

**Facility Information Summary**

AER Reporting Year	2018
Licence Register Number	P0019-02
Name of site	Amgen Technology (Ireland) UC
Site Location	Pottery Road, Dun Laoghaire, Co. Dublin
NACE Code	2120
Class/Classes of Activity	5.16
National Grid Reference (6E, 6 N)	(-6.14958; 53.2718)

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.**

Amgen Technology (Ireland) UC, specialises in secondary manufacturing activities: formulation, fill and packaging. Dependant upon product demand, the company operates a three cycle shift, 5 days a week 24 hours. Amgen Technology (Ireland) UC employs approximately 450 people at its Dublin facility. The manufacturing profile for the site varied in 2018, where one new product was introduced throughout the year. The site was 100% compliant with all the conditions of the sites IE Licence in 2018. The emission trends for effluent varied where some increased and some decreased for the year but overall, the parameters were compliant and represented a very small percentage of the emission limit values. The volume of non hazardous waste increased in 2018, mainly due to significant site upgrade works, which are due to be completed in April 2019. One noise complaint which related to construction activities was actioned upon immediately and closed. In accordance with the site IE Licence, an Environmental Management Plan is maintained which details a number of environmental sustainability projects. Certification to ISO 50001 was maintained in 2018.

**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	Date
Group/Facility manager <small>(or nominated, suitably qualified and experienced deputy)</small>	28 MAR 2017

Considered a copy of a site specific report for purposes only.  
 No further action required for any other site.

**AIR-summary template** Lic No: P0019-02 Year 2018

Answer all questions and complete all tables where relevant

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 do not need to complete the tables

Additional information	
Yes	There are 2 major emission points on site (Emission Point No's: A1-1 and A1-2). It is a requirement of the Sites IE Licence to conduct monitoring on these emission points on a biannual basis. The site also has a number of minor emission points (e.g. emissions from emergency generators and laboratory fumehoods), there is no requirement in the site IE Licence to conduct monitoring at the minor emission points.

**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	In 2018, monitoring of emissions from A1-1 and A1-2 was conducted by Exova Catalyst on a biannual basis.
-----	--

**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
A1-1	Nitrogen oxides (NOx/NO2)	Biannual	200mg/m <sup>3</sup>	No 30min mean can exceed the ELV	57.43	mg/Nm3	yes	EN 14792:2005	1701	Mass load of Nox decreased by 7%
A1-1	Nitrogen oxides (NOx/NO2)	Biannual	200mg/m <sup>3</sup>	No 30min mean can exceed the ELV	73.7	mg/Nm3	yes	EN 14792:2005	as above	
A1-2	Nitrogen oxides (NOx/NO2)	Biannual	200mg/m <sup>3</sup>	No 30min mean can exceed the ELV	73.7	mg/Nm3	yes	EN 14792:2005	as above	
A1-2	Nitrogen oxides (NOx/NO2)	Biannual	200mg/m <sup>3</sup>	No 30min mean can exceed the ELV	92.67	mg/Nm3	yes	EN 14792:2005	as above	
A1-1	volumetric flow	Biannual	9,200m <sup>3</sup> /hr; 220,800m <sup>3</sup> /day	100 % of values < ELV	2705	Nm3/hour	yes	OTH: EN 16911-1	N/A	
A1-1	volumetric flow	Biannual	9,200m <sup>3</sup> /hr; 220,800m <sup>3</sup> /day	100 % of values < ELV	2617	Nm3/hour	yes	OTH: EN 16911-1	N/A	
A1-2	volumetric flow	Biannual	9,200m <sup>3</sup> /hr; 220,800m <sup>3</sup> /day	100 % of values < ELV	2201	Nm3/hour	yes	OTH: EN 16911-1	N/A	
A1-2	volumetric flow	Biannual	9,200m <sup>3</sup> /hr; 220,800m <sup>3</sup> /day	100 % of values < ELV	2882	Nm3/hour	yes	OTH: EN 16911-1	N/A	

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

<b>AIR-summary template</b>	Lic No: P0019-02	Year: 2018
<b>Continuous Monitoring</b>		

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	N/A	
6 Do you have a proactive service agreement for each piece of continuous monitoring equipment?	N/A	
7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below	N/A	

**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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	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
N/A	N/A	N/A	N/A	N/A	N/A

\* 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

For inspection purposes only. Consent of copyright owner required for any other use.



