

Annual Environmental Report for Intel Ireland Ltd.

2014

This Annual Environmental Report was generated using excel template documents provided by the Environmental Protection Agency. The report provides summary information on key environmental emissions and management practices associated with Intel Ireland Ltd's Industrial Emissions Licence P0207-04.

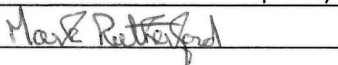
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Facility Information Summary	
AER Reporting Year	2014
Licence Register Number	P0207-04
Name of site	Intel Ireland
Site Location	Collinstown Industrial Park, Leixlip, County Kildare, Ireland
NACE Code	2611
Class/Classes of Activity	Principal Activity: 13.2 The Manufacture of integrated circuits and printed circuit boards. Related Activities: 2.1 The operation of combustion installations with a rated thermal input equal to or greater than 50MW. 12.2.1 The surface treatment of products using organic solvents, in particular for coating, cleaning, with a consumption capacity of more than 200 tonnes per year.
National Grid Reference (6E, 6 N)	298310E, 236940N
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.	In 2014, Intel Ireland did not have any operational manufacturing facilities on site. Fab 24 and Fab 24-2 ceased production late 2013 to allow for conversion works to enable an upgrade for a new technology. Fab 14 ceased manufacturing in 2009. The purpose of the decommissioning of Fab 14 was to position the facility for potential future conversion and reuse. Fab 10 ceased manufacturing in Q2 2011. The purpose of the decommissioning work is to position the Fab 10 facility for future conversion and reuse. Intel Ireland did not receive any non compliances issued by the EPA in 2014. Details of incidents and complaints can be found on our incident reporting sheet.

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.

	24/03/2015
Environmental Health and Safety Manager	

AIR-summary template	Lic No: P0207-04	Year	2014
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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	

Periodic/Non-Continuous Monitoring			
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- 2 Are there any results in breach of licence requirements? If yes please provide brief details in the comment section of TableA1 below

No	
Yes	

- 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](#)

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

Emission Description	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
Fab 14 and Fab 24-2 Ammonia exhausts	A158-A161; A257-A259; A273	Ammonia (NH3)	Biannually	5.0	100 % of values < ELV	<0.10	mg/Nm3	yes	EN 14791:2005	194.5	
Fab 14 and Fab 24-2 Ammonia exhausts	A158-A161	Volumetric flow	Biannually	41,000	100 % of values < ELV	25,871	Nm3/hour	yes	EN 13284-1:2002		
Fab 14 and Fab 24-2 Ammonia exhausts	A257-A259; A273	Volumetric flow	Biannually	56,000	100 % of values < ELV	51,120	Nm3/hour	yes	EN 13284-1:2002		
Fab 10 Boilers	A01/A03/A04/A05/A06	Nitrogen oxides (NOx/NO2)	Annually	180	100 % of values < ELV	131	mg/Nm3	yes	EN 14792:2005	10446.4	Average of Emission point results reported. Mass emission includes boilers and RCTOs
Fab 14 Boilers	A101/A102/A103	Nitrogen oxides (NOx/NO2)	Annually	170	100 % of values < ELV	103	mg/Nm3	yes	EN 14792:2005		
Fab 24 Boilers	A201/A202/A203/A204/A205/A248/A253	Nitrogen oxides (NOx/NO2)	Annually	150	100 % of values < ELV	94	mg/Nm3	yes	EN 14792:2005		
Fab 10 Boilers	A01/A03/A04/A05/A06	Carbon monoxide (CO)	Annually	N/A	100 % of values < ELV	1	mg/Nm3	yes	EN 15058:2004	5047.0	Average of Emission point results reported. Mass emission includes boilers and RCTOs
Fab 14 Boilers	A101/A102/A103	Carbon monoxide (CO)	Annually	N/A	100 % of values < ELV	1	mg/Nm3	yes	EN 15058:2004		
Fab 24 Boilers	A201/A202/A203/A204/A205/A248/A253	Carbon monoxide (CO)	Annually	N/A	100 % of values < ELV	1	mg/Nm3	yes	EN 15058:2004		
Fab 24 Speciality Exhaust	A218	Volumetric flow	Biannually	25,200	100 % of values < ELV	16,075	Nm3/hr	yes	CRM		

AIR-summary template				Lic No:	P0207-04	Year	2014			
Fab 14 Speciality Exhaust	A152	Volumetric flow	Biannually	24,500	100 % of values < ELV	17,119	Nm3/hr	yes	CRM	
Fab 14/Fab 24 Speciality Exhaust	A218/A152	Inorganic Dust Particles Class I	Biannually	0.05	100 % of values < ELV	0.0035	mg/Nm3	yes	CRM	0.77
Fab 14/Fab 24 Speciality Exhaust	A218/A152	Inorganic Dust Particles Class II	Biannually	0.20	100 % of values < ELV	0.0050	mg/Nm3	yes	CRM	1.11
Fab 14/Fab 24 Speciality Exhaust	A218/A152	Inorganic Dust Particles Class III	Biannually	0.20	100 % of values < ELV	0.0047	mg/Nm3	yes	CRM	1.02
Fab 14/Fab 24 Speciality Exhaust	A218/A152	Total Dusts	Biannually	20	100 % of values < ELV	0.283	mg/Nm3	yes	CRM	61.6
F10 RCTO Oxidiser Exhaust	A65-A66	Volumetric flow	Quarterly	5,100	100 % of values < ELV	2,284	Nm3/hour	yes	EN 13284-1:2002	
F14, F24 and F24-2 RCTO Oxidiser Exhaust	A155-A157, A214-A216, A287, A267-A269	Volumetric flow	Quarterly	4,000	100 % of values < ELV	2,508	Nm3/hour	yes	EN 13649:2001	
F10 RCTO Concentrator Exhaust	A61	Volumetric flow	Quarterly	120,000	100 % of values < ELV	17,133	Nm3/hour	yes	EN 13284-1:2002	
F14 and F24-2 RCTO Concentrator Exhaust	A141-A144, A263-A266	Volumetric flow	Quarterly	34,700	100 % of values < ELV	27179.7	Nm3/hour	yes	EN 13284-1:2002	
F24 RCTO Concentrator Exhaust	A260-A262, A270	Volumetric flow	Quarterly	48,000	100 % of values < ELV	19,818	Nm3/hour	yes	EN 13284-1:2002	
F10, F14, F24 and F24-2 RCTO Oxidiser and Concentrator Exhaust	A61, A65, A66, A155-A157, A141-A144, A214-A216, A287, A263-A266, A260-A262, A267-A269, A270	Organics Class I	Quarterly	5	100 % of values < ELV	0.08	mg/Nm3	yes	EN 13649:2001	<76.7
F10, F14, F24 and F24-2 RCTO Concentrator Exhaust	A61, A141-A144, A263-A266, A260-A262, A270	Organics Class II	Quarterly	20	100 % of values < ELV	0.72	mg/Nm3	yes	EN 13649:2001	588.5
F10 Acid Scrubbed Exhaust	A07, A15, A20	Volumetric flow	Quarterly	151,421	100 % of values < ELV	75,716	Nm3/hour	yes	EN 13284-1:2002	Maximum sum of flow of all scrubbers on a given bank of scrubbers is provided for comparison with the ELV.
F14 Acid Scrubbed Exhaust	A105-A107, A109-A111	Volumetric flow	Quarterly	350,660	100 % of values < ELV	227,041	Nm3/hour	yes	EN 13284-1:2002	Maximum sum of flow of all scrubbers on a given bank of scrubbers is provided for comparison with the ELV.
F24 Main and Bridge Acid Scrubbed Exhaust	A206-A213	Volumetric flow	Quarterly	181,705	100 % of values < ELV	102,908	Nm3/hour	yes	EN 13284-1:2002	Maximum sum of flow of all scrubbers on a given bank of scrubbers is provided for comparison with the ELV.

