

Facility Information Summary	
AER Reporting Year	2018
Licence Register Number	P0117-02
Name of site	Ipsen Manufacturing Ireland Ltd.
Site Location	Blanchardstown Industrial Park, Blanchardstown, Dublin 15
NACE Code	2120
Class/Classes of Activity	5.16 The production of pharmaceutical products including
National Grid Reference (6E, 6 N)	-6.36631E, 53.4061N
A description of the activities/processes at the site for the reporting year. This should include information such as production increases or decreases on site, any infrastructural changes, environmental performance which was measured during the reporting year and an overview of compliance with your licence listing all exceedances of licence limits (where applicable) and what they relate to e.g. air, water, noise.	<p>IMIL is part of the Ipsen group. Ipsen is a multinational pharmaceutical group with over 20 products on the market and a total worldwide staff of 4,800. IMIL is a bulk API (active pharmaceutical ingredient) producer of two of the group's main strategic products Decapeptyl® and Somatuline® which are used for a range of life threatening diseases.</p> <p>At the end of 2018 there were 161 employees at IMIL. The production output in 2018 was 129kg of API. This was an increase of 23% on the previous year. This had a knock on effect on waste and emissions.</p> <p>There were 4 incidents raised; one for chloride exceedances, one for malfunctions on the process vent abatement and two for monitoring equipment malfunctions .</p> <p>New developments at IMIL in 2018 included the new Cryogenic abatement coming on line. Licence P0117-02 was granted in April 2018</p>

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet licence requirements.

	
Signature Group/Facility manager (or nominated, suitably qualified and experienced deputy)	Date

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Answer all questions and complete all tables where relevant

		Additional information
1	Does your site have licensed air emissions? If yes please complete table A1 and A2 below for the current reporting year and answer further questions. If you do not have licenced emissions and do not complete a solvent management plan (table A4 and A5) you <u>do not</u> need to complete the tables	Yes

Periodic/Non-Continuous Monitoring

2	Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below	No
3	Was all monitoring carried out in accordance with EPA guidance note AG2 and using the basic air monitoring checklist? Basic air monitoring checklist AGN2	Yes

Table A1: Licensed Mass Emissions/Ambient data-periodic monitoring (non-continuous)

Emission reference no:	Parameter/ Substance	Frequency of Monitoring	ELV in licence or any revision thereof	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence limit	Method of analysis	Annual mass load (kg)	Comments - reason for change in % mass load from previous year if applicable
A3	TA Luft organic substances class 1	6 times per year	20	at mass flows>0.1kg/h	204.6	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 1	6 times per year	20	at mass flows>0.1kg/h	173.9	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 1	6 times per year	20	at mass flows>0.1kg/h	51.2	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 1	6 times per year	20	at mass flows>0.1kg/h	88.6	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 1	6 times per year	20	at mass flows>0.1kg/h	38.2	mg/Nm3	yes	EN 13649:2001	230.5	Increase in production
A3	TA Luft organic substances class 2	6 times per year	100	at mass flows > 2kg/h	162.4	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 2	6 times per year	100	at mass flows > 2kg/h	454.9	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 2	6 times per year	100	at mass flows > 2kg/h	0.9	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 2	6 times per year	100	at mass flows > 2kg/h	218.1	mg/Nm3	yes	EN 13649:2001		
A3	TA Luft organic substances class 2	6 times per year	100	at mass flows > 2kg/h	22.8	mg/Nm3	yes	EN 13649:2001	400.9	Increase in production
A3	TA Luft inorganic dust particles class 3	6 times per year	150	at mass flows > 3kg/h	368.1	mg/Nm3	yes	EN 13649:2001		

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A3	TA Luft inorganic dust particles class 3	6 times per year	150	at mass flows > 3kg/h	1.7	mg/Nm3	yes	EN 13649:2001	
A3	TA Luft inorganic dust particles class 3	6 times per year	150	at mass flows > 3kg/h	1.1	mg/Nm3	yes	EN 13649:2001	
A3	TA Luft inorganic dust particles class 3	6 times per year	150	at mass flows > 3kg/h	1.1	mg/Nm3	yes	EN 13649:2001	
A3	TA Luft inorganic dust particles class 3	6 times per year	150	at mass flows > 3kg/h	1.3	mg/Nm3	yes	EN 13649:2001	Increase in production 2.7
A2-1	Total Organic Carbon (as C)	Quarterly	150		0.96	mg/Nm3	yes	EN 13649:2001	
A2-1	Total Organic Carbon (as C)	Quarterly	150		2	mg/Nm3	yes	EN 13649:2001	0.2 New parameter
A2-1	Dichloromethane (DCM)	Quarterly	20	at mass flows > 100g/h	0.3	mg/Nm3	yes	EN 13649:2001	
A2-1	Dichloromethane (DCM)	Quarterly	20	at mass flows > 100g/h	0.2	mg/Nm3	yes	EN 13649:2001	0.04 New parameter
A2-1	Ammonia (NH3)	Quarterly	30	at mass flows > 150g/h	0.15	mg/Nm3	yes	EN 13649:2001	
A2-1	Ammonia (NH3)	Quarterly	30	at mass flows > 150g/h	0.7	mg/Nm3	yes	EN 13649:2001	0.04 New parameter
A2-2	Total Organic Carbon (as C)	Quarterly when oper	100	at mass flows > 100g/h	9	mg/Nm3	yes	EN 13649:2001	45.1 New parameter
A2-2	Dichloromethane (DCM)	Quarterly	20	at mass flows > 100g/h	1.5	mg/Nm3	yes	EN 13649:2001	7.52 New parameter
A2-2	Ammonia (NH3)	Quarterly	30	at mass flows > 150g/h	1.5	mg/Nm3	yes	EN 13649:2001	7.52 New parameter

Note 1: Volumetric flow shall be included as a reportable parameter

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Continuous Monitoring		

4	Does your site carry out continuous air emissions monitoring? If yes please review your continuous monitoring data and report the required fields below in Table A2 and compare it to its relevant Emission Limit Value (ELV)	No	
5	Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below	SELECT	
6	Do you have a proactive service agreement for each piece of continuous monitoring equipment?	SELECT	
7	Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	SELECT	

Table A2: Summary of average emissions -continuous monitoring

Emission reference no:	Parameter/ Substance	ELV in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission	Annual maximum	Monitoring Equipment downtime (hours)	Number of ELV exceedences in current reporting year	Comments
	SELECT			SELECT	SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					
	SELECT				SELECT					

note 1: Volumetric flow shall be included as a reportable parameter.