		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 only need to complete table W1 and or W2 for storm water analysis and visual inspections	Yes	All final effluent is emitted through EPA emission point SE1. All stormwater is emitted through EPA emission point SW1.
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 only any evidence of contamination noted during visual inspections	Yes	A visual assessment of the stormwater discharge is conducted daily. In 2018, there was no evidence of contamination noted during visual inspection.

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
SW1	onsite	N/A	COD	Jan-18	N/A	All values < ELV	13.25	mg/L	Yes	Flow of stormwater leaving the site is not measured therefore annual mass load cannot be calculated.
SW1	onsite	N/A	COD	Feb-18	N/A	All values < ELV	15.4	mg/L	Yes	
SW1	onsite	N/A	COD	Mar-18	N/A	All values < ELV	10	mg/L	Yes	
SW1	onsite	N/A	COD	Apr-18	N/A	All values < ELV	10.25	mg/L	Yes	
SW1	onsite	N/A	COD	May-18	N/A	All values < ELV	19.4	mg/L	Yes	
SW1	onsite	N/A	COD	Jun-18	N/A	All values < ELV	10.5	mg/L	Yes	
SW1	onsite	N/A	COD	Jul-18	N/A	All values < ELV	17	mg/L	Yes	
SW1	onsite	N/A	COD	Aug-18	N/A	All values < ELV	11.2	mg/L	Yes	
SW1	onsite	N/A	COD	Sep-18	N/A	All values < ELV	10.67	mg/L	Yes	
SW1	onsite	N/A	COD	Oct-18	N/A	All values < ELV	10	mg/L	Yes	
SW1	onsite	N/A	COD	Nov-18	N/A	All values < ELV	10	mg/L	Yes	
SW1	onsite	N/A	COD	Dec-18	N/A	All values < ELV	10	mg/L	Yes	

\*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
N/A	N/A	N/A	N/A	N/A	N/A
			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	No	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	All final effluent and stormwater analyses are completed by Bord na Mona, Newbridge, Co. Kildare. Toxicity monitoring of the final effluent was conducted by Shannon Aquatic Toxicity Laboratory, Shannon, Co. Clare.

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 <sup>2</sup>	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
SE1	Wastewater/Se wer	COD	composite	Monthly	Monthly	270kg/day; 600mg/l	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	30	mg/L	yes	Digestion + Spectrophotometry	APHA / AWWA "Standard Methods"	Method 5220D	1613	Change in mass emission from 2017 is 12%.
SE1	Wastewater/Se wer	BOD	composite	Monthly	Monthly	135kg/day; 300mg/l	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	5	mg/L	yes	Other (TCMP Nitrification Inhibition)	APHA / AWWA "Standard Methods"	Method 5210B	298	Change in mass emission from 2017 is 16%.
SE1	Wastewater/Se wer	Suspended Solids	composite	Monthly	Monthly	180kg/day; 400mg/l	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	15	mg/L	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	Method 2540D	716	Change in mass emission from 2017 is 23%
SE1	Wastewater/Se wer	Sulphate	composite	Monthly	Monthly	225kg/day; 500mg/l	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	45	mg/L	yes	Ion Chromatography	APHA / AWWA "Standard Methods"	Method 4110B	2395	Change in mass emission from 2017 is 40%
SE1	Wastewater/Se wer	Fats, Oils and Greases	composite	Monthly	Monthly	90kg/day; 200mg/l	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	2	mg/L	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	Method 5220B	99	Change in mass emission from 2017 is 67%