AIR-summary template				Lic No:		P0207-04		Year		2014	
F24-2 Acid Scrubbed Exhaust	A249-A251	Volumetric flow	Quarterly	159,391	100 % of values < ELV	116,966	Nm ³ /hour	yes	EN 13284-1:2002		Maximum sum of flow of all scrubbers on a given bank of scrubbers is provided for comparison with the ELV.
F ¹⁰ Acid Scrubbed Exhaust	A07, A15, A20	Hydrogen fluoride	Quarterly	1.70 - 3.00	100 % of values < ELV	0.02	mg/Nm ³	yes	ISO 15713:2006	132.5	Note that ELV is dependent upon the header flow
F ¹⁴ , F24 Main, F24 Bridge and F24-2 Acid Scrubbed Exhaust	A105-A107, A109-A111, A206-A213, A249-A251	Hydrogen fluoride	Quarterly	0.85 - 3.00	100 % of values < ELV	0.07	mg/Nm ³	yes	ISO 15713:2006		Note that ELV is dependent upon the header flow
F ¹⁰ Acid Scrubbed Exhaust	A07, A15, A20	Total fluoride	Quarterly	2.20 - 4.00	100 % of values < ELV	0.02	mg/Nm ³	yes	ISO 15713:2006	252	Method adapted to include filter
F ¹⁴ , F24 Main, F24 Bridge and F24-2 Acid Scrubbed Exhaust	A105-A107, A109-A111, A206-A213, A249-A251	Total fluoride	Quarterly	1.10 - 4.00	100 % of values < ELV	0.11	mg/Nm ³	yes	ISO 15713:2006		Method adapted to include filter
F ¹⁰ , F ¹⁴ , F24 Main, F24 Bridge and F24-2 Acid Scrubbed Exhaust	A07, A15, A20, A105-A107, A109-A111, A206-A213, A249-A251	Total acids	Quarterly	4	100 % of values < ELV	0.95	mg/Nm ³	yes	EN 1911-1 (Part 1)	575.7	
F ¹⁰ Acid Scrubbed Exhaust	A07, A15, A20	Total acids	Quarterly	0.202	100 % of values < ELV	0.005	kg/hr	yes	EN 1911-1 (Part 1)		
F ¹⁴ Acid Scrubbed Exhaust	A105-A107, A109-A111	Total acids	Quarterly	0.234	100 % of values < ELV	0.011	kg/hr	yes	EN 1911-1 (Part 1)		
F24 Main and F24 Bridge Acid Scrubbed Exhaust	A206-A213	Total acids	Quarterly	0.182	100 % of values < ELV	0.006	kg/hr	yes	EN 1911-1 (Part 1)		
F24-2 Acid Scrubbed Exhaust	A249-A251	Total acids	Quarterly	0.213	100 % of values < ELV	0.003	kg/hr	yes	EN 1911-1 (Part 1)		
Trimix Waste Treatment System A Exhaust	A256A	Volumetric flow	Quarterly	14,000	100 % of values < ELV	4724.5	mg/Nm ³	yes	EN 13284-1:2002		Monitoring not required but ELV applies
Trimix Waste Treatment System A Exhaust	A256A	Ammonia (NH ₃)	Quarterly	80	100 % of values < ELV	5.8	mg/Nm ³	yes	EN 14791:2005		
Trimix Waste Treatment System A Exhaust	A256A	Nitrogen oxides (NO _x /NO ₂)	Quarterly	140	100 % of values < ELV	9.3	mg/Nm ³	yes	EN 14792:2005		
Trimix Waste Treatment System A Exhaust	A256A	Carbon monoxide (CO)	Quarterly	600	100 % of values < ELV	87.4	mg/Nm ³	yes	EN 15058:2004		Monitoring not required but ELV applies
Ambient Air	Ambient (L1-L5)	Nitrogen dioxide	Biannually	N/A	N/A	13.4	ug/m ³	N/A	CRM		UV Spectoophotometry
Ambient Air	Vegetation	Fluoride	Quarterly	N/A	N/A	9.2	mg/kg	N/A	OTH		Ion selective electrode

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

AIR-summary template		Lic No:	P0207-04	Year	2014
Continuous Monitoring					

- 4 Does your site carry out continuous air emissions monitoring? Yes
- 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)
- 5 Did continuous monitoring equipment experience downtime? If yes please record downtime in table A2 below Yes
- 6 Do you have a proactive service agreement for each piece of continuous monitoring equipment? Yes
- 7 Did your site experience any abatement system bypasses? If yes please detail them in table A3 below No

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
A61, A65-A67, A141-A144, A155-A157	Total Organic Carbon (as C)	50	30 minute	All 30-minutes averages < 2 x ELV	mg/Nm3	1.2	32.4	135	None	97% of all 30-minute mean values in 2014 were < 1.2 ELV.
A61, A65-A67, A141-A144, A155-A157	Total Organic Carbon (as C)	50	24 hour	Daily average < ELV	mg/Nm3	1.2	23.8		None	
A65-A67, A155-A157	Nitrogen oxides (NOx/NO2)	400	30 minute	All 30-minutes averages < 2 x ELV	mg/Nm3	33.8	152.2	31	None	97% of all 30-minute mean values in 2014 were < 1.2 ELV.
A65-A67, A155-A157	Nitrogen oxides (NOx/NO2)	200	24 hour	Daily average < ELV	mg/Nm3	34.0	89.8		None	
A65-A67, A155-A157	Carbon monoxide (CO)	1200	30 minute	All 30-minutes averages < 2 x ELV	mg/Nm3	32.1	251.4		None	97% of all 30-minute mean values in 2014 were < 1.2 ELV.
A65-A67, A155-A157	Carbon monoxide (CO)	600	24 hour	Daily average < ELV	mg/Nm3	32.1	110.3		None	
Ambient	Nitrogen oxides (NOx/NO2)	N/A		N/A	µg/Nm3	18.5	1129	364	N/A	

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

* 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

AIR-summary template		Lic No:	P0207-04	Year	2014			
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	Please note that the Solvent Management Plan summary is detailed below. The full report is available on site for review by the Agency.		
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 Fugitive emissions to Air from site (kg)	Fugitive emissions as % of solvent input	Fugitive Emission Limit Value (ELV) (%) in licence or any revision thereof	Compliance			
2014	664,859	27,811	4.2%	15% of total solvent input	Yes			
Table A5: Solvent Mass Balance summary								
	(I) Inputs (kg)		(O) Outputs (kg)					
Solvent	(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	Solvents destroyed onsite through physical	Total emission of Solvent to air (kg)
All	664,859	1,102	76,631	821,817	27,811	0	139,734	28,913
							Total	28,913

		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
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

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	pH	Weekly	~6-9.3/10.6	N/A	7.8	pH units	N/A	Action Limits Agreed with the EPA (changes from winter to summer)
SW1	onsite	N/A	COD	Weekly	32	N/A	19.17	mg/L	N/A	
SW1	onsite	N/A	Conductivity	Weekly	1000	N/A	568.74	µS/cm@25oC	N/A	
SW1	onsite	N/A	Total Organic Carbon (as C)	Weekly	21	N/A	6.32	mg/L	N/A	
SW1	onsite	N/A	Total Heavy Metals	Weekly	95	N/A	11.5	mg/L	N/A	

*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
SW1	07/01/2014	Small amount of oil at inlet and outlet of retention pond.	site	Retention Pond was closed overnight to allow oil booms to soak up oil and the pond was inspected the following morning.	The source of the oil was a small spill on-site. The site interceptors caught the bulk with a small amount entering the pond which was absorbed by oil booms.
SW1	14/04/2014	Small amount of oil at inlet of retention pond.	site	Oil booms were used to soak up the small oil slick	The oil was observed at the pond inlet chamber only and was caught by oil booms before it entered the pond itself.