Table A3: Abatement system bypass reporting table

[Bypass protocol](#)

Date*	Duration** (hours)	Location	Reason for bypass	Impact magnitude	Corrective action
27/06/2018	0.2	A2-2	High pressure in the header	No impact	Flow from regeneration cycle optimised
27/06/2018	0	A2-2	High pressure in the header	No impact	Changed to higher quality grade of calcium hydroxide New dosing control implemented to prevent overdosing of calcium hydroxide. Automatic dosing of anti-foam implemented Changed ammonia scrubbing to phosphoric acid
28/06/2018	0	A2-2	High pressure in the header	No impact	Changed to higher quality grade of calcium hydroxide New dosing control implemented to prevent overdosing of calcium hydroxide. Automatic dosing of anti-foam implemented Changed ammonia scrubbing to
29/06/2018	0.16	A2-2	High pressure in the header	No impact	Changed to higher quality grade of calcium hydroxide New dosing control implemented to prevent overdosing of calcium hydroxide. Automatic dosing of anti-foam implemented Changed ammonia scrubbing to

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29/06/2018	0.16	A2-2	High pressure in the header	No impact	Changed to higher quality grade of calcium hydroxide New dosing control implemented to prevent overdosing of calcium hydroxide. Automatic dosing of anti-foam implemented Changed ammonia scrubbing to
25/07/2018	0.16	A2-2	Trip of cryogenic condenser due to low level in Ammonia scrubber with removal of Nitric Acid	No impact	The sump will not be emptied while the process vent is live
03/08/2018	0	A2-2	Trip of cryogenic condenser due to low level switch in siphon caused by manual emptying of CO2 scrubber.	No impact	The sump will not be emptied while the process vent is live
10/08/2018	0.16	A2-2	High pressure due to ice formation	No impact	Changed switchover setting on condenser/recuperator from 50Mbar to 15Mbar
15/08/2018	0.05	A2-2	High pressure due to ice formation	No impact	Changed ammonia scrubbing to phosphoric acid
16/08/2018	0	A2-2	High pressure due to ice formation	No impact	Changed ammonia scrubbing to phosphoric acid
28/08/2018	0.16	A2-2	High pressure due to ice formation	No impact	Changed ammonia scrubbing to phosphoric acid
29/08/2018	0	A2-2	High pressure due to ice formation	No impact	The defrost timer set point on the condensers from increased from 15minutes to 60minutes. Heat tracing installed on the pipework
09/09/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed
19/09/2018	0	A2-2	Communication error on PLC	No impact	Cabling and panel replaced
25/09/2018	0	A2-2	High oxygen reading during calibration	No impact	Ammonia filter installed on O2 Analyser. Disabled the High Oxygen Alarm that trips the header while the O2 Analyser is in Calibration
29/09/2018	0	A2-2	High pressure due to ice formation	No impact	The defrost timer set point on the condensers was increased from 15minutes to 60 minutes. Heat tracing installed on the pipework between the outlet of the condensers and separators to ensure the pipework's temperature increases to above +20C to provide defrosting of ice in pipework.
02/10/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed
03/10/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed

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04/10/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed
12/10/2018	0	A2-2	High pressure due to ice formation	No impact	E-stop shrouded
21/11/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed
21/11/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed
22/11/2018	0	A2-2	Communication error on PLC	No impact	PLC connections upgraded
30/11/2018	0	A2-2	High pressure due to ice formation	No impact	Cyclone separators installed

* this should include all dates that an abatement system bypass occurred

** an accurate record of time bypass beginning and end should be logged on site and maintained for future Agency inspections please refer to bypass protocol link

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Solvent use and management on site

8 Do you have a total Emission Limit Value of direct and fugitive emissions on site? if yes please fill out tables A4 and A5

Yes

Table A4: Solvent Management Plan Summary
Total VOC Emission limit value

[Solvent regulations](#) Please refer to linked solvent regulations to complete table 5 and 6

Reporting year	Total solvent input on site (kg)	Total VOC emissions to Air from entire site (direct and fugitive)	Total VOC emissions as %of solvent input	Total Emission Limit Value (ELV) in licence or any revision therof	Compliance
2018	817654.91	107245.94	13%	15%	Yes
					SELECT

Table A5: Solvent Mass Balance summary

Solvent	(I) Inputs (kg)	(O) Outputs (kg)						
	(I) Inputs (kg)	Organic solvent emission in waste gases(kg)	Solvents lost in water (kg)	Collected waste solvent (kg)	Fugitive Organic Solvent (kg)	Solvent released in other ways e.g. by-passes (kg)	Solvents destroyed onsite through physical	Total emission of Solvent to air (kg)
Methanol	39426.41	506.79	0	710408.97	106739.15	0.14	0	107245.94
Ethanol	1027.24							
Isopropanol	78659							
Acetonitrile	163572							
DCM	387650							
Ethyl Acetate	563.6							
Acetic Acid	18232							
Toluene	1103.18							
DMF	117304							
TFA	7200.48							
DMA	2917							
Total	817654.91							

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER) Lic No: P0117-02 Year: 2018

Additional information	
1 Does your site have licensed emissions direct to surface water or direct to sewer? If yes please complete table W2 and W3 below for the current reporting year and answer further questions. If you do not have licensed emissions you <u>only</u> need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes Licensed emissions to sewer
2 Was it a requirement of your licence to carry out visual inspections on any surface water discharges or watercourses on or near your site? If yes please complete table W2 below summarising <u>only any evidence of contamination noted during visual inspections</u>	Yes No contamination noted during visual inspections at SW1 or SW2

Table W1 Storm water monitoring

Location reference	Location relative to site activities	PRTR Parameter	Licensed Parameter	Monitoring date	ELV or trigger level in licence or any revision thereof*	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Comments
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	
	SELECT	SELECT	SELECT			SELECT		SELECT	SELECT	

*trigger values may be agreed by the Agency outside of licence conditions

Table W2 Visual inspections-Please only enter details where contamination was observed.

Location Reference	Date of inspection	Description of contamination	Source of contamination	Corrective action	Comments
			SELECT		
			SELECT		

Licensed Emissions to water and /or wastewater(sewer)-periodic monitoring (non-continuous)

3 Was there any result in breach of licence requirements? If yes please provide brief details in the comment section of Table W3 below	Yes Additional information
4 Was all monitoring carried out in accordance with EPA guidance and checklists for Quality of Aqueous Monitoring Data Reported to the EPA? If no please detail what areas require improvement in additional information box	Yes External/Internal Lab Quality Assessment of results checklist

Table W3: Licensed Emissions to water and /or wastewater (sewer)-periodic monitoring (non-continuous)