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)														Lic No:	P0019-02	Year	2018
SE1	Wastewater/Se wer	Ortho-phosphate (as PO4)	composite	Monthly	Monthly	22.5kg/day; 50mg/l	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	2	mg/L	yes	Ion Chromatography	APHA / AWWA "Standard Methods"	Method 4500-PE	129	Change in mass emission from 2017 is 75%		
SE1	Wastewater/Se wer	Chlorides (as Cl)	composite	Monthly	Monthly	N/A	N/A	280	mg/L	yes	Ion Chromatography	APHA / AWWA "Standard Methods"	Method 4500-CL-E	15703	Change in mass emission from 2017 is 35%. Effluent is discharged to Local Authority Sewer - EQS is not available.		
SE1	Wastewater/Se wer	Total nitrogen	composite	Monthly	Monthly	N/A	N/A	2	mg/L	yes	Digestion + Spectrophotometry	APHA / AWWA "Standard Methods"	ENV 12260:2003	84	Change in mass emission from 2017 is 51%. Effluent is discharged to Local Authority Sewer - EQS is not available.		
SE1	Wastewater/Se wer	Total phosphorus	composite	Monthly	Monthly	N/A	N/A	3	mg/L	yes	Digestion + Spectrophotometry	APHA / AWWA "Standard Methods"	Method 4500-PB & Hach Method 8190	146	Change in mass emission from 2017 is 43%. Effluent is discharged to Local Authority Sewer - EQS is not available.		
SE1	Wastewater/Se wer	Volatile organic compounds (as TOC)	composite	Quarterly	Quarterly	N/A	N/A	0.5	mg/L	yes	GC (Gas Chromatography)	US EPA	USEPA VOC's Method D3695-95	27	Change in mass emission from 2017 is 22%. Effluent is discharged to Local Authority Sewer - EQS is not available.		
SE1	Wastewater/Se wer	Volatile organic compounds (as TOC)	composite	Quarterly	Quarterly	N/A	N/A	0.5	mg/L	yes	GC (Gas Chromatography)	US EPA	USEPA VOC's Method D3695-95	N/A	N/A		
SE1	Wastewater/Se wer	Volatile organic compounds (as TOC)	composite	Quarterly	Quarterly	N/A	N/A	0.5	mg/L	yes	GC (Gas Chromatography)	US EPA	USEPA VOC's Method D3695-95	N/A	N/A		
SE1	Wastewater/Se wer	30min EC <sub>50</sub> to <i>Vibrio fischeri</i>	composite	Annual	Annual	10TU	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	<2.2	NTU	yes	Toxicity Analysis	ISO	ISO 11348-3: 2007	N/A	N/A		
SE1	Wastewater/Se wer	48h LC <sub>50</sub> to <i>Tisbe battagliai</i>	composite	Annual	Annual	10TU	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	<3.1	NTU	yes	Toxicity Analysis	ISO	ISO 14669:1999	N/A	N/A		

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

**Continuous monitoring**

Does your site carry out continuous emissions to water/sewer monitoring?

5

Additional Information	
Yes	Emissions from SE1 (final effluent) is continuously monitored for temperature, pH and flow. Emissions from SW1 (stormwater discharge) is continuously monitored for pH.

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

No	
Yes	On-site Engineering
No	

**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
SE1	Wastewater/Se wer	Temperature	42°C	30 minutes	No temperature value shall exceed the limit value	degrees C	18.97	12%	0	0	As the parameter is temperature, the annual mass emission for the year is reported in °C rather than kg. The average temperature for the year is reported.
SE1	Wastewater/Se wer	pH	6-10pH	Flow Proportional	No pH value shall deviate from the specified range	pH units	7.69	2%	0	0	As the parameter is pH, the annual mass emission for the year is reported in pH units rather than kg. The average pH for the year is reported.
SE1	Wastewater/Se wer	volumetric flow	450m <sup>3</sup> /day	24 hour	No flow value shall exceed the specific limit	m3/day	54,728,000	18%	0	0	
SW1	Water	pH	N/A	30 minutes	N/A	pH units	7.56	-1%	0	0	As the parameter is pH, the annual mass emission for the year is reported in pH units rather than kg. The average pH for the year is reported.