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	A non compliance was reported to the EPA in relation to levels of tin which were reported in exceedance of our licence limits. The high levels of tin were found to be due to the contamination of compliance samples by new sampling equipment but there was no actual breach of licence limits.
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	

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)															
Lic No: P0207-04							Year 2014								
Emission reference no:	Emission released to	Parameter/ Substance ^{Note 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
SE1	Wastewater/Sewer	BOD	composite	Weekly	Yearly	3800	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	140.94	kg/day	yes	Dissolved Oxygen Meter (Electrode)	APHA / AWWA "Standard Methods"	5210B	45,857	
SE1	Wastewater/Sewer	COD	composite	Weekly	Yearly	7600	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	299.93	kg/day	yes	Closed Reflux Colorimetric Method	APHA / AWWA "Standard Methods"	5220D	80,357	
SE1	Wastewater/Sewer	Inorganic Suspended Solids	composite	Weekly	Yearly	2700	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	44.45	kg/day	yes	In house calculation (TSS - VSS)	N/A	N/A	15,912	
SE1	Wastewater/Sewer	Suspended Solids	composite	Weekly	Yearly	4125	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	164.76	kg/day	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	2540D	46,171	
SE1	Wastewater/Sewer	Total Dissolved Solids	composite	Weekly	Yearly	60570	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	6640.48	kg/day	yes	Gravimetric analysis	APHA / AWWA "Standard Methods"	2540C	1,733,947	
SE1	Wastewater/Sewer	Total nitrogen	composite	Weekly	Yearly	590	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	82.91	kg/day	yes	Total Nitrogen Analyser	I.S. (Irish Standard)	IS EN 12160:2003	26,105	
SE1	Wastewater/Sewer	Total phosphorus	composite	Weekly	Yearly	140	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	3.21	kg/day	yes	Digestion + Spectrophotometry	APHA / AWWA "Standard Methods"	4500-PD and Hach method 8190	1,031	
SE1	Wastewater/Sewer	Fluorides (as total F)	composite	Weekly	Yearly	160	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	24.72	kg/day	yes	Ion Chromatography	APHA / AWWA "Standard Methods"	4110B	7,483	
SE1	Wastewater/Sewer	Cyanides (as total CN)	composite	Weekly	Yearly	0.1	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	mg/L	yes	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	4500-CN-E	N/A	
SE1	Wastewater/Sewer	Cyanides (as total CN)	composite	Weekly	Yearly	1.35	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.04	kg/day	yes	Spectrophotometry (Colorimetry)	APHA / AWWA "Standard Methods"	4500-CN-E	0.00	
SE1	Wastewater/Sewer	Arsenic and compounds (as As)	composite	Weekly	Yearly	0.1	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.002	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	N/A	
SE1	Wastewater/Sewer	Arsenic and compounds (as As)	composite	Weekly	Yearly	1.35	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	0.64	
SE1	Wastewater/Sewer	Copper and compounds (as Cu)	composite	Weekly	Yearly	0.3	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.02	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	N/A	
SE1	Wastewater/Sewer	Copper and compounds (as Cu)	composite	Weekly	Yearly	4.05	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.19	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	63	
SE1	Wastewater/Sewer	Chromium and compounds (as Cr)	composite	Weekly	Yearly	0.1	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.002	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	N/A	
SE1	Wastewater/Sewer	Chromium and compounds (as Cr)	composite	Weekly	Yearly	1.35	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	0	

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)							Lic No:	P0207-04	Year	2014					
SE1	Wastewater/Sewer	Nickel and compounds (as Ni)	composite	Weekly	Yearly	0.2	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.003	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	N/A	
SE1	Wastewater/Sewer	Nickel and compounds (as Ni)	composite	Weekly	Yearly	2.7	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.02	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	3	
SE1	Wastewater/Sewer	Tin	composite	Weekly	Yearly	0.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.052	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	N/A	
SE1	Wastewater/Sewer	Tin	composite	Weekly	Yearly	5.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.48	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	172	
SE1	Wastewater/Sewer	Lead and compounds (as Pb)	composite	Weekly	Yearly	0.4	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.002	mg/L	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	N/A	
SE1	Wastewater/Sewer	Lead and compounds (as Pb)	composite	Weekly	Yearly	1.6	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.01	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	1.26	
SE1	Wastewater/Sewer	Total heavy metals	composite	Weekly	Yearly	13.5	All results < 1.2 times ELV, plus 8 from ten results must be < ELV	0.70	kg/day	yes	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	248	
SE1	Wastewater/Sewer	Ammonia (as N)	composite	Weekly	Yearly	N/A	N/A	32.59	kg/day	N/A	UV/Vis	APHA / AWWA "Standard Methods"	4500- NH3 F	11,834	
SE1	Wastewater/Sewer	Cobalt	composite	Weekly	Yearly	N/A	N/A	0.02	kg/day	N/A	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	US EPA	200.8 (supplement 1 rev. 5.4 May 1994)	4	
SE1	Wastewater/Sewer	Nitrate (as N)	composite	Weekly	Yearly	N/A	N/A	36.63	kg/day	N/A	Ion Chromatography	APHA / AWWA "Standard Methods"	4110B	8,984	
SE1	Wastewater/Sewer	Sulphate	composite	Weekly	Yearly	N/A	N/A	3299.47	kg/day	N/A	Ion Chromatography	APHA / AWWA "Standard Methods"	4110B	1,128,793	

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

AER Monitoring returns summary template-WATER/WASTEWATER(SEWER)

Lic No: P0207-04

Year

2014

Continuous monitoring

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

Yes

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

No

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

Yes

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

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/Sewer	volumetric flow	16500	Yearly	No flow value shall exceed the specific limit	m3/day	8075	5.44	0	0	
SE1	Wastewater/Sewer	volumetric flow	720	Yearly	No flow value shall exceed the specific limit	m3/hr	336	5.33	0	0	
SE1	Wastewater/Sewer	volumetric flow	200	Yearly	No flow value shall exceed the specific limit	l/sec	93.46	5.49	0	0	
SE1	Wastewater/Sewer	pH	6-9.5	Yearly	No pH value shall deviate from the specified range	pH units	7.7	4.76	0	0	
SE1	Wastewater/Sewer	temperature	30	Yearly	No temperature value shall exceed the limit value	degrees C	23	0.57	0	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?
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

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 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 "Chemstore" type units and mobile bunds)
 - 2 How many bunds are on site?
 - 3 How many of these bunds have been tested within the required test schedule?
 - 4 How many mobile bunds are on site?
 - 5 Are the mobile bunds included in the bund test schedule?
 - 6 How many of these mobile bunds have been tested within the required test schedule?
 - 7 How many sumps on site are included in the integrity test schedule?
 - 8 How many of these sumps are integrity tested within the test schedule?
- Please list any sump integrity failures in table B1
- 9 Do all sumps and chambers have high level liquid alarms?

Additional information	
Yes	
3 years	
Yes	
106	
103	Three bunds cannot be tested due to ongoing construction work which is effecting the integrity of the bunds.
62	
Yes	
62	
18	
18	
Yes	
Yes	All failsafe systems are subject to a maintenance and testing programme with the exception of the effluent balance tank which has two liquid levels sensors with a differential alarm which triggers maintenance.
Yes	The firewater retention pond will be tested for the first time in 2015

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)
Bund no. 29	other (please specify)	CRC Lined concrete	Sodium bisulphite, HCL (36%), NaOH (25%)	254.2m ³	100m ³	Structural assessment		25/11/2014	Yes	Fail	There some cracks in the CRC around bolts and at floor/wall joints	CRC due to be repaired in April 2015	April 2015	N/A

* 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?

[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?

