Annual Environmental Report (AER)

2024

Company Name: Sigma-Aldrich Ireland Limited

Licence Number: P0089-06

Address: Vale Road, Arklow, Country Wicklow, Y14 EK18

Class of Activity[1]

- The production of pharmaceutical products including intermediates;
- The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in

[1] See Appendix I

this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities[2] of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

[2] See Appendix I

2) Some documents[3] are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the http://www.epa.ie/licensing/ or http://www.epa.ie/enforcement/ pages of the EPA website.

3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See http://www.epa.ie/about/contactus/ for contact details.

[3] This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

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Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
Beyond Compliance	Beyond compliance is concept to help deliver greater organisational performance and long-term value for the environment, society and the economy.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.

Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.
Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.

Storm Water	Rain water run-off from roof and non-process areas.
Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, Vincent Kennedy, EHS Manager, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here ☑

1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

Sigma-Aldrich Ireland Ltd specialises in the manufacture of a wide range of Active Pharmaceutical Ingredients (APIs) and fine chemicals for supply to clients worldwide for formulation into drug products. Sigma-Aldrich Ireland Ltd was originally a private, family-owned independent company (Iropharm Ltd.). It was established in 1982 on 7 acres of development land approximately 75 kilometres to the south of Dublin.

The facility is located on the Vale Road (R747), Arklow, Co Wicklow, approximately 75km south of Dublin and 2km west-northwest of Arklow Town. The site covers an area of approximately 6.4 hectares and is located in a primarily rural/suburban area adjacent to the railway and the Avoca river. Approximately 2.8 hectares of this is currently developed leaving approximately 3.6 hectares available for expansion.

The site is involved in batch manufacture of bulk active pharmaceutical ingredients and advanced intermediates and excipients. Around 40 products are made. The site is FDA inspected. The basic chemistry is based around batch processing and a typical synthesis consists of an initial chemical reaction followed by purification by distillation, crystallization and drying steps.

Sigma-Aldrich Ireland Ltd site at Arklow is capable of the following operations-

- Batch processes
- High temperature reactions up to 160°C
- Low temperature reactions down to -40°C
- Crystallisations
- High vacuum distillations
- Centrifugation of solids
- Filtration of solids
- Drying of solids under vacuum
- Chromatographic separations
- Milling of solids

- Packaging of solids

The site made progress in completing its targets and objectives listed in the Environmental Management Programme. The site has maintained certification in 2024 for ISO14001:2015 Environmental Management System, and ISO50001:2018 Energy Management System.

The volume of wastewater discharged from the site decreased from 28,339m^3 in 2023 to 25,190m^3 in 2024, a decrease of 11.1%.

Total electricity usage in 2024 reduced significantly with an 8.86% decrease vs. 2023, natural gas usage also decreased by 17.05% with public water usage reducing by 6.35%.

There were no complaints received by the site in 2024.

The site had 26 incidents in 2024, all of which were reported to the Agency, have been fully investigated and closed to the satisfaction of the Agency.

The site had two (2) site visits from the EPA in 2024. One was related to ORM Monitoring, the second was a follow up site visit to review progress on actions raised at previous site visits.

Contact Us

If you have any questions or would like further information on any aspect of our licensed activity, please contact us directly.

See below details:

0402 20300

2) How we Manage our Facility

Environmental Management System

Explanation
To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Secure a Final Determination Industrial Emissions Licence from the EPA	July 2024	Complete
Secure a connection agreement with Uisce Éireann	December 2024	Complete
Establish a team to focus on reducing Thermal Oxidiser bypasses	December 2024	Complete
Establish a site Environmental/Biodiversity Team	June 2024	Complete

Environmental Goal	Target Date	Progress
Install a new burner on the Thermal Oxidiser	December 2024	Complete
Complete drain surveys and repairs	December 2024	Complete

Add rows as necessary

Comment

A total capital expenditure of approximately €226,000 was spent on site environmental and related improvements in 2024.

Beyond Compliance

Explanation
We are legally required to comply with our environmental licence. However, the EPA realise that some sites go further than just complying with their environmental licence requirements. Some projects carried out at facilities can have long term positive impacts on the environment and local communities.
The EPA's beyond compliance initiative is encouraging us to identify and report on these environmental and sustainability projects. For example, the project could involve renewable energy, biodiversity, water conservation or exemplar community engagement.

