Site Condition & Baseline Report

Environmental Permit Application

Yew Tree Dairy PartCo Limited

1 Pit Hey Place,
West Pimbo Industrial Estate,
Skelmersdale
WN8 9PS

Prepared by:

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DRAFT	22 October 2024	Rebecca Holland	Lisa Brookes	Maggie Dutton

Basis of Report

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Table of Contents

Tables in Text

Appendices

1.0 INTRODUCTION

SLR Consulting Limited (SLR) has been instructed by Yew Tree Dairy PartCo Limited (YTD) to prepare an application for an Environmental Permit (EP) for their milk processing facility located at 1 Pit Hey Place, West Pimbo Industrial Estate, Skelmersdale, WN8 9PS (the site).

The Skelmersdale facility treats and processes milk via pasteurisation, evaporation and drying with a throughput greater than 200 tonnes per day.

The facility includes the following listed activities under the Environmental Permitting Regulations (EPR) (England and Wales) 2016 (as amended):

- Section 6.8 Part A(1)(e) *Treating and processing milk, the quantity of milk received being more than 200 tonnes per day (average value on an annual basis)*
- Section 5.4 Part A(1)(a)(*Disposal, recovery or a mix of disposal and recovery of non-hazardous waste….with a capacity exceeding 50 tonnes per day involving one or more of the following activities….(i) biological treatment; (ii) physico-chemical treatment;* and
- Schedule 25A Medium Combustion Plants: Medium Combustion Plant Directive.

1.1 Context and Objectives of the Site Condition Report

This Site Condition Report (SCR) aims to record and describe the condition of the land prior to the commencement of any operations within the proposed EP installation boundary. It has been prepared in accordance with the Environment Agency's (EA) Site Condition Report H5 guidance with regards to the requirements of a baseline report to meet the requirements of Article 22 (2) of Industrial Emissions Directive (IED).

This SCR will provide a point of reference and baseline environmental data so that when the EP is surrendered it can be demonstrated that there has been no deterioration in the condition of the land as a result of the Installation operations and ensure that the condition of the land is in a 'satisfactory state'.

The location of the site is illustrated in Drawing 001. The site layout; site boundary and proposed EP boundary are presented in Drawing 002 and emission points are presented on Drawing 003.

Sections 1 to 3 of the EA's SCR template[1] have been completed within this document and comprise the following aspects:

- Site details;
- Condition of the land at permit issue;
- Geology;
- Hydrology;
- Hydrogeology;
- Pollution history;
- Evidence of historic contamination; and

[1] EA Environmental Permitting Site Condition Report Guidance https://www.gov.uk/government/publications/environmental-permitting-h5-site-condition-report accessed January 2024.

- Permitted activities.

Sections 4 to 7 of the SCR template will be maintained during the life of the EP and Sections 8 to 10 will be completed and submitted in support of the application to surrender the EP.

1.1.1 Sources

The following sources have been utilised in the preparation of this SCR:

- Multi Agency Geographical Information for the Countryside (MAGIC) map[2];
- Landmark Envirocheck Report[3] (refer Appendix A);
- British Geological Survey[4];
- Environment Agency (EA) - Flood Map for Planning[5];
- EA - Long Term Flood Assessment[6];
- ECHA: European Chemicals Agency Substance Information[7];
- Water Framework Directive Environmental Agency Confirmed Hazardous Substances List[8]; and
- Resource and Environmental Consultants Ltd (REC). Geotechnical Site Investigation[9] (Refer Appendix B).

1.1.2 Site Details

Applicant	YTD
Address	1 Pit Hey Place, West Pimbo Industrial Estate, Skelmersdale, WN8 9PS
National Grid Reference	SD 49354 04207
Site Area	3.05 hectares
Document Ref for Site Condition Report	Site Condition Report – 416.065368.00001_SCR dated October 2024
Figure References	• Drawing 001 - Site Location. • Drawing 002 - Site Layout and EP boundary. • Drawing 003 - Emission Points. • Drawing 004 - Site Setting Plan – Local Receptors.

[2] Multi Agency Geographical Information for the Countryside (MAGIC). Accessed 11th April 2024. Accessed at: Magic Map Application (defra.gov.uk)

[3] Landmark Envirocheck Report. Accessed 11th April 2024. Accessed at: Envirocheck - Environmental reports, mapping products and specialised datasets - Envirocheck Analysis Login

[4] British Geological Survey. Accessed 11th April 2024. Accessed at: Welcome to BGS - British Geological Survey

[5] EA. Flood map for planning. Accessed 11th April 2024. Accessed at: Flood map for planning - GOV.UK (flood-map-for-planning.service.gov.uk)

[6] EA. Long Term Flood Assessment. Accessed on 14th May 2024. Accessed at: Check the long term flood risk for an area in England - GOV.UK (www.gov.uk)

[7] ECHA: European Chemicals Agency Substance Information. Accessed at: Homepage - ECHA (europa.eu). Accessed in April 2024.

8 Water Framework Directive Environmental Agency Confirmed Hazardous Substances List. Accessed at '2018 01 31 Confirmed hazardous substances list_0.pdf (wfduk.org)'.

[9] Resource and Environmental Consultants Ltd (REC). Geotechnical Site Investigation. January 2011. Reference 43866p1r0.

Applicant	YTD
	• Drawing 005 - Site Setting Plan – Cultural and Natural Heritage. • Drawing 006 - Chemical Storage Location Plan.

1.1.3 Site Location

The site is centred on National Grid Reference SD 49354 04207 and lies approximately 2km south-east of Skelmersdale town centre within the West Pimbo Industrial Estate. It is accessed via Pimbo Road from the M58 which lies to the north. The site is immediately surrounded by other commercial and industrial premises with the nearest residential properties located approximately 435m to the north, beyond the M58 motorway.

An unnamed lake is located approximately 165 metres northeast of the site. The River Tawd is located approximately 275m southwest of the site.

The site's location is illustrated on Drawing 001; the site layout on Drawing 002 and emission points on Drawing 003. The surrounding land uses, local receptors within 500m are illustrated on Drawing 004 and cultural and natural heritage receptors within 2km are identified on Drawing 005.Chemical storage areas are presented on Drawing 006.