Commentary	
Yes	
Yes	Due to the extremely large capacities of the site transfer systems, they undergo structural integrity inspections in lieu of hydrstatic testing which is deemed impractical
Yes	

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 Please provide integrity testing frequency period
- *please note integrity testing means water tightness testing for process and foul 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)

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

		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?	no	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
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 Groundwater monitoring template AND answer questions 5-12 below.	yes	
5	Is the contamination related to operations at the facility (either current and/or historic)	no	Some wells were found to be in exceedance of the EPA IGVs for the following parameters: conductivity, chloride, copper, lead, nickel and arsenic . Chloride and conductivity have been detected in concentrations above the IGVs in both up-gradient and down-gradient wells but the highest concentrations of both were found in two upgradient wells at the south east corner of the site, MW1 and MW13. This suggests that the source of the contamination is an up-gradient offsite source. The elevated levels of these parameters were the subject of a report commissioned by Intel in 2009. The conclusion of this report was that elevated levels were due to an off-site leaking sewer south of Intel owned by KCC. As 2014 was the first year that metals were analysed there is no data available for expected background levels nor is there 5 year trend data available. No metal was detected above the IGV for both monitoring events.
6	Have actions been taken to address contamination issues?If yes please summarise remediation strategies proposed/undertaken for the site	yes	
7	Please specify the proposed time frame for the remediation strategy	N/A	MW14 was decommissioned due to a well blockage in December 2013 and a replacement well, MW14A, was drilled. There is no 5 year trend data available for MW14A as 2013 was the first sampling year. Construction works in the area around MW10 meant that one sample was taken from MW10 in 2014.
8	Is there a licence condition to carry out/update ELRA for the site?	yes	
9	Has any type of risk assesment 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	

Groundwater/Soil monitoring template		Lic No:	P0207-04	Year	2014
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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
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	pH	pH Electrode	Biannual	7.3	7.15	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Conductivity	Conductivity Meter	Biannual	1245	1195.5	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	COD	Microdigestion, colorimetry	Biannual	52	27.25	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Nitrate	Ion Selective Electrode	Biannual	1.64	1.405	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Total Nitrogen	Addition of TKN + TON	Biannual	2.4	1.95	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Chloride	Titration	Biannual	175	175	mg/l Cl	24-187.5	30	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Fluoride	Ion Selective Electrode	Biannual	0.316	0.2675	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Chromium	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Copper	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Lead	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.012	0.0115	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW1	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0015	0.0011	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	pH	pH Electrode	Biannual	7.2	7.15	pH Units	N/A	≥ 6.5 and ≤ 9.5	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Conductivity	Conductivity Meter	Biannual	336	327.5	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	COD	Microdigestion, colorimetry	Biannual	46	30.5	mg/l O2	N/A	N/A	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Nitrate	Ion Selective Electrode	Biannual	16.3	8.4	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Total Nitrogen	Addition of TKN + TON	Biannual	5.4	3.45	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Chloride	Titration	Biannual	22	19.75	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Fluoride	Ion Selective Electrode	Biannual	0.355	0.2034	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Copper	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Lead	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.004	0.0035	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW7	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	pH	pH Electrode	Biannual	7.4	7.4	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Conductivity	Conductivity Meter	Biannual	314	261	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	COD	Microdigestion, colorimetry	Biannual	149	108.5	mg/l O2	N/A	N/A	yes

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Total Nitrogen	Addition of TKN + TON	Biannual	2.5	2.4	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Chloride	Titration	Biannual	17.5	12.25	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Fluoride	Ion Selective Electrode	Biannual	0.295	0.225	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.008	0.0045	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.027	0.01575	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.064	0.0335	mg/l	0.01875	0.01	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.015	0.0095	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW8	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0065	0.0036	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	pH	pH Electrode	Biannual	7.1	7.05	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Conductivity	Conductivity Meter	Biannual	626	610	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	COD	Microdigestion, colorimetry	Biannual	8	5.25	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Total Nitrogen	Addition of TKN + TON	Biannual	2	1.9	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Chloride	Titration	Biannual	22.5	22	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Fluoride	Ion Selective Electrode	Biannual	0.118	0.11	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0015	0.0015	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW9	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0057	0.00365	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	pH	pH Electrode	Biannual	6.8	6.8	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Conductivity	Conductivity Meter	Biannual	1393	1361	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	COD	Microdigestion, colorimetry	Biannual	106	54.25	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Total Nitrogen	Addition of TKN + TON	Biannual	1.3	1.3	mg/l N	N/A	N/A	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Chloride	Titration	Biannual	122.5	114.75	mg/l Cl	24-187.5	30	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Fluoride	Ion Selective Electrode	Biannual	0.254	0.1785	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.015	0.0115	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW13	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.004	0.0031	mg/l	0.0075	0.01	data not available

.- where average indicates arithmetic mean

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

Groundwater/Soil monitoring template		Lic No:	P0207-04	Year	2014
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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
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	pH	pH Electrode	Biannual	7.4	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Conductivity	Conductivity Meter	Biannual	821	659.5	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	COD	Microdigestion, colorimetry	Biannual	125	67.5	mg/l O2	N/A	N/A	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Nitrate	Ion Selective Electrode	Biannual	9.32	6.61	mg/l NO3	37.5	25	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Total Nitrogen	Addition of TKN + TON	Biannual	3.9	3.25	mg/l N	N/A	N/A	yes

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Chloride	Titration	Biannual	28	21.75	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Fluoride	Ion Selective Electrode	Biannual	0.34	0.328	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.01	0.008	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW2	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.029	0.0181	mg/l	0.0075	0.01	data not available

Groundwater/Soil monitoring template					Lic No:	P0207-04	Year	2014		
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	pH	pH Electrode	Biannual	7.1	7.1		N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Conductivity	Conductivity Meter	Biannual	617	600.5		800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	COD	Microdigestion, colorimetry	Biannual	133	72.5		N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5		37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385		N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Total Nitrogen	Addition of TKN + TON	Biannual	1.5	1.4		N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Chloride	Titration	Biannual	46.5	39		24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Fluoride	Ion Selective Electrode	Biannual	0.219	0.208		N/A	1	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.004	0.0025	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.024	0.01425	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.018	0.0105	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.022	0.01175	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW3	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.007	0.00385	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	pH	pH Electrode	Biannual	7	6.85	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Conductivity	Conductivity Meter	Biannual	1271	942.5	uS/cm	800-1875	1000	no

Groundwater/Soil monitoring template		Lic No: P0207-04		Year 2014						
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	COD	Microdigestion, colorimetry	Biannual	9	5.75	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Nitrate	Ion Selective Electrode	Biannual	14.6	12.22	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Total Nitrogen	Addition of TKN + TON	Biannual	4.6	3.8	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Chloride	Titration	Biannual	34.5	34.35	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Fluoride	Ion Selective Electrode	Biannual	0.3	0.2935	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Chromium	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.002	0.0015	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Copper	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.011	0.00775	mg/l	1.5	0.03	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Lead	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.02	0.014	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW4	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0163	0.00895	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	pH	pH Electrode	Biannual	7.1	7.05	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Conductivity	Conductivity Meter	Biannual	804	747	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	COD	Microdigestion, colorimetry	Biannual	13	10.5	mg/l O2	N/A	N/A	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Nitrate	Ion Selective Electrode	Biannual	1.61	1.055	mg/l NO3	37.5	25	no

