
ENVIRONMENTAL ACCIDENT PREVENTION PROCEDURE

This procedure is required under Condition 9.1 of the site IPPC license. It sets out the main environmental hazards and source-pathway linkages to vulnerable receptors including lands, surface waters including the local river, the groundwater beneath the site and the atmosphere. The procedure also identifies the controls in place to prevent such accidents.

Responsibility

Under the Dairygold Emergency Response Plan the Production Shift Manager assumes the role of Site Controller in an emergency and is responsible for coordinating the response, including taking all necessary measures to protect the environment.

Site Summary

The site is licensed for the following:-

Class 2.1 The operation of combustion installations with rated thermal input equal to or greater than 50MW, and

Class 7.2.1 The treatment and processing of milk, the quantity of milk received being greater than 200 tonnes per day (average value on a yearly basis).

As a result of these activities the site can at various times carry significant storage of whole milk, cream, whey and related products, in addition to quantities of corrosive chemicals and ancillary products and materials. There are limited stores on site of marked gas oil and other oils and greases related to the running of the plant, plus ammonia used for refrigeration.

Hazards, Receptors and Source Pathway Linkages and Related Accident Controls

The table overleaf outlines the main environmental hazards. An accident involving some of these could give rise to a major Health and Safety as well as an Environmental emergency on site. Others may have less of an H&S impact and might not for example warrant an evacuation. Nonetheless the Site Controller (Shift Manager) is responsible for applying those elements of the emergency response plan as may be required to contain the incident and minimise risk to the environment, in an efficient and timely manner.

The site will maintain and adhere to standards for the storage and transfer of all materials as laid out in the IPPC license and in the EPA's guidance note*. The controls outlined in this guidance document are a key element for both the prevention of environmental accidents and for minimising the impact in the event of a failure of preventative measures.

The table overleaf also details the receptors that are at risk due to an environmental incident involving those hazards and the likely pathways to those receptors. Finally the table outlines the controls in place to contain those hazards and break the pathway linkages where possible, to minimise the risk posed by an environmental accident. Refer also to the site's bund, silo and drainage drawings which together indicate the location of the main environmental hazards and potential source-pathways to vulnerable receptors. The Site Controller is required to have a thorough knowledge of site infrastructure including storage areas and site drainage plans.

* <http://www.epa.ie/pubs/advice/general/materialsstorageguidance.html>

Environmental Accidents, Impacts and Controls

Hazard	Receptors & Pathways	Controls
Fire/Explosion Hazard:- contaminated fire water.	Surface water via storm drains, groundwater via unsealed/ unbunded land or damaged drains. NOTE – majority of the site is serviced with effluent drainage system. All internal drains are effluent drains.	Fire and explosion prevention measures. Most areas are serviced by process drainage. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC. Effluent plant and Anaerobic Digester spare capacity. Spill containment measures.
Whole milk, cream, whey and other milk products	As above	Bunding and containment of tanks and lines. Bund, silo and drain surveys (3 yearly). Silo secondary cladding. Yard remote bunding to process lines. Effluent plant and anaerobic digester spare capacity. Cleaning processes. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC.
Bulk Chemical Storage	As above	Bunding and containment of tanks and lines. Conc. corrosives in schedule 10 steel lines. Bund surveys (3 yearly). Bulk chemical delivery practices and procedures. Emergency services and chemical cleanup specialist companies. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC.
Cleaning in process (CIP) and other chemical cleaning.	As above	CIP makeup and storage in banded areas. Yard remote bunding to process lines. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC.
Bulk Diesel/Oil Storage	As above	Diesel storage is a double skinned tank with internal leak detection. Delivery practices and procedures. Yard remote bunding to process lines. Oil interceptor on storm line in Castlefarm to be fitted in 2019 as per EPA TA approved in 2018. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC. Emergency services and chemical clean-up specialist companies.
Oil and Grease Stores	As above	Oil store is banded. Floor of store is impermeable to oils/greases. Delivery and housekeeping practices and procedures. Storage room is access controlled.
Machinery and electrical infrastructure containing oils, lubricants and other hazardous materials.	As above.	Inside production all potential contaminants must be food grade and are environmentally low risk. Most other plant and equipment is housed either in doors in service rooms on hard standing or in bunds to meet various license conditions. Cleaning and decommissioning processes. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC. Waste and recycling segregation and storage measures. Licensed waste hauliers.
Ammonia Refrigeration	Surface water via storm drains, groundwater via unsealed/ unbunded land or damaged drains.	Containment of tanks and lines. Routine service and inspection of receivers and lines. System drain down procedures. Competent

	Atmospheric release, creating public health hazards and nuisance odours.	contractors. Ammonia leak detection. Emergency services and refrigeration specialists. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC. Upgrade to drainage system around the ammonia plant saw the installation of a strip drain in 2018 - connected to effluent. There is also another strip drain further down the yard.
Effluent and sludge	As above.	Tank, pipeline and underground storage vessel inspection and maintenance. Waste and recycling segregation and storage measures. Licensed waste hauliers. Nutrient Management plan.
Waste residues.	As above.	Waste and recycling segregation and storage measures. Suitable waste storage areas. Licensed waste hauliers. Appropriate waste storage and transport vehicles and containers. Most waste handling on areas serviced by process drainage. Storm water system divert in place in Castlefarm – divert activates on trigger limits being reached for pH, temperature, conductivity and TOC.

ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

The following actions must be taken in the event of an emergency to minimize risk to the environment and to meet our licence reporting obligations.

Reference also the Environmental Incident Procedure - Castlefarm.