1.1.4 Current on-Site Land Use

Infrastructure at the facility includes:

- A process building that incorporates raw milk separation, pasteurisation and homgenisation packaging; evaporation and drying; refrigerated storage and office space;
- A warehouse for storage of powdered milk;
- A yard, including tanker bay onloading / offloading;
- Storage of raw material, product, waste and fuel;
- Three steam generators;
- Two combustion driven dryers;
- An emergency back-up generator;
- 300,000lt underground interception tank; and
- Car parking along the southern boundary of site.

Topography at the site slopes moderately from east to west. The site is approximately 1.5m lower in the west than in the east.

1.1.5 Current Surrounding Land Use.

A summary of the site's immediate surrounding land uses is provided in Table 1 below:

Table 1-1 Surrounding Land Uses

Direction	Land-Use
North	Commercial buildings associated with the Pimbo Industrial Estate are located to the north, including Europarts, located immediately north of the site boundary.

Direction	Land-Use
	An unnamed lake is located approximately 167 metres northeast of the site. The M58 motorway is located approximately 300m north of the site. A residential housing estate is located approximately 435m north.
South	Commercial buildings associated with the Pimbo Industrial Estate are located to the south, including Pit Hey Close roadway, located immediately south of the site boundary. An unnamed lake is located approximately 165 metres northeast of the site. The River Tawd is located approximately 275m southwest of the site. Holland Moss is located approximately 445m south of the site.
East	Commercial buildings associated with the Pimbo Industrial Estate are located to the east, including Walker Engineering, located immediately east of the site boundary.
West	Commercial buildings associated with the Pimbo Industrial Estate are located to the west, including Pimbo Road, located immediately west of the site boundary. The River Tawd is located approximately 430m west of the site, with Holland Moss is located beyond.

1.1.6 Sensitive Land Uses

There are no designated ecological habitats on the area of the site. The closest designated ecological habitats to the site are as follows:

- Ravenhead Brickworks Site of Special Scientific Interest (SSSI), approximately 1,500m northeast of the site;
- 9 Local Wildlife Sites, with the closest, Holland Moss approximately 400m southwest of the site; and
- Numerous Listed Buildings (Grade II and II*), with the closest approximately 950m northeast of the site.

2.0 Condition of the Land at Permit Issue

2.1 Environmental setting

2.1.1 Geology

2.1.1.1 Superficial Deposits

British Geological Survey (BGS) data records superficial deposits overlying the bedrock comprising of Till, Devensian – Diamicton.

REC in their 2011 Geotechnical Site Investigation[10] (refer Appendix B) identified the shallow geology in external areas of site (refer Table 2-1 below).

[10] Resource and Environmental Consultants Ltd. (REC). Geotechnical Site Investigation. January 2011. Reference 43866p1r0.

Table 2-1 Typical Geology Onsite

Strata	Typical Description	Max Thickness (m)
Topsoil	Black organic sandy topsoil	0.24
Made Ground	Grey sandy gravel with occasional cobbles. Gravel is sub angular to angular, fine to coarse or mixed lithology. Cobbles are sub angular to angular of siltstone.	1.43
Sandy Gravelly CLAY	Firm to stiff brown sandy gravelly CLAY. Gravel is sub angular to sub rounded, fine to medium of mixed lithology.	2.14
SAND	Brown fine to medium SAND.	0.6
Sandy GRAVEL	Grey very sandy GRAVEL. Gravel is sub rounded to rounded, fine to coarse of mixed lithology	0.3

2.1.1.2 Bedrock Geology

BGS data indicates that the site is underlain by a bedrock of Pennine Middle Coal Measures Formation – Mudstone, siltstone and sandstone.

REC in their 2011 Geotechnical Site Investigation for the site identified shallow mine workings in the local area. A mine entry was identified within 50m of the proposed location of five of the onsite milk tanks. From a review of the solid by REC, geology in the area (BGS Sheet 84 Solid Geology – Wigan 1:50,000), the Prescot Five Foot coal seam appears to outcrop 100m south of the site and is shown to be dipping in a northerly trend below our site at an angle of 15o.

The Prescot Five Foot coal seam is known to be a productive worked seam and REC stated that indicative calculations suggest that the seam may lie 27m below the site.

2.1.1.3 Historical Borehole Review

A review of publicly available historical boreholes[11] located on site have been reviewed. These boreholes were installed prior to the site being developed into buildings associated with the industrial estate. As such, there is potential for an unknown amount of made ground to be located above the typical geology identified in Table 3.2 below, associated with the building of the industrial estate.

Table 2-2 Typical Geology Onsite - Pre-Development (1962 to 1975)

Typical Geology	Typical Depth (m)	Typical Thickness (m)
Topsoil / Sand and Gravel	0 to 0.6 to 2.4 m	2.4 m
Firm sandy Glacial Till	0.6 to 2.4 m to 13 m	10.6 m
Shale / Coal / Fire Clay	13 m to 27 m	Thickness unproven

The topsoil and sand and gravel was documented to be thicker in the southwest corner; reported up to a depth of 2.4m.

[11] Publicly available boreholes from BGS website dated between 1962 and 1975. References: SD40SE20; SD40SE232; SD40SE288; SD40SE291; SD40SE292; SD40SE296; SD40SE302; SD40SE303; SD40SE340; SD40SE487; SD40SE488; SD40SE526; SD40SE527; SD40SE572; SD40SE573; SD40SE730; SD40SE731; SD40SE735; SD40SE737; SD40SE738; and SD40SE749.

2.1.1.4 Depth to Groundwater

During the drilling of historical onsite boreholes; groundwater was typically encountered under two scenarios:

- On top of the Glacial Till (i.e., 1.2 m deep in SD40SE302, SD40SE303 and SD40SE735; and 2.3 m deep in SD40SE573); or
- Within a layer of sandy gravel within the Glacial Till (i.e., between 3.3 m and 3.5 m deep in SD40SE303, SD40SE296 and SD40SE749).