Emission reference no:	Emission released to	Parameter/ SubstanceNote 1	Type of sample	Frequency of monitoring	Averaging period	ELV or trigger values in licence or any revision thereof ^{Note 2}	Licence Compliance criteria	Measured value	Unit of measurement	Compliant with licence	Method of analysis	Procedural reference source	Procedural reference standard number	Annual mass load (kg)	Comments
SE2	Wastewater/ Sewer	BOD	composite	Weekly	24 hour	500	All values < ELV	63	mg/L	yes	Other (Electrometry)	APHA / AWWA "Standard Methods"	SOP 113	121.19	
SE2	Wastewater/ Sewer	COD	composite	Weekly	24 hour	1000	All values < ELV	112	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	SOP 107	311.25	
SE2	Wastewater/ Sewer	Detergents (as MBAS)	composite	Weekly	24 hour	100	All values < ELV	0.98	mg/L	yes	Other (Solvent Extraction/Colorimetry)	APHA / AWWA "Standard Methods"	SOP 116	1.32	
SE2	Wastewater/ Sewer	Sulphate	composite	Weekly	24 hour	500	All values < ELV	147	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	SOP 119	433.61	
SE2	Wastewater/ Sewer	Suspended Solids	composite	Weekly	24 hour	200	All values < ELV	48	mg/L	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	SOP 106	140.75	
SE2	Wastewater/ Sewer	Chlorides (as Cl)	composite	Monthly	24 hour	100	All values < ELV	1679	mg/L	no (if no please enter details in comments box)	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	SOP 100	6579.31	High levels due to salt used in the purified water plant and low background water usage. Irish Water have agreed to increase the limit and a TA is in progress.

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AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)															
		Lic No:		P0117-02		Year		2018							
SE2	Wastewater/ Sewer	Total nitrogen	composite	Monthly	24 hour	-		1.12	mg/L		Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	SOP 104 & 151	1.2	
SE2	Wastewater/ Sewer	Total phosphorus	composite	Monthly	24 hour	-		4.28	mg/L		Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	SOP 166	8.35	
SE2	Wastewater/ Sewer	Pharmaceutical actives	composite	Annual	24 hour	-		<0.0008	mg/L		LC (Liquid Chromatography)	Manufacturer method	P800887 & P800847	<0.01	

Note 1: Volumetric flow shall be included as a reportable parameter

Note 2: Where Emission Limit Values (ELV) do not apply to your licence please compare results against EQS for Surface water or relevant receptor quality standards

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Continuous monitoring
 5 Does your site carry out continuous emissions to water/sewer monitoring? Additional information

If yes please summarise your continuous monitoring data below in Table W4 and compare it to its relevant Emission Limit Value (ELV)

6 Did continuous monitoring equipment experience downtime? If yes please record downtime in table W4 below

7 Do you have a proactive service contract for each piece of continuous monitoring equipment on site?

8 Did abatement system bypass occur during the reporting year? If yes please complete table W5 below

Table W4: Summary of average emissions -continuous monitoring

Emission reference no:	Emission released to	Parameter/ Substance	ELV or trigger values in licence or any revision thereof	Averaging Period	Compliance Criteria	Units of measurement	Annual Emission for current reporting year (kg)	% change +/- from previous reporting year	Monitoring Equipment downtime (hours)	Number of ELV exceedences in reporting year	Comments
SE2	Wastewater/Se wer	volumetric flow	5	1 hour	No flow value shall exceed the .specific limit	m3/hour			10	0	
SE2	Wastewater/Se wer	volumetric flow	80	24 hour	No flow value shall exceed the .specific limit	m3/day	7094.79	52%	10	0	
SE2	Wastewater/Se wer	pH	6 to 10		No pH value shall deviate from the .specified range	pH units			18	0	
SE2	Wastewater/Se wer	Temperature	42		No temperature value shall exceed the limit value.	degrees C			18	0	

note 1: Volumetric flow shall be included as a reportable parameter.

Table W5: Abatement system bypass reporting table

Date	Duration (hours)	Location	Resultant emissions	Reason for bypass	Corrective action*	Was a report submitted to the EPA?	When was this report submitted?
						SELECT	

*Measures taken or proposed to reduce or limit bypass frequency

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Bund testing

dropdown menu click to see options

Additional information

Are you required by your licence to undertake integrity testing on bunds and containment structures? If yes please fill out table B1 below listing all **new bunds and containment structures** on site, in addition to **all bunds which failed the integrity test-all bunding structures which failed including mobile bunds must be listed in the table below, please include all bunds outside the licenced testing period** (mobile bunds and chemstore included)

- 1 Please provide integrity testing frequency period
- 2 Does the site maintain a register of bunds, underground pipelines (including stormwater and foul), Tanks, sumps and containers? (containers refers to "Chemstore" type units and mobile bunds)
- 3 How many bunds are on site?
- 4 How many of these bunds have been tested within the required test schedule?
- 5 How many mobile bunds are on site?
- 6 Are the mobile bunds included in the bund test schedule?
- 7 How many of these mobile bunds have been tested within the required test schedule?
- 8 How many sumps on site are included in the integrity test schedule?
- 9 How many of these sumps are integrity tested within the test schedule?

Yes	
3 years	
Yes	
87	
45	
27	
Yes	
14	
2	
No	
SELECT	
Yes	

Please list any sump integrity failures in table B1

- 11 Do all sumps and chambers have high level liquid alarms?
- 12 If yes to Q11 are these failsafe systems included in a maintenance and testing programme?
- 13 Is the Fire Water Retention Pond included in your integrity test programme?

Table B1: Summary details of bund /containment structure integrity test

Bund/Containment structure ID	Type	Specify Other type	Product containment	Actual capacity	Capacity required*	Type of integrity test	Other test type	Test date	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
10090194	prefabricated		Oil, mixed Solvent, waste water	1140 Ltr	1000 Ltr	Hydraulic test		01-Aug-18	Yes	Pass		SELECT		
10090195	prefabricated		Oil, mixed Solvent, waste water	1140 Ltr	1000 Ltr	Hydraulic test		01-Aug-18	Yes	Pass				
10090196	prefabricated		Oil, mixed Solvent, waste water	1140 Ltr	1000 Ltr	Hydraulic test		01-Aug-18	Yes	Pass				
10090197	prefabricated		Oil, mixed Solvent, waste water	1140 Ltr	1000 Ltr	Hydraulic test		01-Aug-18	Yes	Pass				
10090434	prefabricated		Mixed solvents	421 Ltr	385 Ltr	Hydraulic test		08-May-18	Yes	Pass				
10090435	prefabricated		Mixed solvents	160 Ltr	110 Ltr	Hydraulic test		08-May-18	Yes	Pass				
10090436	prefabricated		Mixed solvents	1293 Ltr	1100 Ltr	Hydraulic test		08-May-18	Yes	Pass				
10090437	prefabricated		Mixed solvents	1293 Ltr	1100 Ltr	Hydraulic test		08-May-18	Yes	Pass				
10090438	prefabricated		Phosphoric Acid	2400 Ltr	2000 Ltr	Hydraulic test		07-May-18	Yes	Pass				
10090439	prefabricated		Calcium Hydroxide (Line Milk)	2400 Ltr	2000 Ltr	Hydraulic test		07-May-18	Yes	Pass				

Commentary

Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?