Did any project completed on your site in the reporting year go beyond your licence requirements?

Yes [✓] No [ ]

If yes, provide details of one case study in Appendix III that demonstrates how the project went beyond compliance of your licence.

3) Energy & Water

Energy

Explanation
Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 3 Energy Used

Energy Used	Quantity (kWh)	% Increase/ decrease on previous year
Electricity	4,210,939 (Green Electricity)	8.86% Reduction
Heavy Fuel Oil	N/A	N/A
Light Fuel Oil	N/A	N/A
Natural Gas	11,822,359 (Gas)	17.05% decrease
Coal / Solid Fuel	N/A	N/A
Peat	N/A	N/A
Renewable Biomass	N/A	N/A
Renewable Energy Generated On-site	N/A	N/A
Total Energy Used	16,033,298	15.04% decrease

Comment

The site's electricity use is considered Renewable Energy as it is 100% green certified wind power from SSE Airtricity.
The site maintained its certification to ISO 50001 Energy Management System Standard in 2024.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 4 Energy Generated

Energy Generated	**Quantity (GJ)**	**% Increase/ decrease on previous year**
Renewable Energy	N/A	N/A
Total Energy Generated	N/A	N/A

Comment

The site's back-up electricity generator (diesel) had 40 hours usage in 2024. Steam generation is not metered.

Water

Explanation
Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 5 Water Used

Source of Water Used	Quantity (m^3/year)	% Increase/ decrease on previous year
Groundwater	N/A	N/A
Surface Water	N/A	N/A
Public Supply	40,784	6.35% decrease
Recycled Water	N/A	N/A
Rainwater	N/A	N/A
Total Water Used	40,784	6.35% reduction

Comment

The total water intake to the site from Public Supply in 2024 was 40,784$m^{3,}$ which represents a 6.35% reduction on 2023 intake.

4) Environmental Complaints

Explanation
Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.
We have an environmental complaints procedure in place where you can contact us[4] directly. You can also contact the EPA[5] if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of all the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 6 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints	Number Closed
Odour / Smells	0	N/A
Noise	0	N/A
Dust	0	N/A
Water Quality	0	N/A
Air Quality	0	N/A
Waste	0	N/A
Litter	0	N/A
Vermin/Flies/Birds	0	N/A
Soil Contamination	0	N/A
Vibration	0	N/A
Other	0	N/A

[4] See Section 1, Introduction – Contact Us

[5] If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to https://lema.epa.ie/complaints

Comment

The site received no environmental complaints during 2024.

5) Environmental Incidents

Explanation
It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.
The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 7 for the number of the environmental incidents we reported to the EPA this year.

Table 7 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline	12	0	0	0	0
Breach of Ambient ELV	0	0	0	0	0
Breach of Emission Limit	2	1	0	0	0
Explosion	0	0	0	0	0
Fire	0	0	0	0	0
Monitoring Equipment Failure	3	0	0	0	0
Odour	0	0	0	0	0
Spillage	0	0	0	0	0
Breach of trigger Level	7	0	0	0	0
Uncontrolled Release	0	0	0	0	0

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Other	1	0	0	0	0

Comment

A brief description of the incidents are as follows:

- There were twelve incidents related to abatement equipment (Thermal Oxidiser) being off-line. Four incidents were related to lack of utilities supply (Distributed Control System – DCS/ compressed air/ power), the remaining eight incidents were related to equipment issues (faulty boiler feedwater valve, boiler feed pumps, steam dump valve and a fractured airline on the TO).
- There were seven incidents related to trigger levels being reached on the surface water. Two were related to inadvertent spills/ leaks to the surface water system, two were related to on-going construction/ underground service works on site, two were related to the incorrect routing of a canteen sink to surface water and the root cause for one of the incidents could not be identified.
- There were three ELV breaches throughout the year. Two were related to heightened Orthophosphate emissions at emissions point SW1, and one was related to an issue with the CEMS system inaccurately reporting flows above the site's ELV.
- There were three incidents related to Monitoring Equipment Issues on site. Two of these were as a result of lost CEMS data. An issue with the TO shutting down due to a loss of compressed air appears to have been incorrectly reported as a monitoring equipment issue.
- The last incident, the nature of which was reported as "other", was related to an issue with the O_2 sensor on the CEMS system. This caused the incorrect calculation of flows within the CEMS system, with the flow appearing above the site's ELV.