During the REC (2011) Geotechnical Site Investigation, groundwater was observed in the drilling of boreholes, between 0.77m below ground level (bgl) and 4.4 m bgl in sand / gravel lenses within superficial deposits.

2.1.2 Hydrogeology

2.1.2.1 Aquifer Classifications

The Envirocheck revealed that superficial deposits on site are classified as Secondary A[12] in the north and east of the site and as unproductive[13] in the south and west of the site. The superficial geology of the site is shown as Devensian Till across the whole site.

A search on the Multi-Agency Geographical Information for the Countryside (MAGIC) map revealed that the bedrock deposits beneath the site is classified as a Secondary A Aquifer.

2.1.2.2 Groundwater Vulnerability

The MAGIC map revealed that the groundwater vulnerability at the site is classified as Medium-High risk. This means that there is a medium-high risk of a pollutant reaching groundwater below the site.

2.1.2.3 Groundwater Abstractions

The BGS website lists Holland Bore No.18 (24.9 m deep targeting the Pennine Middle Coal Measures Formation, reference SD40/115) as being located on site within the current car park to the south of the waste effluent tank. YTD does not hold any operation records or decommissioning records for this well. Water wells are also listed at the following approximate locations in the surrounding area by BGS:

- 40 m south: Holland Bore No.7, SD40/117, 126 m deep (on land currently associated with West Lancs Paints and Varnish Co Ltd);
- 40 m south: Holland Colliery Bore No.31, SD40/116, 87.5 m deep (on land currently associated with Essity / SCA);
- 112 m south: no bore details known;
- 190 m north: Holland Bore No.9, SD40/113, 101m deep;
- 255 m north: Prescott Pit, SD40/112, 341m deep;
- 45 m west: Holland Colliery Bore No.20, SD40/108, 36.3m deep;

[12] Permeable layers capable of supporting water supplies at a local rather than a strategic scale.

[13] These rocks have negligible significance for water supply or baseflow to rivers, lakes and wetlands. They consist of bedrock or superficial deposits with low permeability that naturally offer protection to any aquifers that may be present beneath.

- 110 m west: Holland Colliery Bore No.26, SD40/114, 63.1m deep; and
- 85 m southwest: Holland Colliery Bore No.19, SD40/107, 17.5 m deep.

There is potential that the site and surrounding area appear to have been previously used for groundwater abstraction during the historical operation of Holland Colliery.

An active groundwater abstraction for 'other industrial / commercial / public services: General Use (medium loss)' is located 230m northwest of the site.

There are no other active or revoked groundwater abstractions listed by the Envirocheck within 1500m.

2.1.2.4 Source Protection Zones

A search on the MAGIC map and the Envirocheck report revealed no Source Protection Zones within a 2km radius of the site.

2.1.3 Hydrology

2.1.3.1 Surface Water Features

An unnamed lake is located approximately 165 metres northeast of the site.

The River Tawd flows in a northerly direction past the southern and western site boundary. The river passes closest to the site approximately 275m to the southwest. The River Tawd also passes approximately 430m to the west of the site.

Several tributaries of the River Tawd are located approximately 450m west of the site, and several land drains located beyond within Holland Moss.

2.1.3.2 Surface Water Abstractions

No surface water abstractions are identified within 1500m.

2.1.4 Flood Risk

The Flood Map for Planning identifies the site as lying within a Flood Zone 1, defined by the website as 'having a low probability of flooding from rivers and the sea'. The Long-Term Flood Risk Assessment identifies flooding from groundwater and reservoirs as unlikely.

The Long-Term Flooding Risk Assessment indicates that the on-site loading bay area is potentially at high risk (more than 3.3% chance each year) from surface water flooding.

This may be due to the topography of the yard which slopes from east to west, encouraging surface water to collect in the loading bay. Surface water in this area is directed to the 300,000lt surge tank which can act as attenuation in periods of heavy rain. YTD has not suffered any flooding since taking occupation in 2010.

2.2 Pollution history

2.2.1 Pollution Incidents

Table 2-2 below summarises information taken from the Envirocheck Report for statutory pollution history information within 1000m to the site.

Table 2-3 Pollution Incidents Nearby

Statutory Information	Approximate Distance from Site	Description
Pollution Incident to Controlled Waters	54m east	Incident Reference 92420067, in May 1992, hydrogen peroxide caused a category 2 significant incident to the River Tawd.
	138m northwest	Incident Reference 95420078, in July 1995, engine oil caused a category 3 minor incident to the River Tawd.
	166m east	Incident Reference 94420129, in August 1994, a miscellaneous pollutant (unknown) caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	269m northwest	Incident Reference 96420046, in May 1996, spillage of organic wastes caused a category 3 minor incident to the River Tawd.
	269m southeast	Incident Reference 95420087, in August 1995, a spillage of alkaline chemicals caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	278m east	Incident Reference 93420107, in September 1993, a miscellaneous pollutant (unknown) caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	437m south	Incident Reference 91420062, in April 1991, a miscellaneous pollutant (unknown) caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	449m southwest	Incident Reference CE980891, in July 1998, paints/dyes chemicals caused a category 2 significant incident to water within the Douglas – Upper catchment area.
	462m south	Incident Reference 93420013, in January 1993, industrial effluent (oil/detergent) caused a category 2 significant incident to water within the Douglas – Upper catchment area.
	486m west	Incident Reference CE981188, unknown incident date, organic wastes/vegetable washings caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	504m west	Incident Reference CE981182, unknown incident date, a miscellaneous pollutant (unknown) caused a category 3 minor incident to water within the Douglas – Upper catchment area.