[bundling and storage guidelines](#)

- 16 Are channels/transfer systems to remote containment systems tested?
- 17 Are channels/transfer systems compliant in both integrity and available volume?

Yes	
Yes	CCTV inspection
No	

Pipeline/underground structure testing

Are you required by your licence to undertake integrity testing* on underground structures e.g. pipelines or sumps etc? If yes please fill out table 2 below listing all

- 1 underground structures and pipelines on site **which failed the integrity test and all which have not been tested within the integrity test period as specified**
 - 2 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing of all underground pipelines (as required under your licence)

Yes	
3 years	

Table B2: Summary details of pipeline/underground structures integrity test

Structure ID	Type system	Material of construction:	Does this structure have Secondary containment?	Type of secondary containment	Type integrity testing	Integrity reports maintained on site?	Results of test	Integrity test failure explanation <50 words	Corrective action taken	Scheduled date for retest	Results of retest (if in current reporting year)
FWMH	Storm	Mix (PVC & Concrete)	No		CCTV	Yes	Fail	Survey of the line revealed that some corrective actions are required.	Lines to be repaired and relined if necessary	Q2 2020	

Bund/Pipeline testing template				Lic No: P0117-02		Year: 2018			
DEMH	Foul	Mix (PVC & Concrete)	No	CCTV	Yes	Fail	Survey of the line revealed that some corrective actions are required.	Lines to be repaired and relined if necessary	Q3 2019
IEMH	Process	Mix (PVC & Concrete)	No	CCTV	Yes	Fail	Survey of the line revealed that some corrective actions are required.	Lines to be repaired and relined if necessary	Q3 2019

Please use commentary for additional details not answered by tables/ questions above

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Groundwater/Soil monitoring template	Lic No:	P0117-02	Year	2018
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			Comments
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	yes	
2	Are you required to carry out soil monitoring as part of your licence requirements?	yes	Every 10 years
3	Do you extract groundwater for use on site? If yes please specify use in comment section	no	
4	Do monitoring results show that groundwater generic assessment criteria such as GTVs or IGVs are exceeded or is there an upward trend in results for a substance? If yes, please complete the Groundwater Monitoring Guideline Template Report (link in cell G8) and submit separately through ALDER as a licensee return AND answer questions 5-12 below.	yes	Please provide an interpretation of groundwater monitoring data in the interpretation box below or if you require additional space please include a groundwater/contaminated land monitoring results interpretation as an additional section in this AER EC levels were above the lower TV limit (800µS/cm) at all monitoring locations across the site with the highest level in the most up hydraulic gradient well GW-1: this suggests that the source of contamination originates from off-site. Similarly, the chloride levels are well above the lower TV (24mg/l) for this parameter at all locations. Chloride levels also exceeded the upper TV for this parameter (187.5mg/l) at GW-1 and GW-3, with the highest level recorded in the most upgradient well GW-1 (360mg/l). The highest level of sulphates was also in the most up-hydraulic gradient well at GW-1 (134.9mg/l). The presence of sulphates in the water may explain the high levels of Total Hardness in groundwater as calcium sulphate (CaSO4) would be contributing to non-carbonate hardness.
5	Is the contamination related to operations at the facility (either current and/or historic)	no	
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	N/A	There is an elevated presence of EC, chloride and sulphates. High sulphate levels would generally be associated with leaching of concrete during and/or post construction works or due to the presence of gypsum.
7	Please specify the proposed time frame for the remediation strategy	N/A	
8	Is there a licence condition to carry out/update ELRA for the site?	no	The analytical results for heavy metals, TOC, TPH, PCBs, OCP, VOC, SVOC were all below the detection limit of the laboratory instrument used.
9	Has any type of risk assessment been carried out for the site?	yes	No deviating sample was recorded as part of the TIC analysis during this round of monitoring.
10	Has a Conceptual Site Model been developed for the site?	yes	
11	Have potential receptors been identified on and off site?	N/A	
12	Is there evidence that contamination is migrating offsite?	no	While some levels are elevated, based on the analysis at GW1, the source is off site

Table 1: Upgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/Substance	Methodology	Monitoring frequency	Maximum Concentration++	Average Concentration+	unit	GTV's*	IGV	Upward trend in pollutant concentration over last 5 years of monitoring data
24-Sep-18	GW1	Arsenic		Annual	<0.0025		mg/l	0.0075		no
24-Sep-18	GW1	Boron		Annual	0.031		mg/l	0.75		no
24-Sep-18	GW1	Cadmium		Annual	<0.0005		mg/l	0.00375		no
24-Sep-18	GW1	Chromium		Annual	<0.0015		mg/l	0.037		no
24-Sep-18	GW1	Copper		Annual	<0.007		mg/l	1.5		no
24-Sep-18	GW1	Lead		Annual	<0.005		mg/l	0.0075		no
24-Sep-18	GW1	Mercury		Annual	<0.001		mg/l	0.00075		no
24-Sep-18	GW1	Nickel		Annual	<0.002		mg/l	0.015		no
24-Sep-18	GW1	Selenium		Annual	<0.003		mg/l	-		no
24-Sep-18	GW1	Zinc		Annual	0.003		mg/l	0.075		no
24-Sep-18	GW1	Non Carbonate Hardness (CaCO3)		Annual	540		mg/l	-		data not available

Groundwater/Soil monitoring template			Lic No:	P0117-02	Year	2018		
24-Sep-18	GW1	Total Hardness (CaCO ₃)		Annual	537	mg/l	-	yes
24-Sep-18	GW1	Chloride(soluble)		Annual	360.7	mg/l	24 - 187.5	yes
24-Sep-18	GW1	Electro conductivity (Lab)		Annual	1868	µS/cm	800 - 1875	yes
24-Sep-18	GW1	pH (lab)		Annual	7.76	pH units	6.5 - 9.5	SELECT
24-Sep-18	GW1	Sulphate (Soluble)		Annual	134.9	mg/l	187.5	yes
24-Sep-18	GW1	Total Organic Carbon		Annual	<2	mg/l	-	no
24-Sep-18	GW1	Mineral Oil		Annual	<0.01	mg/l	0.01	no
24-Sep-18	GW1	DRO		Annual	<0.01	mg/l	<0.0075	no
24-Sep-18	GW1	PRO		Annual	<0.01	mg/l	<0.0075	no
24-Sep-18	GW1	Benzene		Annual	<0.0005	mg/l	0.00075	no
24-Sep-18	GW1	Toluene		Annual	<0.005	mg/l	0.525	no
24-Sep-18	GW1	Ethylbenzene		Annual	<0.001	mg/l	0.01	no
24-Sep-18	GW1	Xylene		Annual	<0.003	mg/l	0.01	no
24-Sep-18	GW1	Total PCBs		Annual	<0.0007	mg/l	0.00001	no
24-Sep-18	GW1	Organo-chlorinated Pesticides		Annual	<0.0025	mg/l	0.000375	no
24-Sep-18	GW1	VOCs		Annual	<0.005	mg/l	-	no
24-Sep-18	GW1	sVOCs		Annual	<0.1	mg/l	-	no