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?
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*Measures taken or proposed to reduce or limit bypass frequency

For inspection purposes only. Consent of copyright owner required for any other use.

**Bund testing** dropdown menu click to see options

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

Additional information	
Yes	No bunds failed a water integrity test in 2018.
3 years	
Yes	
25	
25	
0	
N/A	
N/A	
4	
4	
Yes	
Yes	
Yes	

**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)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	SELECT					SELECT			SELECT	SELECT		SELECT		

\* Capacity required should comply with 25% or 110% containment rule as detailed in your licence  
Has integrity testing been carried out in accordance with licence requirements and are all structures tested in line with BS8007/EPA Guidance?  
15 line with BS8007/EPA Guidance?  
16 Are channels/transfer systems to remote containment systems tested?  
17 Are channels/transfer systems compliant in both integrity and available volume?

Commentary	
Yes	
N/A	
N/A	

**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 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**

1  
2 Please provide integrity testing frequency period  
\*please note integrity testing means water tightness testing for process and foul pipelines (as required under your licence)

Additional information	
Yes	No underground pipework failed an integrity test in 2018.
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 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)
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Consent of copyright owner required for any other use. For inspection purposes only.

<b>Groundwater/Soil monitoring template</b>	Lic No: P0019-02	Year 2018
---	------------------	-----------

			Comments	
1	Are you required to carry out groundwater monitoring as part of your licence requirements?	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 interpretaion as an additional section in this AER	
2	Are you required to carry out soil monitoring as part of your licence requirements?	no		
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 <a href="#">Groundwater monitoring template</a>	yes	<p>In accordance with Schedule C.7 of the sites IE Licence, groundwater monitoring was conducted on five groundwater monitoring wells at the site (BH201, BH205, BH209, BH305 and BH307) in May and October 2018. As limits have not being set for parameters in the sites IE Licence, the results were compared to the EPA Interim Guideline Values (IGV's).</p> <p>From the monitoring carried out in May 2018, electrical conductivity levels at locations were below the GTV. Ammoniacal nitrogen concentrations were recorded above the IGV in BH 201, BH209 and BH305. Chloride concentrations were recorded above the GTV in BH201, BH205, BH209 and BH307.</p> <p>Concentrations of trichloroethylene was above the GTV's at borehole BH209. Vinyl chloride was above the GTV at BH201. All other parameters measured in May 2018 were within the IGV for groundwater.</p> <p>From the monitoring conducted in October 2018, ammoniacal nitrogen was recorded above the IGV in BH205 and BH209. Chloride concentrations were recorded above the GTV at BH201 and BH307. Concentrations of trichloroethylene were above the GTV's at boreholes BH209 where vinyl chloride exceeded the GTV in BH201. All other parameters measured were within the IGV for groundwater.</p>	
5	Is the contamination related to operations at the facility (either current and/or historic)	yes		Historic
6	Have actions been taken to address contamination issues? If yes please summarise remediation strategies proposed/undertaken for the site	yes		Long term remediation strategy has been agreed with the EPA and is being implemented with close oversight by the Agency.
7	Please specify the proposed time frame for the remediation strategy	on-going		
8	Is there a licence condition to carry out/update ELRA for the site?	yes		
9	Has any type of risk assessment been carried out for the site?	yes		
10	Has a Conceptual Site Model been developed for the site?	yes		
11	Have potential receptors been identified on and off site?	yes		
12	Is there evidence that contamination is migrating offsite?	no		