Statutory Information	Approximate Distance from Site	Description
	508m west	Incident Reference CE981268, in July 1998, paints/dyes chemicals caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	510m west	Incident Reference 93420107, in September 1993, a miscellaneous pollutant (unknown) caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	522m north	Incident Reference 93420116, in October 1993, oils/petrol caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	558m south	Incident Reference 92420053, in March 1992, industrial effluent caused a category 2 significant incident to water within the Douglas – Upper catchment area.
	653m southeast	Incident Reference 1887, in February 1999, septic tank effluent caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	667m northwest	Incident Reference 94420190, in December 1994, miscellaneous – inert suspended solids caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	748m northeast	Incident Reference 91420222, in December 1991, oils/petrols caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	749m east	Incident Reference 93420100, in August 1993, unknown oils caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	837m east	Incident Reference 91420158, in August 1991, a miscellaneous pollutant (unknown) caused a category 3 minor incident to water within the Douglas – Upper catchment area.
	878m east	Incident Reference 93420128, in November 1993, unknown sewage caused a category 2 significant incident to water within the Douglas – Upper catchment area.
	908m east	Incident Reference 93420094, in July 1993, unknown sewage caused a category 2 significant incident to water within the Douglas – Upper catchment area.

Statutory Information	Approximate Distance from Site	Description
	910m east	Incident Reference 93420130, in November 1993, unknown sewage caused a category 2 significant incident to water within the Douglas – Upper catchment area.

2.2.2 Potentially Polluting Activities – Offsite

Table 2-3 below summarises information taken from the Envirocheck Report for potentially polluting activities undertaken in the vicinity of the site.

Table 2-4 Potentially Polluting Land Uses Offsite

Statutory Information	Approximate Distance from Site	Description
Integrated Pollution Prevention and Control	329m west	Permit Reference: PP3530TM, effective date 10 January 2018, Essity UK Limited, relating to 'Disposal of > 50 T/D non-hazardous waste (>100 T/D if only AD) involving physico-chemical treatment'.
	329m west	Permit Reference: PP3330TP, effective date 11 September 2017, Essity UK Limited, relating to 'Burning any fuel in a furnace with a net rated thermal input of 20 or more megawatts, but a rated thermal input of less than 50 megawatts. - 1.1 B A.'.
	463m south	Permit Reference: NP3709PW, effective date 17 September 2019, Pimbo Generation Limited, relating to 'New Medium Combustion Plant before 20th December 2018 – 25A (A) & 12(1A)(A)'.
Active Discharge Consents	720m northwest from site	Mr Trevor Roberts in June 2002 was granted a new sewage discharge consent for final/treated effluent to be discharged to a freshwater stream/river.
Local Authority Pollution Prevention and Controls	71m southwest	Nelco Permit Reference 47, relating to 'Part B – General Coating Process (No specific reference)'.
	141m southwest	Am Paper, Permit Reference 36, relating to 'Part B – General Fuel and Power Process (No specific reference)'.
	222m southwest	National Power, Permit Reference 48, relating to 'Part B – General Fuel and Power Process (No specific reference)'.
	338m south	Trelleborg Crp Ltd, Permit Reference 66, relating to 'PG6/29 Di-isocyanate processes'.
	471m southeast	Standish Metal Treatment Ltd, Permit Reference 67, relating to 'PG6/23 Coating of metal and plastic'.

Statutory Information	Approximate Distance from Site	Description
	501m east	Old English Roof Tiles, Permit Reference 57, relating to 'PG3/2 Manufacture of heavy clay goods and refractory goods'.
	501m east	Hotter Comfort Concept, Permit Reference 59, relating to 'PG6/29 Di-isocyanate processes'.
	506m east	Jane Robinson Enterprises Ltd, unknown Permit Reference, relating to 'PG3/2 Manufacture of heavy clay goods and refractory goods'.
	811m southeast	Daryl Anodising, Permit Reference 26, 'relating to PG4/1 Processes for the surface treatment of metals'.
	988m east	Cemex UK Materials Ltd, Permit Reference 3, relating to 'PG3/1 Blending, packing, loading and use of bulk cement'.

2.2.3 Historical Land-Uses and Associated Contaminants

2.2.3.1 Historical On-Site Land Use

A review of historical maps presented in the Envirocheck Report has been undertaken to prepare the onsite land use history.

- In 1849 the site comprised of open fields. This area is labelled 'Holland Colliery'. A stream crosses the southwest corner of the site, flowing in a westerly direction. A road (Potter's Lane) traverses through the centre of the site from north to south.
- By 1928, the site predominantly stays the same. However, Digmoor Colliery encroaches into the northeast corner of the site.
- In 1967, the site is still predominantly vacant, and the onsite stream is no longer visible on the historical map.
- By 1972, the site is vacant, save for a pond located in the northwest corner.
- In approximately 1991, the warehouse had been constructed in the eastern portion of site. The onsite pond was no longer featured on the historical map and a drain had been added on site close to the southern boundary. A path is noted traversing north to south to the west of the warehouse.
- In 2000, the process building was constructed. Between 2000 and 2016 the building containing the drying and evaporative room was built.
- The current site layout can be found on the 2024 map.

2.2.3.2 Historical Off-Site Land Use

A review of historical maps from the Envirocheck Report has been undertaken to prepare the offsite land use history.

- The surrounding area predominantly comprised open fields in 1849. The area to the west of the site is labelled ' Holland Colliery'. Digmoor Hall is located approximately

170m north. A stream is located approximately 160 m north. The River Tawd is located approximately is located approximately 275m southwest of the site. A railway is located approximately 900m south.

- By 1893, two ponds are located approximately 100 m north of the site; and a further three ponds are located approximately 160m east. A mineral railway is located approximately 600m east. Potter's Lane traverses the site and carries on north towards Digmoor Hall and south towards Moor Side Farm approximately 450m south. Holland Moss is located approximately 450m west beyond the River Tawd.
- In approximately 1909, land immediately adjacent to the northern site boundary has become 'Digmoor Colliery'. An 'old shaft' is located on the site's southern boundary. Approximately 900m south, railway sidings labelled 'Holland Colliery' are located adjacent to the existing railway.
- In 1951 the surrounding area still predominately comprises open fields. 'Digmoor Colliery' to the north and 'Holland Colliery' 900m south, are no longer shown on the historical map.
- From approximately 1967, large portions of Holland Moss (450m west) are labelled as 'open cast mining'.
- Between 1972-1977, a large amount of development had taken place, with the M58 (approximately 300m north) constructed and a residential housing estate located approximately 435m north). The West Pimbo Industrial Estate was under development, with 'engineering works' located approximately 5m north, 10m south, 15m north and 45m south of the site respectively. Four tanks can be seen along Pilling Place between 20m and 100m north of the site. Pit Hey Place is located immediately south of the site and Pimbo Road immediately west. Land drains are also present approximately 10m south and 15m east of the site.
- By 1991, the West Pimbo Industrial Estate had expanded to the west beyond Pimbo Road.
- The West Pimbo Industrial Estate has remained largely similar until 2024.