.+ where average indicates arithmetic mean

.++ maximum concentration indicates the maximum measured concentration from all monitoring results produced during the reporting year

Table 2: Downgradient Groundwater monitoring results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	IGV	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
24-Sep-18	GW2	Arsenic		Annual	<0.0025		mg/l	0.0075		no
24-Sep-18	GW2	Boron		Annual	0.062		mg/l	0.75		no
24-Sep-18	GW2	Cadmium		Annual	<0.0005		mg/l	0.00375		no
24-Sep-18	GW2	Chromium		Annual	<0.0015		mg/l	0.037		no
24-Sep-18	GW2	Copper		Annual	<0.007		mg/l	1.5		no
24-Sep-18	GW2	Lead		Annual	<0.005		mg/l	0.0075		no
24-Sep-18	GW2	Mercury		Annual	<0.001		mg/l	0.00075		no
24-Sep-18	GW2	Nickel		Annual	<0.002		mg/l	0.015		no
24-Sep-18	GW2	Selenium		Annual	<0.003		mg/l	-		no
24-Sep-18	GW2	Zinc		Annual	0.006		mg/l	0.075		no
24-Sep-18	GW2	Non Carbonate Hardness (CaCO ₃)		Annual	510		mg/l	-		data not available

Groundwater/Soil monitoring template			Lic No:	P0117-02	Year	2018	
24-Sep-18	GW2	Total Hardness (CaCO ₃)	Annual	520	mg/l	-	yes
24-Sep-18	GW2	Chloride (soluble)	Annual	105.8	mg/l	24 - 187.5	yes
24-Sep-18	GW2	Electro conductivity (Lab)	Annual	928	µS/cm	800 - 1875	yes
24-Sep-18	GW2	pH (lab)	Annual	7.61	pH units	6.5 - 9.5	data not available
24-Sep-18	GW2	Sulphate (Soluble)	Annual	90.6	mg/l	187.5	no
24-Sep-18	GW2	Total Organic Carbon	Annual	<2	mg/l	-	no
24-Sep-18	GW2	Mineral Oil	Annual	<0.01	mg/l	0.01	no
24-Sep-18	GW2	DRO	Annual	<0.01	mg/l	<0.0075	no
24-Sep-18	GW2	PRO	Annual	<0.01	mg/l	<0.0075	no
24-Sep-18	GW2	Benzene	Annual	<0.0005	mg/l	0.00075	no
24-Sep-18	GW2	Toluene	Annual	<0.005	mg/l	0.525	no
24-Sep-18	GW2	Ethylbenzene	Annual	<0.001	mg/l	0.01	no
24-Sep-18	GW2	Xylene	Annual	<0.003	mg/l	0.01	no
24-Sep-18	GW2	Total PCBs	Annual	<0.0007	mg/l	0.00001	no
24-Sep-18	GW2	Organo-chlorinated Pesticides	Annual	<0.0025	mg/l	0.000375	no
24-Sep-18	GW2	VOCs	Annual	<0.005	mg/l	-	no
24-Sep-18	GW2	sVOCs	Annual	<0.1	mg/l	-	no
24-Sep-18	GW3	Arsenic	Annual	<0.0025	mg/l	0.0075	no
24-Sep-18	GW3	Boron	Annual	0.035	mg/l	0.75	no
24-Sep-18	GW3	Cadmium	Annual	<0.0005	mg/l	0.00375	no
24-Sep-18	GW3	Chromium	Annual	<0.0015	mg/l	0.037	no
24-Sep-18	GW3	Copper	Annual	<0.007	mg/l	1.5	no
24-Sep-18	GW3	Lead	Annual	<0.005	mg/l	0.0075	no
24-Sep-18	GW3	Mercury	Annual	<0.001	mg/l	0.00075	no
24-Sep-18	GW3	Nickel	Annual	<0.002	mg/l	0.015	no
24-Sep-18	GW3	Selenium	Annual	<0.003	mg/l	-	no
24-Sep-18	GW3	Zinc	Annual	0.006	mg/l	0.075	no
24-Sep-18	GW3	Non Carbonate Hardness (CaCO ₃)	Annual	455	mg/l	-	data not available
24-Sep-18	GW3	Total Hardness (CaCO ₃)	Annual	492	mg/l	-	yes
24-Sep-18	GW3	Chloride (soluble)	Annual	319.9	mg/l	24 - 187.5	yes
24-Sep-18	GW3	Electro conductivity (Lab)	Annual	1512	µS/cm	800 - 1875	yes
24-Sep-18	GW3	pH (lab)	Annual	7.64	pH units	6.5 - 9.5	data not available

Groundwater/Soil monitoring template				Lic No:	P0117-02	Year	2018
24-Sep-18	GW3	Sulphate (Soluble)	Annual	105.5	mg/l	187.5	no
24-Sep-18	GW3	Total Organic Carbon	Annual	<2	mg/l	-	no
24-Sep-18	GW3	Mineral Oil	Annual	<0.01	mg/l	0.01	no
24-Sep-18	GW3	DRO	Annual	<0.01	mg/l	<0.0075	no
24-Sep-18	GW3	PRO	Annual	<0.01	mg/l	<0.0075	no
24-Sep-18	GW3	Benzene	Annual	<0.0005	mg/l	0.00075	no
24-Sep-18	GW3	Toluene	Annual	<0.005	mg/l	0.525	no
24-Sep-18	GW3	Ethylbenzene	Annual	<0.001	mg/l	0.01	no
24-Sep-18	GW3	Xylene	Annual	<0.003	mg/l	0.01	no
24-Sep-18	GW3	Total PCBs	Annual	<0.0007	mg/l	0.00001	no
24-Sep-18	GW3	Organo-chlorinated Pesticides	Annual	<0.0025	mg/l	0.000375	no
24-Sep-18	GW3	VOCs	Annual	<0.005	mg/l	-	no
24-Sep-18	GW3	sVOCs	Annual	<0.1	mg/l	-	no
<p>*please note exceedance of generic assessment criteria (GAC) such as a Groundwater Threshold Value (GTV) or an Interim Guideline Value (IGV) or an upward trend in results for a substance indicates that further interpretation of monitoring results is required. In addition to completing the above table, please complete the Groundwater Monitoring Guideline Template Report at the link provided and submit separately through ALDER as a licensee return or as otherwise instructed by the EPA.</p> <p style="text-align: right;">Groundwater monitoring template</p>							
<p>More information on the use of soil and groundwater standards/ generic assessment criteria (GAC) and risk assessment tools is available in the EPA published guidance (see Guidance on the Management of Contaminated Land and Groundwater at EPA Licensed Sites (EPA 2013) the link in G31)</p>							
<p>**Depending on location of the site and proximity to other sensitive receptors alternative Receptor based Water Quality standards should be used in addition to the GTV e.g. if the site is close to surface water compare to Surface Water Environmental Quality Standards (SWEQS), If the site is close to a drinking water supply compare results to the Drinking Water Standards (DWS)</p> <p style="text-align: right;"> Surface water EQS Groundwater regulations Drinking water (private supply) standards Drinking water (public supply) standards </p>							