**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
May & Oct 2018	BH305	pH	pH electrode	Biannually	7.7	7.3	pH units	N/A	>6.5 & <9.5	no
		COD	Standard Method	Biannually	7	7	mg/l	N/A	N/A	no
		Nitrate	Standard Method	Biannually	22	15	mg/l	37.5	25	no
		Total Ammonia	Standard Method	Biannually	0.3	0.27	mg/l	N/A	(0.15 (as amminium)	no
		Total Nitrogen	Standard Method	Biannually	10	9	mg/l	N/A	N/A	no
		Conductivity	Standard Method	Biannually	1236	1213	uS/cm	>800 & <1875	1000	no
		Chloride	Standard Method	Biannually	43	42	mg/l	187.5	30	no
		Trichloroethylene	GC-MS	Biannually	3	3	ug/l	7.5	70	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**

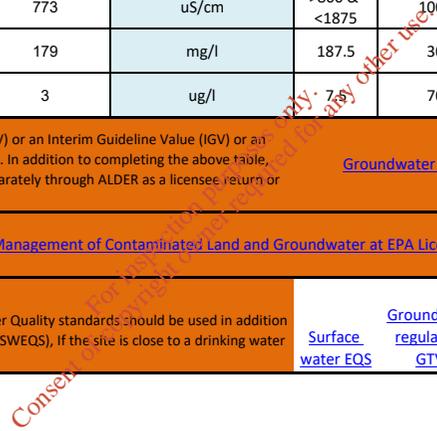
Date of sampling	Sample location reference	Parameter/ Substance	Methodology	Monitoring frequency	Maximum Concentration	Average Concentration	unit	GTV's*	IGV	Upward trend in yearly average pollutant concentration over last 5 years of monitoring data
May & Oct 2018	BH205	pH	pH electrode	Biannually	7.7	7.6	pH units	N/A	>6.5 & <9.5	no
		COD	Standard Method	Biannually	28	21	mg/l	N/A	N/A	no
		Nitrate	Standard Method	Biannually	3	1	mg/l	37.5	25	no
		Total Ammonia	Standard Method	Biannually	0.09	0.06	mg/l	N/A	(0.15 (as ammonium))	no
		Total Nitrogen	Standard Method	Biannually	4	3	mg/l	N/A	N/A	no
		Conductivity	Standard Method	Biannually	822	773	uS/cm	>800 & <1875	1000	no
		Chloride	Standard Method	Biannually	245	179	mg/l	187.5	30	no
		Trichloroethylene	GC-MS	Biannually	3	3	ug/l	7.5	70	no

\*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. [Groundwater monitoring template](#)

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 on the Management of Contaminated Land and Groundwater at EPA Licensed Sites \(EPA 2013\)](#). guidance (see the link in G31).

\*\*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)

[Groundwater regulations \(private supply\)](#) [Drinking water \(public supply\) standards](#) [Interim Guideline Values \(IGV\)](#)  
[Surface water EQS](#) [GTV's](#) [standards](#) [standards](#)



**Table 3: Soil results**

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

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

For inspection purposes only.  
Consent of copyright owner required for any other use.

<b>Environmental Liabilities template</b>	Lic No:	P0019-02	Year	2018
---	---------	----------	------	------

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

		Commentary
1	ELRA initial agreement status	Submitted and agreed by EPA
2	ELRA review status	Review required and completed
3	Amount of Financial Provision cover required as determined by the latest ELRA	€ 480,000
4	Financial Provision for ELRA status	Submitted and agreed by EPA
5	Financial Provision for ELRA - amount of cover	€ 480,000
6	Financial Provision for ELRA - type	Other please specify
7	Financial provision for ELRA expiry date	Enter expiry date
8	Closure plan initial agreement status	Closure plan submitted and agreed by EPA
9	Closure plan review status	Review required and completed
10	Financial Provision for Closure status	Submitted and agreed by EPA
11	Financial Provision for Closure - amount of cover	€ 645,000.00
12	Financial Provision for Closure - type	Other please specify
13	Financial provision for Closure expiry date	Enter expiry date

The ELRA is currently being updated and will be submitted to the Agency prior to June 2019. The details provided below are from the current submitted

Parent company guarantee - Amgen Inc.

N/A

Update submitted to the Agency in July 2015. Awaiting approval of report.

Parent company guarantee - Amgen Inc.