2.2.4 Evidence of Damage to Pollution Prevention Measures

Regular visual inspections are carried out on storage areas to identify any evidence of spillages or leakages. The results of any inspections or investigations are recorded.

All equipment is subject to pre-planned preventative maintenance checks and maintained in accordance with manufacturer's recommendations.

The site benefits from impermeable concrete surfacing and a sealed drainage system to collect surface water and spills in a 300,000lt attenuation tank to minimise the risk of run-off. This tank needs to be over pumped to be emptied. The material in the 300,000lt tank can be either directed to the effluent tank for disposal to sewer or tankered offsite to suitably licenced facility depending on testing results.

2.3 Evidence of Historic Contamination

Section 2.1.1 presents a review of onsite boreholes installed onsite between 1963 and 1975. Aside from some localised areas of Made Ground, no other record of contamination was observed within these boreholes. These boreholes were installed prior to the site being developed as part of the West Pimbo Industrial Estate.

From historical mapping, it is noted that potential for infilling at the site exists in the northwest corner, the location of a former pond. The site also appears to be linked to

historical operation of the Holland Colliery. A shaft was identified along the southern site boundary, and a former water well associated with the colliery was previously present in the car park.

Nine boreholes were progressed across the site, targeted at geotechnical points of interest in the 2011 REC Geotechnical Site Investigation (refer Appendix B).

REC (2011) tested soil samples for a range of chemical analysis during their Geotechnical Site Investigation including metals, pH, total sulphate, water soluble sulphate, sulphide, cyanide, phenols, total and speciated poly-aromatic hydrocarbons (PAHs), asbestos, organic carbon and total and speciated petroleum hydrocarbon (TPH).

REC (2011) undertook a tier 1 quantitative assessment of the soil data, and the results indicated that the data did not exceed any of the screening criteria for a commercial end use. Asbestos was not identified in any of the soil samples submitted for screening analysis.

Appendix B presents the full soil dataset analysed in 2011.

2.4 Baseline Soil and Groundwater Reference Data

The European Commission Guidance concerning baseline reports under *Article 22(2) of Directive 2010/75/EU on industrial emissions 2014/C 136/03*[14], outlines that a number of key tasks should be undertaken to both determine whether a baseline report needs to be produced for a particular situation and in order to produce the baseline report itself. Eight stages have been identified in this process, covering the following main elements:

- Stages 1-3: to decide whether a baseline report is required;
- Stages 4-7: to determine how a baseline report has to be prepared;
- Stage 8: to determine the content of the report

Where during stages 1-3 it is demonstrated on the basis of the available information that a baseline report is not required, the IED state the '*there is no need to progress to the later stages*'. However, a record of this decision should be provided to the competent authority.

Set out below in Table 2-3 are details of how YTD has met the baseline data requirements.

[14] Communication from the Commission — European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions (europa.eu)

Table 2-5 Industrial Emissions Directive Baseline Data Requirements

Stage	Activity	Objective	How the requirements have been met
1	Identify which hazardous substances are used, produced or released at the installation.	Determine whether or not hazardous substances are used, produced or released in view of deciding whether a baseline report is required. If yes: produce a list of all potential hazardous substances.	The raw materials presented in the 416.065368.00001_BATOT have been reviewed alongside historical land use data. The list of potentially hazardous substances used are summarized below. **As a result of the operation of the milk processing facility:** • Kerosene • Diesel. • Milk. • Cream. • Waste product. • Waste sediment. • Waste effluent. **As a result of historical land use:** Potential hazardous substances from infilling of onsite ponds / Made Ground placed during redevelopment works: • TPH. • Volatile organic compounds (VOC). • Semi volatile organic compounds (SVOC). • Polycyclic aromatic hydrocarbons (PAH). • Metals. • Gases (including CO_2, H_2S, CH_4, CO) • Asbestos • Acidic/alkaline soil.

Stage	Activity	Objective	How the requirements have been met
2	Identify which of the hazardous substances from Stage 1 which, according to the evaluation by suitably qualified and experiences persons, as a result of their hazardousness in respect to toxicity, mobility, persistence and biodegradability (as well as other characteristics), are capable of contaminating soil or groundwater. Discard those hazardous substances that are incapable of contaminating soil or groundwater. Justify and record the decisions taken to exclude certain hazardous substances.	To restrict further consideration to only the **relevant** hazardous substances (RHS) that are capable of contaminating soil or groundwater in view of deciding on the need to prepare and submit a baseline report.	A review of the raw materials present at the site that are considered to be an RHS substance are presented in Appendix C, Table C-1. The following RHS stored externally, have been identified in the current production process: • Kerosene • Diesel. • Milk. • Cream. • Waste product. • Waste sediment. • Waste effluent. All of the substances detailed above would be capable of contaminating soil, groundwater and surface water if there were no mitigation measures in place at the Installation.
3	For each relevant hazardous substance brought forward from Stage 2, identify the actual possibility for soil or groundwater contamination at the site of the installation, including the probability of releases and the consequences of releases, taking particular account of: - the quantities of each hazardous substance concerned; - how and where they are stored; - how they are to be transported around the installation; - how they are used - where they are emitted	To identify which of the hazardous substances from Stage 2 represent a potential pollution risk at the site based on the likelihood of emissions of such substances occurring. **These are the 'relevant' hazardous substances for which information must be included in the baseline report.** Note: Where it is found that, due to the quantities of the hazardous substances used, produced or released, that there is **no possibility of soil and groundwater contamination a baseline report does not need to be prepared or submitted**. However, in those cases it is expected that	Appendix C presents the 'relevant hazardous substances assessment' for the site. This assessment outlines potential risks from identified RHS used on site and what controls are used to minimise these risks. Existing mitigation measures for the site will continue to ensure that no contamination occurs as a result of the existing and proposed activities to be undertaken at the site, refer to the following for a list of mitigation measures utilised onsite: • Environmental Risk Assessment – 410.064951.00001_ERA. • Best Available Techniques and Operating Techniques – 410.064951.00001_BATOT.