Groundwater/Soil monitoring template Lic No: P0117-02 Year 2018

Table 3: Soil results

Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit
							SELECT
							SELECT

Where additional detail is required please enter it here in 200 words or less

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[Click here to access EPA guidance on Environmental Liabilities and Financial provision](#)

		Commentary	
1	ELRA initial agreement status	SELECT	Not required under P0117-02
2	ELRA review status	SELECT	
3	Amount of Financial Provision cover required as determined by the latest ELRA	Specify	
4	Financial Provision for ELRA status	SELECT	
5	Financial Provision for ELRA - amount of cover	Specify	
6	Financial Provision for ELRA - type	SELECT	
7	Financial provision for ELRA expiry date	Enter expiry date	
8	Closure plan initial agreement status	SELECT	
9	Closure plan review status	SELECT	
10	Financial Provision for Closure status	SELECT	
11	Financial Provision for Closure - amount of cover	Specify	
12	Financial Provision for Closure - type	SELECT	
13	Financial provision for Closure expiry date	Enter expiry date	

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Environmental Management Programme/Continuous Improvement Programme template		Lic No:	P0117-02	Year	2018
Highlighted cells contain dropdown menu click to view		Additional Information			
1	Do you maintain an Environmental Management System (EMS) for the site. If yes, please detail in additional information	Yes	IMIL maintain an EMS for the site on Scannell software system and are certified to ISO 14001		
2	Does the EMS reference the most significant environmental aspects and associated impacts on-site	Yes			
3	Does the EMS maintain an Environmental Management Programme (EMP) as required in accordance with the licence requirements	Yes			
4	Do you maintain an environmental documentation/communication system to inform the public on environmental performance of the facility, as required by the licence	Yes			

Environmental Management Programme (EMP) report					
Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Reduction of emissions to Wastewater	Reduce water used in washes on site	30	Review of washes for lyophilisation steps to challenge the number of washes. Washes to be removed are being currently reviewed	Section Head	Improved Environmental Management Practices
Waste reduction/Raw material usage efficiency	Reduce hazardous waste generated on site	30	Waste team established. Deep dive into waste generation on site. Some washes removed from waste stream, reduction in generation of waste in lyophilisation areas	Section Head	Reduced emissions
Additional improvements	Review waste analysis to optimise testing in terms of accuracy and turn around time	60	External partner identified. Change control raised to move testing to external partner.	Section Head	Improved Environmental Management Practices
Reduction of emissions to Air	Reduce fugative emissions	30	Review nitrogen blanketing in older areas of the site	Section Head	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Review of pipelines and flanges	20	Flange guards to be installed. Install high level alarms in all pump sumps and install cables back to BMS.	Section Head	Increased compliance with licence conditions

Noise monitoring summary report Lic No: P0117-02 Year 2018

- 1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table N1 noise summary below
- 2 Was noise monitoring carried out using the EPA Guidance note, including completion of the "Checklist for noise measurement report" included in the guidance note as table 6?
- 3 Does your site have a noise reduction plan?
- 4 When was the noise reduction plan last updated?
- 5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

[Noise Guidance note NG4](#)

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is site compliant with noise limits (day/evening/night)?
30/08/2018	Day	-	NSL1	-	46 - 47	-	-	No	SELECT	Plant noise dominated, road traffic noise was audible intermittent at time. Forklifts audible from adjacent facility (not IPSEN).	Yes
30/08/2018	Day	-	NSL2	-	47 - 49	-	-	No		Plant noise from boiler house dominated, road traffic noise was significant, intermittent at time. Forklifts occasional passing through the yard.	Yes
30/08/2018	Evening	-	NSL1	-	42	-	-	No		Plant noise from IPSEN and intermittent road traffic noise	Yes
30/08/2018	Evening	-	NSL2	-	44	-	-	No		Plant noise from boiler house and intermittent road traffic noise significant	Yes
30/08/2018	Night	-	NSL1	-	41 - 42	-	-	No		Plant noise from IPSEN and intermittent road traffic noise	Yes
30/08/2018	Night	-	NSL2	-	43 - 44	-	-	No		Plant noise from boiler house and intermittent road traffic noise significant.	Yes

*Please ensure that a tonal analysis has been carried out as per guidance note NG4. These records must be maintained onsite for future inspection

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	If tonal /impulsive noise was identified was 5dB penalty applied?	Comments (ex. main noise sources on site, & extraneous noise ex. road traffic)	Is <u>site</u> compliant with noise limits (day/evening/night)?
--------------------	-------------	--------------------------	---	------------------	------------------	------------------	-------------------	---------------------------------	---	--	---

If noise limits exceeded as a result of noise attributed to site activities, please choose the corrective action from the following options?

SELECT

** please explain the reason for not taking action/resolution of noise issues?
Any additional comments? (less than 200 words)

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Resource Usage/Energy efficiency summary

Lic No:

P0117-02

Year

2018

1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below

2 Is the site a member of any accredited programmes for reducing energy usage/water conservation such as the SEAI programme linked to the right? If yes please list them in additional information

3 Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information

Additional information

Q4 2018	
No	
SELECT	N/A

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	10515	11163	+23%	-14%
Total Energy Generated (MWHrs)	0	0		
Total Renewable Energy Generated (MWHrs)	0	0		
Electricity Consumption (MWHrs)	5364.8	5731.9	+23%	-13%
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)	0	0		
Light Fuel Oil (m3)	2	1	+23%	-59%
Natural gas (m3)	437544	461436	+23%	-14%
Coal/Solid fuel (metric tonnes)	0	0		
Peat (metric tonnes)	0	0		
Renewable Biomass	0	0		
Renewable energy generated on site	0	0		

* where consumption of energy can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

Water use	Water extracted		Production +/- % compared to previous reporting year**	Water Consumption +/- % vs overall site production*	Water Emissions		Water Consumption	
	Previous year m3/yr.	Current year m3/yr.			Volume Discharged back to environment(m ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:	
Groundwater	0	0						
Surface water	0	0						
Public supply	14887	14496	+23%	-21%	14332	0	0	
Recycled water	0	0						
Total	10939	14496	+23%	-21%	14332	0	0	

* where consumption of water can be compared to overall site production please enter this information as percentage increase or decrease compared to the previous reporting year.