N/A

Copyright of EPA for inspection purposes only; not for any other use.

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	P0019-02	Year	2018
Highlighted cells contain dropdown menu click to view		Additional Information			
1	Do you maintain an Environmental Mangement System (EMS) for the site. If yes, please detail in additional information	Yes	The structure of the management system can be described as comprising of six key elements aimed at continuous improvement strategy. 1) Organisational & Personnel - roles and responsibilities, training awareness & procedures; 2) Identify Hazard - identification of hazards and implementation of proper controls; 3) Operational Controls - documented procedures and work instructions; 4) Planning for Emergencies - documented Emergency Response Procedure; 5) Monitoring Performance - evaluated performance of the site against EHS goals; 6) Audit & Review		
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
Energy Efficiency/Utility conservation	Destratification in the Warehouse HVAC Load	30% Complete	Identified low power de-stratification fans, which will allow larger AHU/ supply fans to be shut down. Approval given to proceed with install.	Section Head	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Lighting controls PM2 & PM3 interstitials	60% complete	Unoccupied set back of lighting in low occupancy areas --progressing depending on routine change-outs	Section Head	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Chilled water optimisation	100% Complete	Obtain 10% reduction in demand side for chilled water by: reduce the system pressure; rebalance one index branch; potentially coil changes; PICV valve installations & load transfers to glycol.	Section Head	Improved Environmental Management Practices
Additional improvements	Sustainability Awareness Promotion (new 2019)	20% complete	Increase environmental awareness of colleagues on site through a Sustainability Awareness Promotion week.	Section Head	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0019-02	Year	2018
Waste reduction/Raw material usage efficiency	Increase recycling and recovery on site	75% Complete	generated on site and identify and implement suitable opportunities to reduce the total volume of waste generated on site and where that is not possible, to divert waste to appropriate recovery or recycling options. Canteen waste optimised - composting has increased greatly (>40Tonne) where coffee cups and takeaway trays are all now biodegradable.	Section Head		Improved Environmental Management Practices	
Energy Efficiency/Utility conservation	Implement data analytics to monitor operating equipment continuously for better information to maintenance personnel.	100% Complete	Implement SAIF / Amgen Rhode Island program remotely to analyse ADL data continuously	Section Head		Improved Environmental Management Practices	
Energy Efficiency/Utility conservation	Upgrade chilled water infrastructure	90% Complete	Upgrading 5.6MW chiller to CoP=9 from CoP=6.5 -- capital project. Since January 2018, 7 low efficiency chillers removed and 5 new chillers installed.	Section Head		Improved Environmental Management Practices	
Waste reduction/Raw material usage efficiency	Eliminate single use plastics from the canteen areas	20% complete	Identify opportunities for eliminating the use of single use plastics in the canteen areas e.g. plastic bottles of water are replaced with aluminium cans of water, elimination of plastic straws.	Section Head		Improved Environmental Management Practices	
Energy Efficiency/Utility conservation	Reduction in HVAC in Personnel Support Facility.	30% Complete	HVAC in Personnel Support Facility, set back out of hours and fresh air plenum mods.	Section Head		Improved Environmental Management Practices	

For internal use only. Consent of copyright owner required for reproduction.

## Noise monitoring summary report

Lic No: P0019-02

Year

2018

1 Was noise monitoring a licence requirement for the AER period?

If yes please fill in table N1 noise summary below

Yes

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?

[Noise Guidance note NG4](#)

Yes

3 Does your site have a noise reduction plan

No

4 When was the noise reduction plan last updated?

N/A

5 Have there been changes relevant to site noise emissions (e.g. plant or operational changes) since the last noise survey?