Stage	Activity	Objective	How the requirements have been met
	- measures that have been and, for new installations, will be adopted to protect soil and groundwater at the installation.	a record of such a decision, including the reasons for the decision, will be made and held by the competent authority.	The Facility is be managed by technically competent personnel in accordance with site procedures and the Environmental Management System. This will ensure good practice on site and minimise environmental risk throughout the operation. The relevant hazardous substances assessment (Appendix C) has concluded that there is no credible risk potential pollution impacting on soil, groundwater and surface water as a result of the activities proposed to be regulated under the EP.
4	Provide site history	Identify potential sources which may have resulted in the relevant hazardous substances identified in Stage 3 being present on the site of the installation.	Please refer to Section 2.2 of this SCR for details of past land use, historic pollution incidents and historical intrusive data
5	Identify the site's environmental setting	Determine where hazardous substances may go if emitted and where to look for them. Also identify the environmental media and receptors that are potentially at risk and where there are other activities in the area which release the same hazardous substances and may cause them to migrate onto the site.	Please refer to Sections 1.2 and 1.3 of this SCR for details of the Site's surroundings and details of present environmental settings. Please refer to the ERA (416.065368.00001_ERA) included with this EP application.
6	Use the results of Stages (3) to (5) to describe the site, in particular demonstrating the location, type, extent and quantity of historic pollution and potential future emissions noting the strata and groundwater bodies likely to be affected by those emissions – making links between sources of emissions, the	Identify the location, nature and extent of existing pollution on the site and to determine which strata and groundwater bodies might be affected by such pollution. Compare with potential future emissions to see if areas are coincident.	The relevant hazardous substances assessment (Appendix C) indicates that there is no credible risk of potential pollution impacting on soil and groundwater as a result of the activities proposed and management practices in place. The REC 2011 Geotechnical Site Investigation report indicated that there was a low risk to commercial receptors during the tier 1 quantitative assessment of

Stage	Activity	Objective	How the requirements have been met
	pathways by which pollution may move and the receptors likely to be affected.		shallow soil data in the areas investigated for the assessment. However, there are potential historical sources of pollution located at the site: • Potential for Made Ground and infilling located below the site. • 24 years of industrial use at the site has the potential for unknown spills to have impacted land quality in areas not assessed by REC in 2011. • 13 years of operation of the site as a dairy between 2011 and 2024 where no soil or ground water data has been collected.
7	If there is sufficient information to quantify the state of soil and groundwater pollution by relevant hazardous substances on the basis of Stages (1) to (6) then go directly to Stage 8. If insufficient data exists, then intrusive investigation of the site will be required in order to gather such information.	Collect additional data as is necessary to allow a quantified assessment of soil and groundwater pollution by relevant hazardous substances.	There is no credible risk of pollution incidents from the proposed onsite activities due to the combination of existing containment and environmental management procedures that are currently in place. However, SLR recommend that YTD undertake baseline soil and groundwater monitoring as the current data set is insufficient to quantify the current state of soil and groundwater pollution by relevant hazardous substances. This is particularly relevant considering the potential for a cross-over between historical processes undertaken at the site in the past 13 years and the proposed activities covered under the environmental permit. Establishing baseline soil and ground conditions at the start of the EP will avoid potentially more stringent clean up criteria being applied by the regulator at site surrender. Also as stated in the H5 Guidance:

Stage	Activity	Objective	How the requirements have been met
			'if you choose not to submit any monitoring data…. you will be accepting the risk that you may be required to clean up pre-existing contamination when you surrender your permit.'
8	Statement of Site Condition	Present a statement of site condition based on Stages 1-7.	Refer Stage 7.

3.0 Permitted Activities

3.1 Existing Activities to be Permitted

The existing activities to be permitted include:

- Milk processing above 200 tonnes per day; and
- Operation of medium combustion plant (3 x steam generators / 2 x dryers).

Supporting activities include:

- Storage of kerosene for use as ‘dual fuel’ for onsite combustion plant in the event of a disruption to the gas supply;
- Storage and use of cleaning chemicals;
- Storage and discharge of effluent to sewer; and
- Storage of waste product.

3.2 Installation Activities

The facility will be permitted under Schedule 1, Part A1 of the Environmental Permitting (England and Wales) Regulations (EPR) 2016 (as amended), as follows:

- Section 6.8 Part A(1)(e) *Treating and processing milk, the quantity of milk received being more than 200 tonnes per day (average value on an annual basis).*
- Section 5.4 Part A(1)(a) Disposal, recovery or a mix of disposal and recovery of non-hazardous waste with a capacity exceeding 50 tonnes per day involving one or more of the following activities: (ii) physico-chemical treatment.
- Schedule 25A Medium Combustion Plants: Medium Combustion Plant Directive .

3.3 Directly Associated Activities

The following directly associated activities (DAAs) to the primary activity are undertaken at the site:

- Storage and handling of raw materials, fuels, and products.
- Storage and off-site removal of effluent.
- Storage and off-site reuse / disposal of solid waste.
- Combustion of natural gas in boilers to provide steam and heat for the dryers.
- Loading and dispatch of final products.
- Blow moulding and packaging.

3.4 Non-permitted Activities

There are no non-permitted activities taking place at the site.

3.5 Environmental Monitoring and Compliance

Monitoring of point source and fugitive emissions throughout the lifetime of the site will be undertaken in line with the conditions outlined within the EP.

Reporting of emissions will be undertaken in line with the conditions outlined in the EP.

3.6 Operation of the Installation and Management System

The Facility will be managed by technically competent personnel in accordance with site procedures and the Environmental Management System. This will ensure good practice on site and minimise environmental risk throughout the operation.