Responsibility

Under the Dairygold Emergency Response Plan the Production Shift Manager assumes the role of Site Controller in an emergency and is responsible for coordinating the response, including taking all necessary measures to protect the environment.

Control of the Incident

The Site Controller is responsible for implementing controls to minimise environmental risk

The Site Controller shall without delay:-

- Inform the Site Manager, the Group EHS Manager and EHS Coordinator of any incident.
- Assess the risk to the environment posed by the incident.
- Divert storm water systems to process drainage. This system diverts automatically on pH, temperature, conductivity and TOC. A physical check to ensure that diversion has occurred is MANDATORY.
- Isolating the source of any emission when safe to do so.
- Identify and execute all other necessary measures to minimise the emissions/malfunction and the effects thereof.
- Contact the emergency services for assistance if required.
- Obtain the assistance of specialist clean-up services where required.

- Manage waste arising from the incident. All drums containing waste must be properly sealed, labelled and stored in an appropriate location.

In addition to taking the appropriate care for the health, safety and welfare of site personnel involved in the incident, attention must be given to preventing contaminants from reaching storm drains and the soil in particular and for properly and appropriately dealing with contaminated waste arising from the incident.

Fire Water Management

Fire fighting has the potential to generate significant quantities of contaminated water. Contaminated fire water should be directed to the appropriate retention area, which is spare capacity within the anaerobic digester and/or effluent treatment plant. Where storm water divers are required to divert storm water to the process network the Site Controller must ensure this system is diverting appropriately. Other processes that may be impacting on the capacity of effluent lines must be halted completely during a fire fighting situation to make drainage capacity available for fire water. This may include but is not limited to stopping all production including washes and stopping water softener regeneration.

The Site Controller shall without delay:-

- Inform the Site Manager, the Group EHS Manager and EHS Coordinator of the incident.
- Assess the risk to the environment posed by the incident.
- Divert storm water systems to process drainage as per the Castlefarm Environmental Incident Procedure

Notification of the Incident

The Site Manager is responsible for notifying the Group EHS Manager and the authorities including the EPA, Inland Fisheries and Local Authority in the event of an Environmental Incident in accordance with Condition 11 of the Licence and as per Guidance to licensees on the Notification, Management and Communication of Environmental Incidents. The Incident Notification is then logged formally through the EDEN system (the EPA's computer database). It is important to use the Environmental Impact Assessment criteria when ranking incident. See tables overleaf.

EPA, Inniscarra (If contact is made with Cork office that is sufficient otherwise Agency Headquarters must be contacted)	Tel 021 4875540 and Fax 021 4875545
EPA Headquarters	Tel 053 9160600 Fax 053 9160699
CORK COUNTY COUNCIL: (Local and Sanitary Authority) (Head Fax with <u>URGENT POLLUTION INCIDENT IN LICENCED PREMISES</u>)	Tel 021 4821433 Fax 021 4532727
INLAND FISHERIES :	Tel 052 6123624 Fax 052 6123971

Refer to condition 11 of the IPPC license for further details.

Incident Investigation and Follow-up

The EHS Coordinator with the assistance of the Site Controller and Site Manager will investigate the incident and liaise with the EPA. Priorities will include but are not limited to:-

- Identifying the date, time and place of the incident.
- Carrying out an investigation to identify the nature, source and cause of the incident and any emissions arising therefrom.
- Evaluate the environmental pollution, if any, caused by the incident.

A proposal shall be issued to the EPA by the Site Manager within 1 month of the incident:-

- Identifying and putting in place measures to avoid reoccurrence of the incident, and
- Identifying and putting in place any other appropriate remedial action.

Classification of an Environmental Accident

To determine the significance of an incident the EPA provides the following classification systems, which is based on their effect or potential to impact on the environment. All reported incidents should be ranked into one of the categories listed below when reporting incidents to the EPA.

An incident is typically defined in the IPPC/Waste Licenses as:

- (i) an emergency;
- (ii) any emission which does not comply with the requirements of the license;
- (iii) Any exceedance of the daily duty capacity of the waste handling equipment;
- (iv) Any trigger level specified in the license which is attained or exceeded;
- (v) Any indication that environmental pollution has, or may have taken place.

An **incident** can be:

1. An irregular process occurrence which causes
 - A release to the ETP
 - Waste liquid discharging to ETP
 - An emission to atmosphere
2. An unscheduled release to the environment, inside or outside a building e.g.
 - A spillage
 - A leak (liquid or gas)
3. Any irregular
 - Noise
 - Malodour

A **potential incident** is any situation, which you believe could cause an incident as defined above.

Environmental Impact Assessment Criteria

Ranking	Classification	Impact on the Environment
1	Minor	<ul style="list-style-type: none">• No contamination, localised effects• Minor effect on air quality as evidenced by dust or odour complaint(s)

		<ul style="list-style-type: none"> • ELV breaches • An emission which does not comply with the requirement of the license/COA (a pattern of repeated minor incidents should be taken into account when considering the level of response)
2	Limited	<ul style="list-style-type: none"> • Simple contamination, localised effects of short duration • Local limited impact to water, land and air • Notification to and short term closure of potable water extractors required.
3	Serious	<ul style="list-style-type: none"> • Simple contamination, widespread effects of extended duration • Significant effects on water quality • Major damage to an ecosystem (e.g. significant impact on fish population) • Longer term closure of potable water extractors • Significant reduction in amenity value • Significant damage to agriculture or commerce • Significant impact on man
4	Very Serious	<ul style="list-style-type: none"> • Heavy contamination, local effects of extended duration.
5	Catastrophic	<ul style="list-style-type: none"> • Very heavy contamination, widespread effects of extended duration.