbent material. Clean up the spilt material starting from the outside of the spill and moving inwards. Do not stand in the spilt material.
The used clean up material must be placed in the hazardous waste drums situated in the waste disposal area at the rear of the yard.

For very large spills, contact the waste contractor shown in the List of Contacts who will be able to respond by visiting the site to remove spilt material in a tanker with suction facility

Table 1

Storage Facility	Product	Location	Maximum quantity stored	Protection available
SK1	Skim	Silo Area	70,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
SK2	Skim	Silo Area	70,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
Storage Facility	Product	Location	Maximum quantity stored	Protection available
RM1	Raw Milk	Silo Area	70,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
RM 2	Raw Milk	Silo Area	70,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
RM 3	Raw Milk	Silo Area	70,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
Silo 4	Raw Cream	Silo Area	60,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
Silo 5	Raw Cream	Silo Area	60,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
Silo 6	Raw Cream	Silo Area	60,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing
Silo 7	Raw Cream	Silo Area	60,000lt	High Level Probes Positioned on a raised plinth. Outlet valve. Annual Crack testing

AVW 1	Recovered interfaces	Silo area	10,000lt	High level probes, positioned in a deflection wall, annual crack testing
AVW 2	Recovered interfaces	Silo area	10,000lt	High level probes, positioned in a deflection wall, annual crack testing
Storage Facility	Product	Location	Maximum quantity stored	Protection available
FM 1	Finished Milk	Mezzanine floor-Packing	30,000lt	Staff training.
FM 2	Finished Milk	Mezzanine floor-Packing	30,000lt	Staff training.
FM 3 / PC 5	Finished Milk / Finished Cream	Mezzanine floor-Packing	8,000lt	Staff training.
FM 4	Finished Milk	Mezzanine floor-Packing	15,000lt	Staff training.
FM 5	Finished Milk	Mezzanine floor-Packing	15,000lt	Staff training.
PC 1	Finished Cream	Mezzanine floor-Packing	4,000lt	Staff training.
PC 2	Finished Cream	Mezzanine floor-Packing	4,000lt	Staff training.
PC 3	Finished Cream	Mezzanine floor-Packing	4,000lt	Staff training.
PC 4	Finished Cream	Mezzanine floor-Packing	4,000lt	Staff training.
PC 6	Finished Cream	Mezzanine floor-Packing	20,000lt	Staff training.
PC 7	Finished Cream	Mezzanine floor-Packing	20,000lt	Staff training.
PC 8	Finished Cream	Mezzanine floor-Packing	20,000lt	Staff training.
PC 9	Finished Cream	Mezzanine floor-Packing	20,000lt	Staff training.
YM 1	Mix for culture	Cultured Processing Area	10,000lt	Staff training.
YM 2	Mix for culture	Cultured processing Area	10,000lt	Staff training.
INCUBATION 1	Cultured Product	Cultured Incubation Area	10,000lt	Staff training.
INCUBATION 2	Cultured Product	Cultured Incubation Area	10,000lt	Staff training.

INCUBATION 3	Cultured Product	Cultured Incubation Area	10,000lt	Staff training.
Storage Facility	Product	Location	Maximum quantity stored	Protection available
INCUBATION 4	Cultured product	Cultured Incubation Area	10,000lt	Staff training.
INCUBATION 5	Cultured product	Culture Incubation Area	10,000lt	Staff training.
HOLDING TANK 1	Cultured Product	Cultured Incubation Area	10,000lt	Staff training.
HOLDING TANK 2	Cultured Product	Cultured Incubation Area	10,000lt	Staff training.
CULTURE RECOVERY TANK	Product recovery	Cultured Incubation Area	5,000lt	Staff training.
RC 1	Raw Cream	Processing Room	2,000lt	Staff training.
RC 2	Raw Cream	Processing Room	2,000lt	Staff training.

4.5.2. Fuel and Oil

An inventory of all fuel and oil stored on site, and their locations are listed below Table 2.

Fuel and Oil must never be allowed to enter any site drains.

Always prevent oil and fuel from entering the ground. NEVER store oil or fuel on non-hard standing ground.

All fuel and oil spills must be cleaned up using Yellow or White absorbent products. Clean up the spilt material starting from the outside of the spill and moving inwards. Do not stand in the spilt material.

The clean-up materials must be segregated and stored in the secure containers prior to off-site disposal. All waste from oil or fuel spills must be placed into a waste bag – present in each spill kit, with the top of the bag tie wrapped to minimise likelihood of escape of used absorbents and placed in the oily waste container in the hazardous waste area

For very large spills, contact the waste contractor shown in the list of contacts who will be able to respond by visiting site to remove spilt material with a vacuum tanker. Consideration should also be given to implementing site emergency evacuation procedure, where there is a threat to human health.

Table 2.

Storage Facility	**Product**	**Location**	**Maximum quantity stored**	**Protection available**
205ltr drum	Kerosene	Yard	500ltr	Bunded, spill kit available, stored away from vehicular movements.

25ltr drum	Omala 220	Oil safe bank – outside boiler house	75ltr	Bunded, spill kit available, barriered storage area.
25ltr drum	Cassida Fluid GL 320	Oil safe bank – outside boiler house	50ltr	Bunded, spill kit available, barriered storage area.
25ltr drum	Reflo 68A	Oil safe bank – outside boiler house	50ltr	Bunded, spill kit available, barriered storage area.
25ltr drum	MillMax 32HV	Oil safe bank – outside boiler house	50ltr	Bunded, spill kit available, barriered storage area.