Groundwater/Soil monitoring template			Lic No: P0207-04		Year 2014					
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Total Nitrogen	Addition of TKN + TON	Biannual	2.4	2.2	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Chloride	Titration	Biannual	49	44.5	mg/l Cl	24-187.5	30	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Fluoride	Ion Selective Electrode	Biannual	0.674	0.5535	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.039	0.028	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.04	0.023	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.466	0.2345	mg/l	0.015	0.02	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW5	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0563	0.0285	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	pH	pH Electrode	Biannual	7.1	7.1	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Conductivity	Conductivity Meter	Biannual	715	715	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	COD	Microdigestion, colorimetry	Biannual	2.5	2.5	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Nitrate	Ion Selective Electrode	Biannual	0.05	0.05	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Total Nitrogen	Addition of TKN + TON	Biannual	0.8	0.8	mg/l N	N/A	N/A	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Chloride	Titration	Biannual	34.5	34.5	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Fluoride	Ion Selective Electrode	Biannual	0.147	0.147	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0015	0.0015	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW10	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0005	0.0005	mg/l	0.0075	0.01	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	pH	pH Electrode	Biannual	7.1	7.1	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Conductivity	Conductivity Meter	Biannual	886	765	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	COD	Microdigestion, colorimetry	Biannual	29	21	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Total Nitrogen	Addition of TKN + TON	Biannual	1	1	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Chloride	Titration	Biannual	50	45	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Fluoride	Ion Selective Electrode	Biannual	0.193	0.1845	mg/l F	N/A	1	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.026	0.01525	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.007	0.005	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0015	0.0015	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW11	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	pH	pH Electrode	Biannual	7.4	7.3	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Conductivity	Conductivity Meter	Biannual	752	635	uS/cm	800-1875	1000	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	COD	Microdigestion, colorimetry	Biannual	368	190	mg/l O2	N/A	N/A	yes
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Total Nitrogen	Addition of TKN + TON	Biannual	1.8	1.65	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Chloride	Titration	Biannual	32	26	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Fluoride	Ion Selective Electrode	Biannual	0.382	0.343	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Chromium	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Copper	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Lead	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.008	0.0055	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0015	0.0015	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW12	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	pH	pH Electrode	Biannual	7.1	7.1	pH Units	N/A	≥ 6.5 and ≤ 9.5	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Conductivity	Conductivity Meter	Biannual	872	726.5	uS/cm	800-1875	1000	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	COD	Microdigestion, colorimetry	Biannual	22	12.25	mg/l O2	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Total Nitrogen	Addition of TKN + TON	Biannual	1.3	1.15	mg/l N	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Chloride	Titration	Biannual	65	60.25	mg/l Cl	24-187.5	30	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Fluoride	Ion Selective Electrode	Biannual	0.206	0.1715	mg/l F	N/A	1	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.005	0.00325	mg/l	0.015	0.02	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW14A	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	pH	pH Electrode	Biannual	7.1	7.1	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Conductivity	Conductivity Meter	Biannual	1094	1089.5	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	COD	Microdigestion, colorimetry	Biannual	11	6.75	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Nitrate	Ion Selective Electrode	Biannual	1	0.75	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Total Nitrogen	Addition of TKN + TON	Biannual	1.5	1.25	mg/l N	N/A	N/A	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Chloride	Titration	Biannual	48	44.25	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Fluoride	Ion Selective Electrode	Biannual	0.127	0.1125	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.0045	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.008	0.006	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW15	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0023	0.002	mg/l	0.0075	0.01	data not available

Groundwater/Soil monitoring template					Lic No:	P0207-04	Year	2014		
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	pH	pH Electrode	Biannual	7.4	7.3		N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Conductivity	Conductivity Meter	Biannual	1184	1063.5		800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	COD	Microdigestion, colorimetry	Biannual	35	27		N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Nitrate	Ion Selective Electrode	Biannual	6.48	4.96		37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385		N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Total Nitrogen	Addition of TKN + TON	Biannual	2.7	2.25		N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Chloride	Titration	Biannual	87.5	87.5		24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Fluoride	Ion Selective Electrode	Biannual	0.459	0.4		N/A	1	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.002	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.028	0.01625	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.003	0.003	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.022	0.0185	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0035	0.0035	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW16	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0019	0.0013	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	pH	pH Electrode	Biannual	7.2	7.15	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Conductivity	Conductivity Meter	Biannual	1072	1029	uS/cm	800-1875	1000	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	COD	Microdigestion, colorimetry	Biannual	2.5	2.5	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Total Nitrogen	Addition of TKN + TON	Biannual	1	0.9	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Chloride	Titration	Biannual	33.5	33.25	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Fluoride	Ion Selective Electrode	Biannual	0.345	0.3345	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Chromium	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0057	0.00335	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Copper	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.00375	mg/l	1.5	0.03	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Lead	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.003	0.002	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0015	0.0015	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.004	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW17	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	pH	pH Electrode	Biannual	7.5	7.4	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Conductivity	Conductivity Meter	Biannual	309	272.5	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	COD	Microdigestion, colorimetry	Biannual	57	34	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Nitrate	Ion Selective Electrode	Biannual	0.5	0.5	mg/l NO3	37.5	25	no

Groundwater/Soil monitoring template			Lic No: P0207-04		Year 2014					
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Total Nitrogen	Addition of TKN + TON	Biannual	2	1.65	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Chloride	Titration	Biannual	10	10	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Fluoride	Ion Selective Electrode	Biannual	0.371	0.314	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0016	0.0013	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0045	0.00375	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.006	0.0045	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.009	0.00525	mg/l	0.015	0.02	data not available

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.03	0.01675	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW18	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	pH	pH Electrode	Biannual	7.1	7.05	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Conductivity	Conductivity Meter	Biannual	720	707	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	COD	Microdigestion, colorimetry	Biannual	42	22.25	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Nitrate	Ion Selective Electrode	Biannual	3.54	2.635	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Total Nitrogen	Addition of TKN + TON	Biannual	2.3	2.2	mg/l N	N/A	N/A	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Chloride	Titration	Biannual	45.5	44	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Fluoride	Ion Selective Electrode	Biannual	0.434	0.3705	mg/l F	N/A	1	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Chromium	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.0916	0.0463	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Copper	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.061	0.03275	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Lead	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.005	0.004	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Nickel	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.678	0.342	mg/l	0.015	0.02	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Tin	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.043	0.02325	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW19	Arsenic	ICP / ICPMS (Inductively Coupled Plasma - Mass Spectrometry)	Biannual	0.061	0.03085	mg/l	0.0075	0.01	data not available

Groundwater/Soil monitoring template					Lic No:	P0207-04	Year	2014		
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	pH	pH Electrode	Biannual	7	6.95	pH Units	N/A	≥ 6.5 and ≤ 9.5	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Conductivity	Conductivity Meter	Biannual	802	693	uS/cm	800-1875	1000	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	COD	Microdigestion, colorimetry	Biannual	2.5	2.5	mg/l O2	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Nitrate	Ion Selective Electrode	Biannual	15.2	10.82	mg/l NO3	37.5	25	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Total Ammonia	Ion Selective Electrode	Biannual	0.0385	0.0385	mg/l as NH4	N/A	0.15	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Total Nitrogen	Addition of TKN + TON	Biannual	4.5	3.6	mg/l N	N/A	N/A	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Chloride	Titration	Biannual	37	36.5	mg/l Cl	24-187.5	30	no
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Fluoride	Ion Selective Electrode	Biannual	0.71	0.502	mg/l F	N/A	1	no

Groundwater/Soil monitoring template				Lic No:	P0207-04	Year	2014			
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Chromium	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.001	0.001	mg/l	0.0375	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Copper	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.00375	mg/l	1.5	0.03	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Lead	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.003	0.002	mg/l	0.01875	0.01	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Nickel	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.01	0.00575	mg/l	0.015	0.02	data not available

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18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Tin	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0045	0.004	mg/l	N/A	N/A	data not available
18/02/2014 to 19/02/2014 and 26/8/2014 to 28/8/2014	MW20	Arsenic	ICP / ICPMS (Inductively Coupled Plasma Mass Spectrometry)	Biannual	0.0007	0.0007	mg/l	0.0075	0.01	data not available

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

**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](#) [Drinking water](#) [Surface water EQS](#) [regulations](#) [\(private supply\)](#) [standards](#) [Drinking water \(public supply\) standards](#) [Interim Guideline Values \(IGV\)](#)