** where site production information is available please enter percentage increase or decrease compared to previous year

	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	3020.27	0	1510.46	1501.13	8.68
Non-Hazardous (Tonnes)	119.77	0	0	119.77	0

Resource Usage/Energy efficiency summary Lic No: P0117-02 Year 2018

Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
Q4 2018	Energy Standard	Energy engineering standard to be put in place to ensure that cradle to grave costs are considered for any new plant.	energy audit	TBC	Q4 2019	Engineering	TBC	
Q4 2018	AHU demand	Review air change rates in cleanroom areas	energy audit	TBC	Q4 2019	Engineering	TBC	
Q4 2018	Energy team training	Energy Management team to be trained on energy analysing techniques	energy audit	TBC	Apr-19	Engineering	TBC	

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry) please complete the following information

	Unit ID	Unit ID	Unit ID	Unit ID	Station Total
Technology					
Primary Fuel					
Thermal Efficiency					
Unit Date of Commission					
Total Starts for year					
Total Running Time					
Total Electricity Generated (GWH)					
House Load (GWH)					
KWH per Litre of Process Water					
KWH per Litre of Total Water used on Site					

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Complaints and Incidents summary template Lic No: P0117-02 Year 2018

Complaints		Additional information
Have you received any environmental complaints in the current reporting year? If yes please complete summary details of complaints received on site in table 1 below		Yes

Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
15-Feb-18	Noise		Nuisance noise, visual impact	PA announcements turned off, rabbits rehomed, visual impact assessment completed	Complete	28-Sep-18	
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
	SELECT				SELECT		
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		1					
Total complaints closed during reporting year		1					
Balance of complaints end of reporting year		0					

Incidents		Additional information
Have any incidents occurred on site in the current reporting year? Please list all incidents for current reporting year in Table 2 below		Yes

*For information on how to report and what constitutes an incident [What is an incident](#)

Date of occurrence	Incident nature	Location of occurrence	Incident category*please refer to guidance	Receptor	Cause of incident	Other cause(please specify)	Activity in progress at time of incident	Communication	Occurrence	Corrective action<20 words	Preventative action <20 words	Resolution status	Resolution date	Likelihood of reoccurrence
11-Feb-18	Monitoring equipment offline	Licensed discharge point (SE2)	1. Minor	Sewer	Plant or equipment issues		Routine maintenance	EPA	New	New seal put in to prevent water ingress	New seal put in to prevent water ingress	Complete		Low
23-May-18	Breach of ELV	Licensed discharge point (SE2)	1. Minor	Sewer	Other (add details)	Licence limit for chloride not adequate for normal site operation	Normal activities	EPA	Recurring	TA for increase for chloride submitted	TA for increase for chloride submitted	Ongoing	Q2 2019	High
26-Jun-18	Other(abatement equipment off line)	Licensed discharge point (A2-1)	1. Minor	Air	Plant or equipment issues		Normal activities	EPA	Recurring	Process vent robustness measures	Process vent robustness measures	Complete	Q1 2019	Low

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Complaints and Incidents summary template													Lic No:		P0117-02		Year		2018	
23-Oct-18	Monitoring equipment offline	Licensed discharge point (SE2)	1. Minor	Sewer	Other (add details)	Electrical works in adjacent area	Construction	EPA	New	Electrical cabling appropriately terminated	Instruction given to electricians on terminations	Complete	Q4 2018	Low						
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT		SELECT		SELECT						
Total number of incidents current year															4					
Total number of incidents previous year															2					
% reduction/increase															50%					

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WASTE SUMMARY	Lic No:	P0117-02	Year	2018
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SECTION A- WASTE MANAGEMENT RECORD FOR WASTE TRANSFERRED OFF SITE

Please insert details of waste transferred off site in the adjoining Waste Management Record tab.

SECTION B- WASTE ACCEPTED ONTO SITE-TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES

1 Were any wastes accepted onto your site for recovery or disposal or treatment prior to recovery or disposal within the boundaries of your facility ?; (waste generated within your boundaries is to be captured through PRTR reporting)

No	Additional Information
----	------------------------

If yes please enter details in table 1 below

2 Did your site have any rejected consignments of waste in the current reporting year? If yes please give a brief explanation in the additional information

N/A	Additional Information
N/A	Additional Information

3 Was waste accepted onto your site that was generated outside the Republic of Ireland? If yes please state the quantity in tonnes in additional information

Table 1 Details of waste accepted onto your site for recovery, disposal or treatment (do not include wastes generated at your site, as these will have been reported in your PRTR workbook)

Licensed annual tonnage limit for your site (total tonnes/annum)	EWC code	Source of waste accepted	Description of waste accepted Please enter an accurate and detailed description - which applies to relevant EWC code European Waste Catalogue EWC codes	Quantity of waste accepted in current reporting year (tonnes)	Quantity of waste accepted in previous reporting year (tonnes)	Reduction/ Increase over previous year +/- %	Reason for reduction/ increase from previous reporting year	Packaging Content (%)- only applies if the waste has a packaging component	Disposal/Recovery or treatment operation carried out at your site and the description of this operation	Quantity of waste remaining on site at the end of reporting year (tonnes)	Comments -
	European Waste Catalogue EWC codes		European Waste Catalogue EWC codes								

SECTION C-TO BE COMPLETED BY ALL WASTE FACILITIES (waste transfer stations, Composters, Material recovery facilities etc) EXCEPT LANDFILL SITES

4 Is all waste processing infrastructure as required by your licence and approved by the Agency in place? If no please list waste processing infrastructure required onsite

SELECT	
SELECT	

5 Is all waste storage infrastructure as required by your licence and approved by the Agency in place? If no please list waste storage infrastructure required on site

SELECT	
SELECT	
SELECT	

6 Does your facility have relevant nuisance controls in place?

7 Do you have an odour management system in place for your facility? If no why?

8 Do you maintain a sludge register on site?

SECTION D-TO BE COMPLETED BY LANDFILL SITES ONLY

Table 2 Waste type and tonnage-landfill only

Waste types permitted for disposal	Authorised/licenced annual intake for disposal (tpa)	Actual intake for disposal in reporting year (tpa)	Remaining licensed capacity at end of reporting year (m3)	Comments

Table 3 General information-Landfill only

Area ID	Date landfilling commenced	Date landfilling ceased	Currently landfilling	Private or Public Operated	Inert or non-hazardous	Predicted date to cease landfilling	Licence permits asbestos	Is there a separate cell for asbestos?	Accepted asbestos in reporting year	Total disposal area occupied by waste	Lined disposal area occupied by waste	Unlined area	Comments on liner type
										SELECT UNIT	SELECT UNIT	SELECT UNIT	
Cell 8													

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WASTE SUMMARY Lic No: P0117-02 Year 2018

Table 4 Environmental monitoring-landfill only [Landfill Manual-Monitoring Standards](#)