3.7 Environmental Risk Assessment

As required by EA guidance, an ERA has been undertaken and is included as part of the EP application (416.065368.00001_ERA).

The ERA is provided in section 6 of the EP application and is an assessment of the risks to the environment and to human health that may be associated with the proposed operations at the Site. The ERA reviews a 2km radius from the site's EP boundary for potentially sensitive receptors of ecological importance along with features such as sites of cultural and natural heritage. A radius of 500m from the site's EP boundary has been adopted for all other potentially sensitive receptors (for example, residential, commercial, industrial, agricultural, and surface water receptors).

3.8 SCR Updates

YTD will maintain the SCR over the lifetime of the site to detail potential or recorded change to the condition of the Site.

4.0 Conclusion

There is no credible risk from ongoing pollution incidents from the proposed onsite activities due to the combination of existing containment and environmental management procedures that are currently in place. However, SLR recommend that YTD undertake baseline soil and groundwater monitoring as the current data set is insufficient to quantify the current state of soil and groundwater pollution by relevant hazardous substances. This is particularly relevant considering the potential for a cross-over between historical processes undertaken at the site in the past 13 years since the REC 2011 Geotechnical Site Investigation and the proposed activities covered under the EP.

Establishing baseline soil and ground conditions at the start of the EP will also avoid potentially more stringent clean up criteria being applied by the regulator at site surrender.

Also as stated in the H5 Guidance:

'if you choose not to submit any monitoring data…. you will be accepting the risk that you may be required to clean up pre-existing contamination when you surrender your permit.'

Appendix A Envirocheck Report

Site Condition & Baseline Report

Environmental Permit Application

Yew Tree Dairy PartCo Limited

SLR Project No.: 416.065368.00001

22 October 2024

Appendix B REC 2011 Geotechnical Site Investigation Report

Site Condition & Baseline Report

Environmental Permit Application

Yew Tree Dairy PartCo Limited

SLR Project No.: 416.065368.00001

22 October 2024

Appendix C Relevant Hazardous Substances Assessment

Site Condition & Baseline Report

Environmental Permit Application

Yew Tree Dairy PartCo Limited

SLR Project No.: 416.065368.00001

22 October 2024

C.1 Relevant Hazardous Substances Assessment

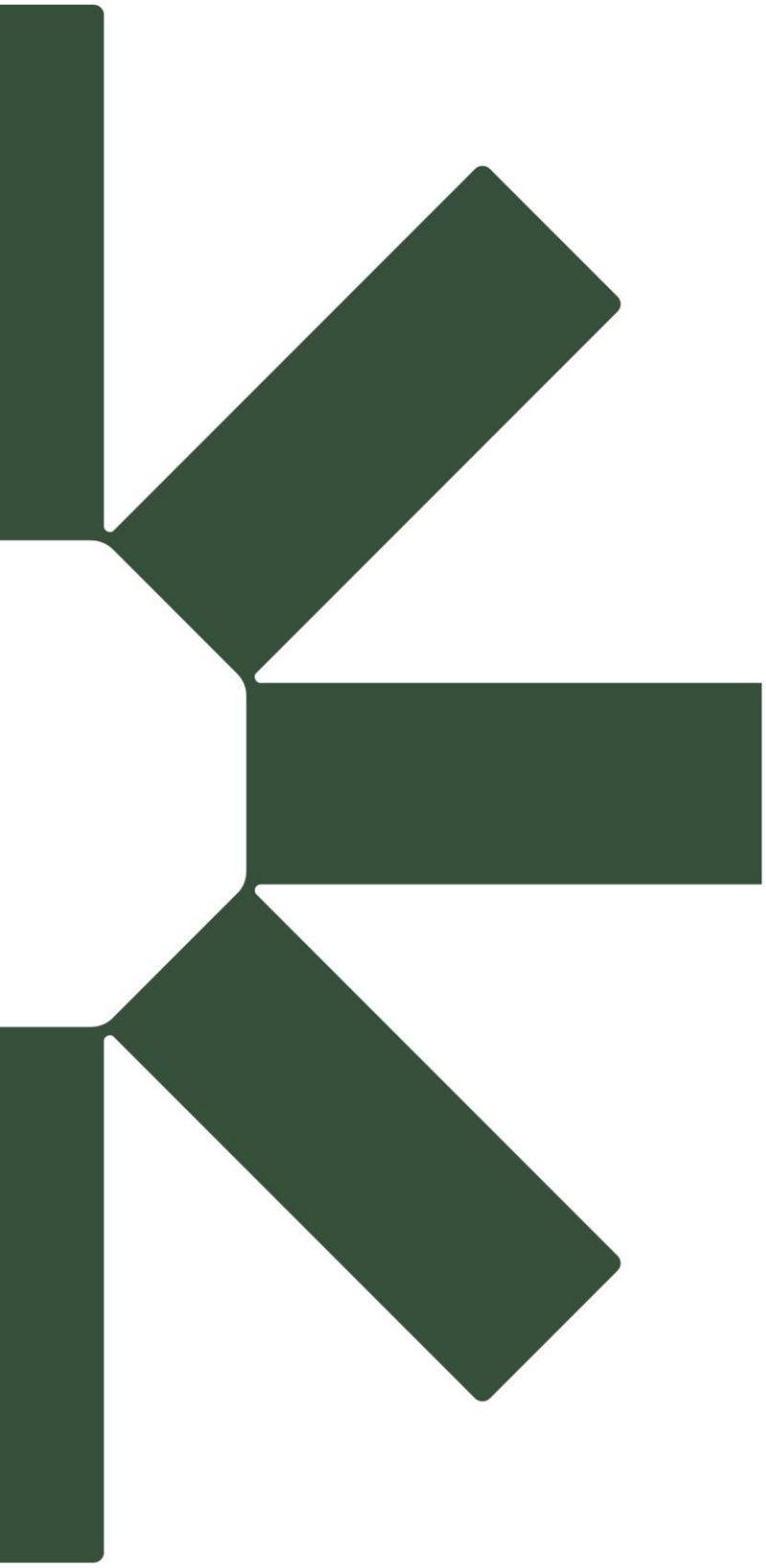
The relevant hazardous substances assessment for the site is presented in Table C-1 below. Where hazardous substances are stored internally on hard standing at the site and the risk of pollution of soil and groundwater as a result of accidental release is considered to be negligible, these substances are not considered further in this assessment.