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

N/A

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

		Commentary
1	ELRA initial agreement status	Submitted and not agreed by EPA; Previously, the ELRA was incorporated into the RMP. The initial RMP was submitted to the Agency in 2003 and was updated in 2005, 2006 and 2007. A standalone ELRA was produced in 2010 and submitted to the Agency. The Agency has not provided any comments on the content of any of the RMP/ELRA's submitted.
2	ELRA review status	Review required and completed The company submitted a revised ELRA in January 2015. This ELRA was completed in accordance with the Agency's 2006 Guidance Document. Intel Ireland is aware that the Agency has issued a revised Guidance Document in 2014 and has committed to further updating the ELRA by mid 2015.
3	Amount of Financial Provision cover required as determined by the latest ELRA	Euro 466,675 This figure is taken from the ELRA submitted to the Agency in January 2015.
4	Financial Provision for ELRA status	Submitted and not agreed by EPA;
5	Financial Provision for ELRA - amount of cover	Euro 934,000 This is the figure which covers the ELRA and CRAMP previously submitted to the Agency as a Parent Company guarantee. A revised proposal for a Financial Provision was not submitted to match the revised ELRA (or CRAMP) submitted to the Agency in January 2015. The company propose to aware the publication of a guidance document from the Agency on the topic of Financial Provisions.
6	Financial Provision for ELRA - type	Other please specify Parent Company Guarantee
7	Financial provision for ELRA expiry date	None
8	Closure plan initial agreement status	Closure plan submitted and not agreed by EPA Incorporated into the RMP-CRAMP document submitted to the Agency in 2010. The Agency has not provided any comments on the content of the RMP-CRAMP. A 2010 update was submitted to the Agency, but the Agency has not provided comment.
9	Closure plan review status	Review required and completed The company submitted a revised CRAMP in January 2015. This CRAMP was completed in accordance with the Agency's 2006 Guidance Document on this topic. Intel Ireland is aware that the Agency has issued a revised Guidance Document and has committed to further updating the CRAMP by mid 2015.
10	Financial Provision for Closure status	Submitted and not agreed by EPA; A figure of Euro 934,000 to cover both CRAMP and ELRA was previously submitted to the Agency. This was submitted as a Parent Company Guarantee. Before a proposal is made in terms of the financial provisions or the method of security, the company proposes to await the publication of a Guidance Note on Financial Provisions from the Agency.
11	Financial Provision for Closure - amount of cover	Euro 1,934,395 This figure is taken from the CRAMP submitted to the Agency in January 2015.
12	Financial Provision for Closure - type	Other please specify Parent Company Guarantee
13	Financial provision for Closure expiry date	None

Environmental Management Programme/Continuous Improvement Programme template		Lic No:	P0207-04	Year	2014
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	Intel Corporation holds a multisite certification to the voluntary environmental standard ISO 14001 and safety standard OHSAS 18001. The Intel Ireland site also holds site certification to the energy management standard ISO 50001.		
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) Plan 2014					
Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Waste reduction/Raw material usage efficiency	Achieve zero chemical waste to landfill in line with Intel corporate targets.	97%	The goal has replaced the goal of recycling 80% of chemical waste. Intel Ireland sent 3% of chemical waste to landfill in 2014. This is down from 8% in 2013.	Environmental Engineer	Reduced emissions
Waste reduction/Raw material usage efficiency	Recycle 90% of our non-hazardous waste in line with Intel Corporate targets	100%	Intel Ireland exceeded the goal resulting in 99% recycling of non hazardous waste for 2014.	Environmental Engineer	Reduced emissions
Additional improvements (Air)	Determine feasibility of retrofitting the Fab 14 TOC analyser to enable routing calibration gases to the sample points to enable verification of the sampling system	70%	Preliminary design and costs were obtained for this project. Design was revised to revisit costing for the project and we have put this out to tender for installation costs. The most competitive costing will then be submitted to corporate for approval.	Environmental Engineer	Improved Environmental Management Practices
Additional improvements (Air)	Develop a site specific protocol for monitoring to air of fluorides	0%	This has not been progressed as it is not due until 12 months from commencement of operations and is therefore included in the EMP Plan for 2015.	Environmental Engineer	Increased compliance with licence conditions
Additional improvements (Air)	Conduct performance tests on all operating air abatement equipment	80%	F10 and F14 abatement systems performance tests were completed in 2014. The remaining abatement systems to be tested will be included in the 2015 EMP plan.	Environmental Engineer	Increased compliance with licence conditions
Additional improvements (Air)	Carry out a full ecological survey of wild and domesticated flora and fauna in the vicinity of the installation	20%	A proposed scope of the ecological survey was submitted to the NPWS for consultation in February 2015. It is planned to commence the survey in April 2015, although this is not due until 12 months from commencement of operations and is therefore included in the EMP Plan for 2015.	Environmental Engineer	Increased compliance with licence conditions
Additional improvements (Air)	Carry out an air dispersion model validation study in line with the Agency's Air Dispersion Modelling from Industrial Installations Guidance Note (AG4).	0%	A scope for the air dispersion model validation study has been drafted fro submission to the Agency for approval. This is not due until 12 months from commencement of operations and is therefore included in the EMP Plan for 2015.	Environmental Engineer	Increased compliance with licence conditions
Additional improvements (Air)	Investigate how the control parameters associated with the emissions to air abatement systems correlate with emission levels of fluorides and ammonia;	100%	Intel's Technology Development organisation has demonstrated that there is a correlation between loadings of ammonia to the acid scrubbers and fluoride emissions. pH and conductivity are also known to influence the removal efficiency of scrubbers. However, from testing carried out in the U.S., there was no correlation between changes in pH and conductivity and fluoride emissions. In the case of ammonia emissions, it is well known that a decrease in pH will drive ammonium into ammonia and therefore, this will enhance it's removal in the scrubber. A main control parameter for emissions from scrubber is the water to air ratio which is controlled strictly with alarms/response procedures for any out of control issues.	Environmental Engineer	Increased compliance with licence conditions
Additional improvements (Air)	Investigate the use of the Facilities Management System to provide continuous and recorded flow data for emissions from the acid gas scrubbers.	60%	Preliminary design and costs were obtained for this project with options for two different types of flow meters. Due to the uncertainty of the proposed methods, we are investigating completion of a pilot study to determine the effectiveness of the flow monitoring systems on the scrubber outlets. In addition, a cost versus risk analysis will be carried out to determine the overall feasibility of this project.	Environmental Engineer	Increased compliance with licence conditions
Energy Efficiency/Utility conservation	Provide annualized savings of \$2.5M in energy projects in 2014.	100%	The site achieved \$5M dollars in annualized energy savings through the implementation of Energy and Water Conservation projects.	Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Carry out an audit of the energy efficiency of the site in 2014 to meet licence condition 7.1.	100%	Audit was completed and report was prepared and held on site.	Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Monitor and engage with Corporate Intel EHS on EHS Re-engineering for implementation on new software tools and changes to business processes.	80%	New audit and compliance software tools have been developed and are currently being implimented.	Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Ensure the site EMS documentation is updated to reflect any changes as per new IE licence document P0207-04	100%	All EMS documentation was reviewed to ensure that any updates that are required as per the new IE Licence P0207-04 have been completed	Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Ensure successful completion of the ISO50001 surveillance audit.	100%	In 2014 the ISO 50001 surveillance audit was completed successfully	Individual	Improved Environmental Management Practices

Environmental Management Programme/Continuous Improvement Programme template				Lic No:	P0207-04	Year	2014
Additional improvements (EHS and Energy Management System)	Ensure Intel's compliance calendar is updated for any licence changes.	100%	In Q1 2014 work has commenced on updating the site compliance calendar with respect to the new IE licence and also again in Q4 to prepare for the implementation of the new compliance software system.	Individual	Improved Environmental Management Practices		
Materials Handling/Storage/Bunding	Carry out integrity testing of all loading sumps as required in Condition 6.16 of our IEL	100%	All required testing was completed and any failures were investigated and repaired	Individual	Continued compliance with licence		
Materials Handling/Storage/Bunding	Carry out integrity testing of all bunds as required in Condition 6.16 of our IEL	100%	All required testing was completed and any failures were investigated and repaired	Individual	Continued compliance with licence		
Reduction of emissions to Water	Track fluoride emissions to sewer against our commitment to the EPA (letter dated 5th December 2007) to reduce fluoride emissions for future technologies.	100%	No production carried out in 2014.	Section Head	Reduced emissions		
REACH and CLP compliance	Track all substances used in 2014 for REACH registration status and CLP compliance.	100%	100% of substances were tracked for REACH registration status and CLP compliance.	Environmental Engineer	REACH & CLP compliance		
REACH and CLP compliance	Obtain CLP formatted SDSs for all products used on-site.	100%	100% of SDSs received are CLP compliant.	Environmental Engineer	REACH & CLP compliance		