Was meteorological monitoring in compliance with Landfill Directive (LD) standard in reporting year +	Was leachate monitored in compliance with LD standard in reporting year	Was Landfill Gas monitored in compliance with LD standard in reporting year	Was SW monitored in compliance with LD standard in reporting year	Have GW trigger levels been established	Were emission limit values agreed with the Agency (ELVs)	Was topography of the site surveyed in reporting year	Has the statement under SS3(A)(5) of WMA been submitted in reporting year	Comments

+ please refer to Landfill Manual linked above for relevant Landfill Directive monitoring standards

Table 5 Capping-Landfill only

Area uncapped*	Area with temporary cap	Area with final cap to LD Standard m2 ha, a	Area capped other	Area with waste that should be permanently capped to date under licence	What materials are used in the cap	Comments
SELECT UNIT	SELECT UNIT					

*please note this includes daily cover area

Table 6 Leachate-Landfill only

9 Is leachate from your site treated in a Waste Water Treatment Plant?

SELECT
SELECT

10 Is leachate released to surface water? If yes please complete leachate mass load information below

Volume of leachate in reporting year(m3)	Leachate (BOD) mass load (kg/annum)	Leachate (COD) mass load (kg/annum)	Leachate (NH4) mass load (kg/annum)	Leachate (Chloride) mass load kg/annum	Leachate treatment on-site	Specify type of leachate treatment	Comments

Please ensure that all information reported in the landfill gas section is consistent with the Landfill Gas Survey submitted in conjunction with PRTR returns

Table 7 Landfill Gas-Landfill only

Gas Captured&Treated by LFG System m3	Power generated (MW / KWh)	Used on-site or to national grid	Was surface emissions monitoring performed during the reporting year?	Comments
			SELECT	

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Waste Summary Continued

Please insert a copy of your Waste Management Record for waste transferred off site

Transferred Waste							
List of Waste (LoW)				Next Destination		Final Destination	
LoW Code	LoW Description	Classification	Quantity of waste Tonnes / year	Organisation	Waste Treatment Operation	Organisation	Waste Treatment Operation
06 01 05*	nitric acid and nitrous acid	Hazardous	2.78	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D09 - Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)
06 02 05*	other bases	Hazardous	0.99	Rilta Environmental Limited - W0192	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	SISAV - Sistema Integrado de Tratamento e Eliminacao de R	D09 - Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)
07 05 01*	aqueous washing liquids and mother liquors	Hazardous	589.70	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	ARF SA	D10 - Incineration on land
07 05 01*	aqueous washing liquids and mother liquors	Hazardous	1.07	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Abfall Verwertungs Gesellsch GmbH	D10 - Incineration on land
07 05 01*	aqueous washing liquids and mother liquors	Hazardous	764.64	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
07 05 01*	aqueous washing liquids and mother liquors	Hazardous	1004.00	Indaver Ireland Limited (Duleek) - W0167	R01 - Use principally as a fuel or other means to generate energy	-	

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07 05 03*	organic halogenated solvents, washing liquids and mother liquors	Hazardous	473.70	Indaver Ireland Ltd.	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	Richard Geiss GmbH	R02 - Solvent reclamation/regeneration
07 05 03*	organic halogenated solvents, washing liquids and mother liquors	Hazardous	22.50	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
07 05 04*	other organic solvents, washing liquids and mother liquors	Hazardous	0.25	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
07 05 13*	solid wastes containing hazardous substances	Hazardous	2.80	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Abfall Verwertungs Gesellsch.GmbH	D10 - Incineration on land
07 05 13*	solid wastes containing hazardous substances	Hazardous	11.34	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
13 01 13*	other hydraulic oils	Hazardous	0.37	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Abfall Verwertungs Gesellsch.GmbH	D10 - Incineration on land
13 01 13*	other hydraulic oils	Hazardous	1.93	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Hazardous	1.21	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Abfall Verwertungs Gesellsch.GmbH	D10 - Incineration on land
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Hazardous	6.01	Indaver Ireland Ltd.	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	Afvalstoffen Terminal Moerdijk B.V.	R01 - Use principally as a fuel or other means to generate energy

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15 01 10*	packaging containing residues of or contaminated by hazardous substances	Hazardous	4.17	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
15 01 10*	packaging containing residues of or contaminated by hazardous substances	Hazardous	0.18	Rilta Environmental Limited - W0192	R05 - Recycling/reclamation of other inorganic materials	Indaver Antwerpen NV	D10 - Incineration on land
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Hazardous	11.05	Indaver Ireland Ltd.	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	Afvalstoffen Terminal Moerdijk B.V.	R01 - Use principally as a fuel or other means to generate energy
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Hazardous	16.41	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Abfall Verwertungs Gesellsch.GmbH	D10 - Incineration on land
15 02 02*	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances	Hazardous	56.95	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
16 02 11*	Non-household waste fridges and freezers and other devices containing HCFC, HFC	Hazardous	0.67	KMK Metals Recycling Limited - W0113	R04 - Recycling/reclamation of metals and metal compounds	-	
16 02 13* E	Non-household other waste electrical and electronic equipment, hazardous	Hazardous	2.05	KMK Metals Recycling Limited - W0113	R04 - Recycling/reclamation of metals and metal compounds	-	
16 03 03*	inorganic wastes containing hazardous substances	Hazardous	36.42	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
16 03 05*	organic wastes containing hazardous substances	Hazardous	0.09	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Abfall Verwertungs Gesellsch.GmbH	D10 - Incineration on land
16 03 05*	organic wastes containing hazardous substances	Hazardous	0.05	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land

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16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals	Hazardous	0.39	Indaver Ireland Ltd.	D15 - Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage, pending collection, on the site where the waste is produced)	Indaver Antwerpen NV	D10 - Incineration on land
16 05 07*	discarded inorganic chemicals consisting of or containing hazardous substances	Hazardous	2.58	Rilta Environmental Limited - W0192	R13 - Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage, pending collection, on the site where the waste is produced)	Revatech S.A	R05 - Recycling/reclamation of other inorganic materials
16 10 01*	aqueous liquid wastes containing hazardous substances	Hazardous	4.90	Rilta Environmental Limited - W0192	D09 - Physico-chemical treatment not specified elsewhere in this Annex which results in final compounds or mixtures which are discarded by means of any of the operations numbered D 1 to D 12 (e.g. evaporation, drying, calcination, etc.)	-	
18 01 03*	wastes whose collection and disposal is subject to special requirements in order to prevent infection	Hazardous	0.99	SRCL Limited (Kylemore Road) trading as Eco-Safe Systems Ltd, Allied Industrial Estate, Kylemore Road, D10 - W0054	R03 - Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes)	-	
20 01 21*	Household waste fluorescent lamps and other mercury containing waste	Hazardous	0.08	Irish Lamp Recycling Company Ltd.	R05 - Recycling/reclamation of other inorganic materials	-	

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