All of the above incidents were notified to the Agency with corrective and preventive actions agreed and implemented.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA[6].

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

[6] See section 5, Incidents

Storm Water

Explanation
Storm water is rain water run-off from roof and non-process areas of a facility, e.g. carparks, and generally shall not contain any pollution.
Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. **Storm water from our facility is managed prior to release by;**

Storm water is continuously monitored for pH and Total Organic Carbon (TOC), is visually inspected daily, is tested for temperature and Chemical Oxygen Demand (COD) weekly and is tested for Biological Oxygen Demand (BOD) monthly.

2. **Storm water from our facility is released into the following water bodies:**

Avoca river.

Table 8 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant[7]	Comment
Visual inspection	Daily (when discharging to the river)	100	Fully compliant
Temperature	Weekly	N/A	Fully compliant
COD	44	100	Fully compliant
pH	44	100	Fully compliant with licence limits
BOD	12	100	Fully compliant with licence limits

Add rows as necessary

Comment

All Storm Water samples complied with relevant licence limits in 2024.

[7] % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. **Waste water produced by our activities is treated as follows before discharge to a receiving waterbody**;

Sigma-Aldrich Ireland Ltd.'s WWTP includes physical, chemical, and biological processes to treat the wastewater to the required discharge standard.

2. **Treated waste water from our facility is released into the following water bodies:**

Avoca river.

Table 9 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Temperature	365	100	Fully compliant with licence limits
pH	365	100	
Toxicity	1	100	
BOD	48	100	
COD	341	100	
Suspended Solids	356	99.71	One exceedance of suspended solids was reported via EDEN ref. INCI027810
Nitrates (as N)	13	100	Fully compliant with licence limits
Ammonia (as N)	98	100	
Orthophosphate (as P)	60	93.33	Four exceedances of our OP ELV were reported via EDEN ref. INCI027322
Chloride	13	100	Fully compliant with licence limits
Sulphate	13	100	

Add rows as necessary

Comment

Good compliance with licence ELVs was in 2024 with the exception of the above-mentioned exceedances for Orthophosphates and Suspended Solids. These exceedances were notified to the Agency and preventive actions were agreed.

Air

Explanation
Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. **We monitor air emissions from the following number of emission points at our facility.**

9

Table 10 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Total Dust	4	100%	Carried out quarterly by an accredited contractor.
Flow Rate	Continuous	100%	Fully compliant with licence limits
NO_2	Continuous	100%	
SO_2	Continuous	100%	
CO	Continuous	100%	
Total Organic Carbon (TOC)	Continuous	100%	
HCl	Continuous	100%	

Add rows as necessary

Comment

The percentage uptime for the Thermal Oxidiser in 2024 was 99.79%, which excludes a scheduled summer and winter maintenance shutdown, but does include TO Downtime events which were notified to the EPA via the Eden Portal. This is compared to a percentage uptime for the Thermal Oxidiser in 2023 of 98.2%, an improvement of 0.59% and above our target of 99%.

In the event of a TO downtime event, by default the valve diverts to the bypass vent in the Thermal Oxidiser as a safety feature. In order to assess any impact of these events, independent dispersion models were undertaken using worst case scenario VOC emission monitoring data from 2020. It was concluded, for each typical solvent used in the facility, that the emissions from A2-7 are in compliance with environmental assessment levels (AELs). Modelled concentrations were found to be negligible so that all emissions would disperse over the facility and not impact any worst-case receptors past the application boundary.

Table 11 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant[8]	Comment
Licence Holder	N/A	N/A	N/A
EPA	N/A	N/A	N/A

Add rows where necessary

Comment

Not applicable.

[8] A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at Air Enforcement | Environmental Protection Agency (epa.ie)

Fugitive Solvent Emissions

Are you required to monitor fugitive solvent air emissions from your facility?

Yes ✓ No

Explanation
The use of solvents is regulated under Irish and European Union (EU) Regulations[9]. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 12 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
922,407.00	4.49	100%

Comment

A fugitive emissions survey was completed in 2021 by AWN Consulting Ltd. This reviewed information from 2019 and verified that fugitive emissions from the facility remain low.