4.5.3. Chemicals

An inventory of all bulk chemicals stored on site, and their locations are listed below Table 3

Chemicals must never be allowed to enter surface water drains (marked blue)

Small quantities may enter foul drains (marked red) although this should be avoided wherever possible in order to ensure that the site does not exceed its effluent discharge consent.

Always prevent chemicals from entering the ground. NEVER store chemicals on non- hard standing.

All chemical spills must be cleaned up using the YELLOW spill kit absorbents. Ensure that the correct PPE is used for the type of chemical spill; if you are unsure refer to the MSDS (COSHH) sheet. Clean up the spilt material starting from the outside of the spill moving inwards. Do not stand in the spilt material.

The clean up materials must always be segregated and stored in the secure containers at the rear of the yard in the waste area. The materials must be placed in the secure containers marked as chemical waste in the hazardous waste area.

For very large spills, contact the waste contractor shown on the list of contacts who will be able to respond by visiting site to remove spilt material with a vacuum tanker. Consideration should also be given to implementing the site evacuation procedure, where there is threat to human health.

Table 3

Storage Facility	**Product**	**Location**	**Maximum quantity stored**	**Protection available**
Chemical silo 1	50% Sulphuric acid	Outside laboratory	7500ltrs	Self-bunded silo. Situated on a raised plinth, segregated from vehicular movements

Chemical silo 2	Klenz 2 – (Summer grade) / Klenz 3 – (Winter grade)	Outside laboratory	10500ltrs	Self-bunded silo. Situated on a raised plinth, segregated from vehicular movements
Chemical silo 3	Circklenz	Outside laboratory	10500ltrs	Self-bunded silo. Situated on a raised plinth, segregated from vehicular movements
Glycol tank	25% mixture of water and Glycol	Outside staff entrance	8000ltr	Self-bunded, segregated from vehicular movement by Armco barriers
Storage Facility	Product	Location	Maximum quantity stored	Protection available
IBC	Acidklenz 50	Yard	1000ltrs per IBC	Bunded, stored away from vehicular movements
IBC	Cirklenz	Yard	1000ltrs per IBC	Bunded, stored away from vehicular movements
IBC	Klenz 2	Yard	1000ltrs per IBC	Bunded, stored away from vehicular movements
25ltr drum	Acidklenz 50	Chemical store	1000ltrs	Bunded within chemical store, stored away from vehicular movements
25ltr drum	Masol 222	Chemical store	150ltrs	Bunded within chemical store, stored away from vehicular movements
25ltr drum	Masol 200	Chemical store	150ltrs	Bunded within chemical store, stored away from vehicular movements
25ltr drum	Masol 210	Chemical store	150ltr	Bunded within chemical store, stored away from vehicular movements

25ltr drum	Chlorofoam	Chemical store	1000ltrs	Bunded within chemical store, stored away from vehicular movements
Storage Facility	Product	Location	Maximum quantity stored	Protection available
25ltr drum	Hypoklenz	Chemical store	150ltr	Bunded within chemical cabinet stored outside chemical store, stored away from vehicular movements
25ltr drum	Antifoam	Chemical store	150ltr	Bunded within chemical store, stored away from vehicular movements
25ltr drum	Bioklenz	Chemical store	50ltr	Bunded within chemical store, stored away from vehicular movements

4.5.4. Fire Water

Wherever possible curbing is employed around the site perimeter to ensure any spilt material and firewater does not run off to non-hard standing around the site perimeter.

- The protection of site personnel from injury is the primary concern during a major incident such as fire. No employee should, in any circumstances, take any steps which might prejudice his / her health. However, if action is possible, or if the emergency services are able to act on behalf of the site, then the following steps should be taken.
- Provide the emergency services with a copy of the site plan, available in the COSHH file, this show the storage areas for all site hazardous materials. This will allow the emergency services to give priority to the necessary areas.
- Ensure drain covers and booms are employed wherever is reasonably practicable, to prevent the escape of firewater and other liquids to site drains or to ground.
- Ensure the incident is reported to the Environment Agency and the Sewage Undertaker – Anglian Water Services **Limited, without delay. Telephone numbers are included in the list of contacts**

4.6. Step 7 – Reporting

Environmental incidents and near misses can be reported by the safety reporting system, available on all web browser enabled devices.

After all spill events, an assessment of the root cause will be carried out. This must consider what actions, systems, equipment or procedures failed and why they failed. - WHAT WENT WRONG AND WHY?

The root cause analysis will provide the information to identify the necessary preventative and corrective action to be taken. This may involve upgrading or replacing equipment, relocating site activities, providing additional or new training, amending existing training programme, writing new or amending work instructions and procedures. - WHAT IS NECESSARY TO PREVENT THIS INCIDENT HAPPENING AGAIN?

The investigation shall also consider the effectiveness of this procedure in managing the incident. – WAS THE INCIDENT DEALT WITH EFFECTIVELY AND WHAT LESSONS COULD BE LEARNT?

Any corrective or preventative actions associated with spill incidents will assigned a delegated person to undertake the actions and a timescale that has been agreed by all parties.