Table C-1 Relevant Hazardous Substances Assessment

Chemical	CAS No	Container Type	Volume of Container (litre)	Amount Stored on Site (litre)	Internal or External Storage	Primary Containment	Secondary Containment	Tertiary Containment	Offloading Area Location & Offloading Procedure	Environmental Risk Phrases	Relevant Hazardous Substance	Carried forward to Stage 3 Assessment	Credible Risk of Pollution?
Outdoors - Service Area													
Kerosene	8008-20-6	Tank	1 No. 10,000lt 1 No, 10,000lt	20,000lt	External	Integrally bunded tank	Integrally bunded tank	Drainage plan not provided to SLR to confirm tertiary containment.	Offloading procedure in place for fuel.	ECHA Database General MSDS for Kerosene: H411 – aquatic toxicity	Yes	Yes	No – integrally bunded tank considered sufficient to mitigate potential risk.
Diesel	68334-30-5	Belly Tank – Emergency Generator	1,000lt	1,000lt	External	Integrally bunded tank	Integrally bunded tank	Drainage plan not provided to SLR to confirm tertiary containment	Offloading procedure in place for fuel.	ECHA Database Carc. 1A, H350 – May cause cancer.	Yes	Yes	No – integrally bunded tank considered sufficient to mitigate potential risk.
Outdoors – Southwest Corner													
Raw Milk	8049-98-7	Tanks	8 No. 275,000lt	Above 2million llt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Offloading procedure in place for milk products.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Cream	8049-98-7	Tanks	2 No. 100,000L 1 No. 10,000lt	220,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Offloading procedure in place for milk products.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Waste Product	8049-98-7	Tank	1 No. 40,000lt	40,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Onloading procedure in place for waste product.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Waste Effluent	8049-98-7	Tank	1 No. 90,000lt	90,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Discharge procedure in place for waste effluent. Effluent can be held in the tank if required and tested for quality and tankered offsite in the occurrence of a non-compliance.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Outdoors – Northern Yard Area													
Skimmed milk	8049-98-7	Tanks	3 No. 275,000lt 2 No. 18,000lt	860,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Offloading procedure in place for milk products.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.

Chemical	CAS No	Container Type	Volume of Container (litre)	Amount Stored on Site (litre)	Internal or External Storage	Primary Containment	Secondary Containment	Tertiary Containment	Offloading Area Location & Offloading Procedure	Environmental Risk Phrases	Relevant Hazardous Substance	Carried forward to Stage 3 Assessment	Credible Risk of Pollution?
Waste Product	8049-98-7	Tank	1 No. 40,000lt	40,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Onloading procedure in place for waste product.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Waste Sediment	8049-98-7	Tank	1 No. 40,000lt	40,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Onloading procedure in place for waste sediment.	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Waste Effluent	8049-98-7	Tank	1 No. 90,000lt	90,000lt	External	Single skinned tank	None	300,000lt underground surge tank on drainage system	Discharge procedure in place for waste effluent. Effluent can be held in the tank if required and tested for quality and tankered offsite in the occurrence of	High organic content	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Tank Wash Caustic 32 Sodium Hydroxide	1310-73-2	IBC	1,000lt	1,000lt	External	IBC	Bunded stillage	300,000lt underground surge tank on drainage system	Offloading procedure in place for chemicals.	ECHA Database No aquatic risk phrases or reproduction risk phrases listed on ECHA database. Not listed on the EA Confirmed Hazardous Substance List	No	No	N/A
Tank Wash Chlorofoam Sodium Hydroxide – 5-15% Amines, C12-14 Alkyldimethylamine,-N-Oxides 1-5% Sodium Hypochlorite 1-5%	308062-28-4	IBC	1,000lt	1,000lt	External	IBC	Bunded stillage	300,000lt underground surge tank on drainage system	Offloading procedure in place for chemicals.	ECHA Database No aquatic risk phrases or reproduction risk phrases listed on ECHA database. Not listed on the EA Confirmed Hazardous Substance List	No	No	N/A
Tank Wash Flux Clean No.7	Not provided	IBCs	1,000lt	1,000lt	External	IBC	Bunded stillage	300,000lt underground surge tank on drainage system	Offloading procedure in place for chemicals.	In absence of MSDS, this food grade cleaning chemical is assumed to have a similar profile to other cleaning chemicals used onsite	No	No	No – tertiary containment and PPM measures considered to mitigate the risk.
Kerosene	8008-20-6	Tank	1 No. 60,000lt	60,000lt	External	Integrally bunded tank	Integrally bunded tank	300,000lt underground surge tank on drainage system	Offloading procedure in place for fuel.	ECHA Database General MSDS for Kerosene:	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.

Chemical	CAS No	Container Type	Volume of Container (litre)	Amount Stored on Site (litre)	Internal or External Storage	Primary Containment	Secondary Containment	Tertiary Containment	Offloading Area Location & Offloading Procedure	Environmental Risk Phrases	Relevant Hazardous Substance	Carried forward to Stage 3 Assessment	Credible Risk of Pollution?
										H411 – aquatic toxicity			
Diesel	68334-30-5	Tank	1 No. 2,500lt	2,500lt	External	Double skinned tank	Double skinned tank	300,000lt underground surge tank on drainage system	Offloading procedure in place for fuel.	ECHA Database Carc. 1A, H350 – May cause cancer.	Yes	Yes	No – tertiary containment and PPM measures considered to mitigate the risk.
Outdoors – Northwest Corner													
Chlorine dioxide	10049-04-4	Tank	1 No. 20,000lt	20,000lt	External	Integrally bunded	Integrally bunded	None	Offloading procedure in place for chemicals.	ECHA Database No aquatic risk phrases or reproduction risk phrases listed on ECHA database. Not listed on the EA Confirmed Hazardous Substance List	No	No	N/A



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