No

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise location (on site)	Noise sensitive location -NSL (if applicable)	LA <sub>eq</sub>	LA <sub>90</sub>	LA <sub>10</sub>	LA <sub>max</sub>	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)?
9th Sept 2018	Daytime	B1	Yes	46	42	48	70	No	N/A	Traffic off site. Trees rustling, birds, neighbouring estate, plant barely audible.	Yes
9th Sept 2018	Daytime	B2	Yes	44	40	46	59	No	N/A	Traffic off site. Trees rustling, birds, neighbouring estate, plant barely audible.	Yes
9th Sept 2018	Daytime	B3	Yes	43	37	46	61	No	N/A	Distant traffic, birds and trees rustling. Low level steady plant barely audible.	Yes
9th Sept 2018	Daytime	B4	Yes	48	44	50	49	No	N/A	Distant traffic. Noise from adjoining garden centre. Plant barely audible.	Yes
9th Sept 2018	Daytime	B5	Yes	49	46	50	73	No	N/A	Distant traffic. Neighbouring construction site. Amgen plant not audible.	Yes
9th Sept 2018	Daytime	B6	Yes	59	48	63	84	No	N/A	Traffic Pottery Road. Construction noise adjoining site. Amgen plant not audible	Yes
9th Sept 2018	Daytime	B7	Yes	58	46	63	74	No	N/A	Traffic Pottery Road. Trees rustling and birds. Amgen plant not audible.	Yes
9th Sept 2018	Daytime	B8	Yes	59	47	63	73	No	N/A	Traffic Pottery Road. Trees rustling and birds. Amgen plant not audible.	Yes
8th Sept 2018	Evening	B1	Yes	42	40	44	58	No	N/A	Distant traffic. Conversation from adjoining housing development. Low level steady plant noise.	Yes

8th Sept 2018	Evening	B2	Yes	39	37	41	55	No	N/A	Distant traffic. Low level steady plant noise.	Yes
8th Sept 2018	Evening	B3	Yes	38	36	39	55	No	N/A	Distant traffic. Low level steady plant noise.	Yes
8th Sept 2018	Evening	B4	Yes	40	39	40	53	No	N/A	Distant traffic. Low level steady plant noise.	Yes
8th Sept 2018	Evening	B5	Yes	35	32	36	65	No	N/A	Distant traffic. Low level steady plant audible in traffic lulls.	Yes
8th Sept 2018	Evening	B6	Yes	52	41	56	68	No	N/A	Traffic Pottery Road. Trees rustling. Birds. Plant not audible.	Yes
8th Sept 2018	Evening	B7	Yes	55	43	60	88	No	N/A	Traffic Pottery Road. Trees rustling. Birds. Plant barely audible during traffic lulls.	Yes
8th Sept 2018	Evening	B8	Yes	55	43	60	70	No	N/A	Traffic Pottery Road. Trees rustling. Plant not audible.	Yes
8th/9th Sept 2018	Night - time	B1	Yes	40	39	42	62	No	N/A	Traffic distant and local. Plant barely audible.	Yes
8th/9th Sept 2018	Night - time	B2	Yes	37	35	39	52	No	N/A	Distant traffic. Low level steady plant noise, barely audible.	Yes
8th/9th Sept 2018	Night - time	B3	Yes	36	34	38	56	No	N/A	Distant traffic. Low level steady plant noise, barely audible.	Yes
8th/9th Sept 2018	Night - time	B4	Yes	37	36	37	54	No	N/A	Low level steady level plant noise CUB.	Yes
8th/9th Sept 2018	Night - time	B5	Yes	36	33	36	63	No	N/A	Very low level steady level plant noise, CUB.	Yes
8th/9th Sept 2018	Night - time	B6	Yes	51	39	51	69	No	N/A	Traffic. Noise adjoining plant. Amgen plant not audible.	Yes
8th/9th Sept 2018	Night - time	B7	Yes	48	39	49	69	No	N/A	Traffic, steady low level plant noise barely audible.	Yes
8th/9th Sept 2018	Night - time	B8	Yes	48	39	48	68	No	N/A	Distant traffic, plant not audible.	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

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

N/A

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

## Resource Usage/Energy efficiency summary

Lic No:

P0019-02

Year

2018

		Additional information
1	When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below	Enter date of audit 04/09/18 (ISO50001 Surveillance Audit)
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	No
3	Where Fuel Oil is used in boilers on site is the sulphur content compliant with licence conditions? Please state percentage in additional information	N/A Diesel is only a back up to gas for the boilers and has not had to be used in the boilers for >10 years. There is no licence ELV for sulphur in the sites IE Licence.