Environmental Management Programme/Continuous Improvement Programme template

Lic No:

P0207-04

Year

2014

Highlighted cells contain dropdown menu click to view

Additional Information

Environmental Management Programme (EMP) Plan 2015					
Objective Category	Target	Status (% completed)	How target was progressed	Responsibility	Intermediate outcomes
Additional improvements (Air)	Develop a site specific protocol for monitoring to air of fluorides	0		Individual	Increased compliance with licence conditions
Additional improvements (Air)	Determine feasibility of retrofitting the Fab 14 TOC analyser to enable routing calibration gases to the sample points to enable verification of the sampling system	70	Preliminary design and costs were obtained for this project. Design was revised to revisit costing for the project and we have put this out to tender for installation costs. The most competitive costing will then be submitted to corporate for approval.	Individual	Improved Environmental Management Practices
Additional improvements (Air)	Conduct performance tests on all operating air abatement equipment	80	F10 and F14 abatement systems performance tests were completed in 2014. The remaining abatement systems to be tested will be included in the 2015 EMP plan.	Individual	Increased compliance with licence conditions
Additional improvements (Air)	Carry out a full ecological survey of wild and domesticated flora and fauna in the vicinity of the installation	20	A proposed scope of the ecological survey was submitted to the NPWS for consultation in February 2015. It is planned to commence the survey in April 2015, although this is not due until 12 months from commencement of operations and is therefore included in the EMP Plan for 2015.	Individual	Increased compliance with licence conditions
Additional improvements (Air)	Carry out an air dispersion model validation study in line with the Agency's Air Dispersion Modelling from Industrial Installations Guidance Note (AG4).	0		Individual	Increased compliance with licence conditions
Additional improvements (Air)	Investigate the use of the Facilities Management System to provide continuous and recorded flow data for emissions from the acid gas scrubbers.	60	Preliminary design and costs were obtained for this project with options for two different types of flow meters. Due to the uncertainty of the proposed methods, we are investigating completion of a pilot study to determine the effectiveness of the flow monitoring systems on the scrubber outlets. In addition, a cost versus risk analysis will be carried out to determine the overall feasibility of this project.	Individual	Increased compliance with licence conditions
Materials Handling/Storage/Bunding	Carry out hydrostatic testing of loading aprons	0		Individual	Continued compliance with licence
Materials Handling/Storage/Bunding	Conduct testing of contained storm systems	0		Individual	Continued compliance with licence
Materials Handling/Storage/Bunding	Carry out hydrostatic testing of bunds that are due for testing in 2015	0		Individual	Continued compliance with licence
Reduction of emissions to Wastewater	Track fluoride emissions to sewer against our commitment to the EPA (letter dated 5th December 2007) to reduce fluoride emissions for future technologies.	0		Individual	Reduced emissions
Waste reduction/Raw material usage efficiency	Achieve zero chemical waste to landfill in line with Intel corporate targets.	0		Individual	Reduced emissions
Waste reduction/Raw material usage efficiency	Recycle 90% of our non-hazardous waste in line with Intel Corporate targets	0		Individual	Reduced emissions
REACH and CLP compliance	Obtain CLP formatted SDSs for all products used on-site.	0		Environmental Engineer	REACH & CLP compliance
Energy Efficiency/Utility conservation	Provide annualized savings of \$3.5M in energy projects in 2014.	0		Individual	Improved Environmental Management Practices
Energy Efficiency/Utility conservation	Carry out an audit of the energy efficiency of the site in 2014 to meet licence condition 7.1.	0		Individual	Improved Environmental Management Practices
Additional improvements (EHS and Energy Management System)	Monitor and engage with Corporate Intel EHS on implementation of new software tool for compliance	0		Individual	Improved Environmental Management Practices

Noise monitoring summary report

Lic No: P0207-04 Year

2014

- 1 Was noise monitoring a licence requirement for the AER period?
If yes please fill in table N1 noise summary below
Was noise monitoring carried out using the EPA Guidance note, including [Noise Guidance note NG4](#)
- 2 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?

Yes
Yes
No
N/A
Yes

Table N1: Noise monitoring summary

Date of monitoring	Time period	Noise sensitive location -NSL (if applicable)	LA _{eq}	LA ₉₀	LA ₁₀	LA _{max}	Tonal or Impulsive noise* (Y/N)	/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)?
20/07/2014	09:12-16:55	NM-01	55 - 56	38 - 42	55 - 60	75 - 92	No	N/A	During the daytime survey periods, distant road traffic movement, occasional aircraft movements, birdsong and distant construction related sounds from the Intel site were noted as the primary sources of noise at the time of monitoring in this area. Plant noise from the Intel site was not audible at this location during the daytime monitoring period.	Yes
20/07/2014	09:12-16:55	NM-02	46 - 52	36 - 39	48 - 56	74 - 84	No	N/A	During the daytime survey periods, distant road traffic movements were noted as the primary sources of noise at the time of monitoring. Aircraft movements, birdsong and a slight rustling of foliage were also noted. Plant noise from the Intel site was inaudible during daytime periods at this location.	Yes
20/07/2014	09:12-16:55	NM-03	41 - 47	38 - 39	42 - 49	56 - 66	No	N/A	During daytime periods at this location, steady plant noise from the Intel site along with birdsong and distant traffic were audible. Distant construction activity was also noted. During the third measurement period a dog barking influenced the LAeq and LAmax parameters.	Yes
20/07/2014	09:12-16:55	NM-04	53 - 56	33 - 36	57 - 62	74 - 75	No	N/A	During the daytime survey periods, distant road traffic movements were noted as the primary sources of noise at the time of monitoring. Birdsong and occasional aircraft movements were also noted. A lawnmower was also audible during the third measurement. Plant noise from the Intel site was not audible at this location.	Yes
20/07/2014	09:12-16:55	NM-05	57 - 62	44 - 49	59 - 66	74 - 84	No	N/A	During the daytime survey periods, Intel construction activities and distant road traffic movements were noted as the primary sources of noise at the time of monitoring. Plant noise from the Intel site was audible at low level. Birdsong and aircraft movements were also noted.	Yes
20/07/2014	09:12-16:55	NM-06	50 - 53	44 - 48	53 - 55	62 - 67	No	N/A	During the daytime survey periods, Intel construction activities and distant road traffic movements were noted as the primary sources of noise at the time of monitoring. Other sources of noise included birdsong and distant aircraft movements. Plant noise from the Intel site was audible during lulls in construction activity.	Yes
20/07/2014	09:12-16:55	NM-07	47 - 51	42 - 43	49 - 52	60 - 76	No	N/A	During the daytime survey periods, distant traffic on surrounding roads, occasional train movements and occasional local traffic were noted to be the dominant noise sources. Noise from children playing was audible during the third measurement period. Plant noise from the Intel site was not audible during the daytime measurement periods.	Yes
30/07/2014	21:28-22:52	NM-01	43	40	45	50	No	N/A	During the evening survey period, audible noise sources included distant traffic on surrounding roads and, to a lesser extent, noise from wind passing through nearby foliage. Intel plant noise was not audible at this location.	Yes