[9] See Annex VII of the Industrial Emissions Directive
https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm

Groundwater

Explanation
Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.
Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. **Do you have a groundwater monitoring programme in place?**

Yes ☑ No ☐

2. **Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?**

Yes ☑ No ☐

Table 13 List of Groundwater Pollutants Identified

Pollutants
MTBE
Chlorobenzene
Xylene
Ammoniacal nitrogen

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

4. Continuation of the biannual groundwater monitoring programme is recommended for 2025 in both the groundwater monitoring report for 2024 and the Hydrogeological Risk Assessment. No remedial intervention is warranted in relation to groundwater due to the declining concentration trends for the key historical COPCs.

Comment

Biannual monitoring of groundwater was completed in May and October/ November 2024.

The direction of groundwater flow is consistent with that observed previously and is to the north-east, indicating groundwater discharge to the Avoca River, which is identified as the main receptor of groundwater from the site. There are no users of groundwater down-gradient of the site in the scrubland between the site and the river.

The majority of results were within previously reported concentration ranges. Given the general downward concentration trends evident from the long-term monitoring dataset, the historical plumes of MTBE and total xylene in groundwater appear to be localised within the site and slowly shrinking.

As trends of the polluting substances continue to reduce over time, Sigma-Aldrich Ireland Ltd. are continuing to monitor regularly and are continuing to adhere to good handling practices of materials and inspect storage structures integrity regularly to prevent loss and/or contamination.

We also had a Hydrogeological Risk Assessment completed in 2024, which was submitted to the Agency via licensee return LR089600.

Noise

Explanation
Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. **We conducted noise monitoring on the following dates this year:**

30th of January 2025

2. **Where was the noise monitoring carried out?**
   - i. **the boundary of our facility;**
   - ii. **noise sensitive locations off-site; or**
   - iii. **both.**

iii. Both

3. **Were measured noise levels compliant with your EPA licence limits?**

Yes [✓] No [ ]

If No, we took the following actions to address the noise level exceedances?

Not applicable

Comment

“The day, evening and nighttime noise limits as set out in IEL P0089-05 for Merck SIAL have not been breached at the nearest noise sensitive locations by the noise emanating from Merck SIAL facility. It is therefore concluded

that Merck SIAL facility in in Arklow, Co. Wicklow is demonstrating compliance with the IEL noise limits identified for the facility in IE License Number P0089-05."

7) Waste

Waste Generated

Explanation
Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.
We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in Table 14 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 14 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	995.98	13.78% decrease	45%
Non-Hazardous	102.78	75.98% decrease	13.81%
Inert	N/A	N/A	N/A
Total Tonnes	1098.76	30.59% decrease	42.2%

Comment

No waste went to landfill from site in 2024. All site waste was processed for recovery and recycling.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes ☐ No ☑

Explanation
Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.
We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 15 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 15 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	N/A	N/A	N/A
Non-Hazardous	N/A	N/A	N/A
Inert	N/A	N/A	N/A
Total Tonnes	N/A	N/A	N/A

Comment

Not applicable.

8) Financial Provision

Explanation
Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility[10] by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes [✓] No [ ]

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

2024

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

2023

4. Has there been any significant changes on your site since the last agreements?

Yes [ ] No [✓]

If yes, have you submitted details to the EPA?

Yes [ ] No [ ] N/A [✓]

[10] See Appendix II

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture[11]
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

[11] This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at Compliance & Enforcement: Licensees: Reporting Publications | Environmental Protection Agency (epa.ie)

Appendix II

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

Compliance & Enforcement: Financial Provisions Publications | Environmental Protection Agency (epa.ie)

Appendix III

Beyond Compliance

The case study below shows how we went beyond the requirements of our licence in the reporting year.

In 2024, several environmental projects were successfully completed on-site, including:

- HSE TO Burner Upgrade: Complete replacement of the TO burner to enhance performance and reduce energy consumption
- Upgrade of WWTP Lab: Improvements made to the Wastewater Treatment Plant laboratory
- Establish a team to focus on reducing Thermal Oxidiser bypasses
- Establish a site Environmental/Biodiversity Team
- Upgrade of WWTP WAS Tank (with Final Effluent Buffer Tank to follow)
- Maintained membership to the All-Ireland Pollinator Plan