Table R1 Energy usage on site				
Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	41,129.25	43,682.38	N/A	N/A
Total Energy Generated (MWHrs)	0	0	N/A	N/A
Total Renewable Energy Generated (MWHrs)	0	0	N/A	N/A
Electricity Consumption (MWHrs)	24,151.78	24,856.04	N/A	N/A
Fossil Fuels Consumption:			N/A	N/A
Heavy Fuel Oil (m3)	0	0	N/A	N/A
Light Fuel Oil (m3)	0	0	N/A	N/A
Natural gas (m3)	1502500	1637073	N/A	N/A
Coal/Solid fuel (metric tonnes)	0	0	N/A	N/A
Peat (metric tonnes)	0	0	N/A	N/A
Renewable Biomass	0	0	N/A	N/A
Renewable energy generated on site	0	0	N/A	N/A

\* 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

Table R2 Water usage on site					Water Emissions	Water Consumption	
Water use	Water extracted Previous year m3/yr.	Water extracted Current year m3/yr.	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*	Volume Discharged back to environment(m <sup>3</sup> yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater	0	0	N/A	N/A	0	0	0
Surface water	0	0	N/A	N/A	0	0	0
Public supply	84614	91376	N/A	N/A	63963	21441	5972
Recycled water	0	0	N/A	N/A	0	0	0
Total	84614	91376	N/A	N/A	63963	21441	5972

\* 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

## Resource Usage/Energy efficiency summary

Lic No:

P0019-02

Year

2018

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	251.9	0	155	30.9	65.96
Non-Hazardous (Tonnes)	1963.6	0	576.6	1387	0

For inspection purposes only.  
Consent of copyright owner required for any other use.

**Resource Usage/Energy efficiency summary** Lic No: P0019-02 Year 2018

Table R4: Energy Audit finding recommendations								
Date of audit	Recommendations	Description of Measures proposed	Origin of measures	Predicted energy savings %	Implementation date	Responsibility	Completion date	Status and comments
04/09/2018	ISO 50001 Surveillance Audit	N/A	accredited programme	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

For inspection purposes only. Consent of copyright owner required for any other use.

**Complaints and Incidents summary template** Lic No: P0019-02 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	

Table 1 Complaints summary							
Date	Category	Other type (please specify)	Brief description of complaint (Free txt <20 words)	Corrective action< 20 words	Resolution status	Resolution date	Further information
27/11/2018	Noise	N/A	Local resident observed a loud noise from a construction project related activity during high winds.	Material causing the noise nuisance was repaired and tied down.	Complete	27/11/2018	The complainant was contacted immediately to discuss the details of the reported complaint and to apologise for the inconvenience. There was a yellow wind warning issued by Met Eireann at the time. The wind was causing plastic overhangs on the roof to lift and plastic packaging to flap.
	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					

For inspection purposes only. Consent of copyright owner required for any other use.

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	
No	

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

Table 2 Incidents summary														
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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT	SELECT
Total number of incidents current year		0												
Total number of incidents previous year		0												
% reduction/increase		0												

WASTE SUMMARY	Lic No:	P0019-02	Year	2018
<b>SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES</b>		<a href="#">PRTR facility logon</a>	dropdown list click to see options	

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

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)

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

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

Additional Information

No	
----	--

No	
----	--

No	
----	--

**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	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 -
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**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

N/A	
-----	--

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

N/A	
-----	--

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?

N/A	
-----	--

N/A	
-----	--

N/A	
-----	--

**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
N/A	N/A	N/A	N/A	N/A

**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													

**WASTE SUMMARY** Lic No: P0019-02 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 S53(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	

For inspection purposes only.  
Consent of copyright owner required for any other use.