30/07/2014	21:28-22.52	NM-02	37	35	38	52	No	N/A	During the evening survey period, audible noise sources included distant traffic on surrounding roads and, to a lesser extent, noise from wind passing through nearby foliage. Intel plant noise was not audible at this location.	Yes
30/07/2014	21:28-22.52	NM-03	44	43	45	49	No	N/A	During the evening survey period, noise levels were influenced by steady plant noise with occasional distant traffic movements and, to a lesser extent, noise from wind passing through nearby foliage.	Yes
30/07/2014	21:28-22.52	NM-04	33	31	35	47	No	N/A	During the evening survey period, audible noise sources included distant traffic on surrounding roads and, to a lesser extent, noise from wind passing through nearby foliage. Intel plant noise was just audible at this location.	Yes
09/07/2014	21:53-22.48	NM-05	43	40	44	57	No	N/A	During the evening survey period, broadband plant noise was audible from the rear of the site. Other sources included occasional traffic on the R148 and distant traffic from the direction of the N4 Road.	Yes
09/07/2014	21:53-22.48	NM-06	45	40	49	60	No	N/A	During the evening survey period, broadband plant noise was audible from the rear of the site. Other sources included occasional traffic on the R148 and distant traffic from the direction of the N4 Road.	Yes
09/07/2014	21:53-22.48	NM-07	47	41	49	70	No	N/A	During the evening survey period, audible noise sources included distant traffic on surrounding roads and occasional vehicle movements within the estate. Intel plant noise was not audible at this location.	Yes
30/07/2014	23:51-03:05	NM-01	36 - 39	33 - 36	38 - 41	55	No	N/A	During the night-time survey period, audible noise sources included distant traffic on surrounding roads and, to a lesser extent, noise from wind passing through nearby foliage. Intel plant noise was not audible at this location.	Yes
30/07/2014	23:51-03:05	NM-02	34 - 37	31 - 33	35 - 39	54 - 59	No	N/A	During the night-time survey periods, audible noise sources included distant traffic on surrounding roads and, to a lesser extent, noise from wind passing through nearby foliage.	Yes
30/07/2014	23:51-03:05	NM-03	41 - 43	40 - 41	42 - 44	46 - 49	No	N/A	During night-time periods, noise levels were influenced by steady plant noise with occasional distant traffic movements and, to a lesser extent, noise from wind passing through nearby foliage.	Yes
30/07/2014	23:51-03:05	NM-04	32 - 34	30 - 31	33 - 35	51 - 55	No	N/A	During night-time periods, audible noise sources included distant traffic on surrounding roads and, to a lesser extent, noise from wind passing through nearby foliage. Intel plant noise was just audible at this location.	Yes
09/07/2014	23:00-00:59	NM-05	40	38	42	58 - 60	No	N/A	During the night-time survey periods, broadband plant noise was audible from the rear of the site. Other sources included occasional traffic on the R148 and distant traffic from the direction of the N4 Road.	Yes
09/07/2014	23:00-00:59	NM-06	43 - 44	37 - 40	46 - 48	56 - 58	No	N/A	During the night-time survey periods, broadband plant noise was audible from the rear of the site. Other sources included occasional traffic on the R148 and distant traffic from the direction of the N4 Road.	Yes
09/07/2014	23:00-00:59	NM-07	41 - 43	37	43 - 45	52 - 59	No	N/A	Distant traffic movements were noted to be the dominant noise source during nighttime periods. Plant noise from the Intel site was not audible during the night-time measurement periods.	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)

- 1 When did the site carry out the most recent energy efficiency audit? Please list the recommendations in table 3 below
[SEAI - Large](#)
- 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
[Industry Energy Network \(LIEN\)](#)
- 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	
2014	The site holds certification to international standard ISO50001. To support this accreditation we carry out continuous
Yes	
Yes	<0.1%

Energy Use	Previous year	Current year	Production +/- % compared to previous reporting year**	Energy Consumption +/- % vs overall site production*
Total Energy Used (MWHrs)	374541.7843	433738.6702		
Total Energy Generated (MWHrs)	0			
Total Renewable Energy Generated (MWHrs)	34781.64368	60832.67022		
Electricity Consumption (MWHrs)	339760.1407	372906		
Fossil Fuels Consumption:				
Heavy Fuel Oil (m3)	0	0		
Light Fuel Oil (m3)	47	65		
Natural gas (m3)	13,190,960	13,495,692		
Coal/Solid fuel (metric tonnes)	0	0		
Peat (metric tonnes)	0	0		
Renewable Biomass	0	0		
Renewable energy generated on site	34781.64368	60832.67022		

* 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 ³ /yr):	Volume used i.e not discharged to environment e.g. released as steam m3/yr	Unaccounted for Water:
Groundwater	0		Production levels not provided as this information is considered intellectual property.	Production levels not provided as this information is considered intellectual property.			
Surface water	0						
Public supply	3088179	3248950					
Recycled water	0						
Total	3088179	3248950			2,943,492	305458	

* 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

Table R3 Waste Stream Summary					
	Total	Landfill	Incineration	Recycled	Other
Hazardous (Tonnes)	4021.8	121	1666.12	1240.03	995.05
Non-Hazardous (Tonnes)	22305.22	21.71	0	22099.47	184.04

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
Not applicable. Please note audit recommendations are evaluated. Where feasible the recommendations will become a site energy project and is tracked through the site's Environmental management objectives, targets and programmes. For high level energy information please refer to the EMP template. More detailed information is available for review at the Intel site.								
			SELECT					

Table R5: Power Generation: Where power is generated onsite (e.g. power generation facilities/food and drink industry)please complete the following information
 Not Applicable

Intel
Ireland
Ltd.,
Energy
Efficiency
Audit

December 19

2014

This document contains the submission from Intel Ireland Ltd in relation to the Industrial Emissions Licence Condition 7.1 and 7.2.

Industrial
Emissions
Licence Reg.
No.: P207-04

Executive Summary

Intel Ireland Ltd., has demonstrated focus on its energy performance through an energy management programme since commencing operations. Similarly, it was one of the first companies in Ireland to implement a formal Energy Management System, originally implementing the Irish standard IS 393, then subsequently once available, the European standard EN 16001 and then the international voluntary standard ISO 50001. The programme meets the requirements of Level 4 of energy management matrix

Level	Energy Policy	Organising	Motivation	Information Systems	Marketing	Investment
Level 4	Energy policy, action plan and regular review have commitment of top management as part of an environmental strategy	Energy management fully integrated into management structure. Clear delegation of responsibility for energy consumption.	Formal and informal channels of communication regularly exploited by energy manager and energy staff at all levels.	Comprehensive system sets targets, monitors consumption, identifies faults, quantifies savings and provides budget tracking.	Marketing the value of energy efficiency and the performance of energy management both within the organisation and outside it.	Positive discrimination in favour of 'green' schemes with detailed investment appraisal of all new-build and refurbishment opportunities.

The Leixlip operations are undergoing change and the audit covers a period of equipment de-install and install. The audit uses 2013 as baseline and covers 2014 from an opportunity perspective.

Energy Use	2013	Comment
Total Renewable Energy Generated (MWHrs)	34,781	Renewable energy referenced here as Heat Recovery.
Electricity Consumption (MWHrs)	339,760	
Fossil Fuels Consumption:		
Light Fuel Oil (m3)	47.13	
Natural gas (MWhr)	152,702	

Table. 1

The site has undergone an extensive investment programme. This upgraded equipment has required extensive commissioning and testing with a view to energy efficiency set-up. Particularly of note is the removal of outdated R22 chillers and the installation of new efficient chillers. New VSD compressors and efficient screw machines were installed also. An intensive heat recovery system in F14 was commissioned displacing the need for heat from natural gas from boilers for cleanroom heating. Through the period a number of detailed system reviews were carried out on boiler plant, HVAC systems, compressed air systems and nitrogen plant operation. At the time of completion of the audit some of these detailed reviews are ongoing. The services of a compressor

testing company were engaged to test individual compressor performance.

The energy audits form part of the continuous improvement within the energy management system. Priority is given to the significant energy users. These users are chilled water, compressed air generation, nitrogen production and HVAC.

The site has multiple systems to analyse the operation of equipment and there are multiple performance indicators to ensure equipment is operating in a controlled manner. Through the audit period, additional instrumentation was installed. This instrumentation has allowed the setup of new energy indicators at a system level.

These indicators include kWh per ton cooling for chilled water plant which is monitored for consumption across the sub components. Also compressed air is tracked against specific power consumption. These indicators are used as a template across the Intel Corporation.

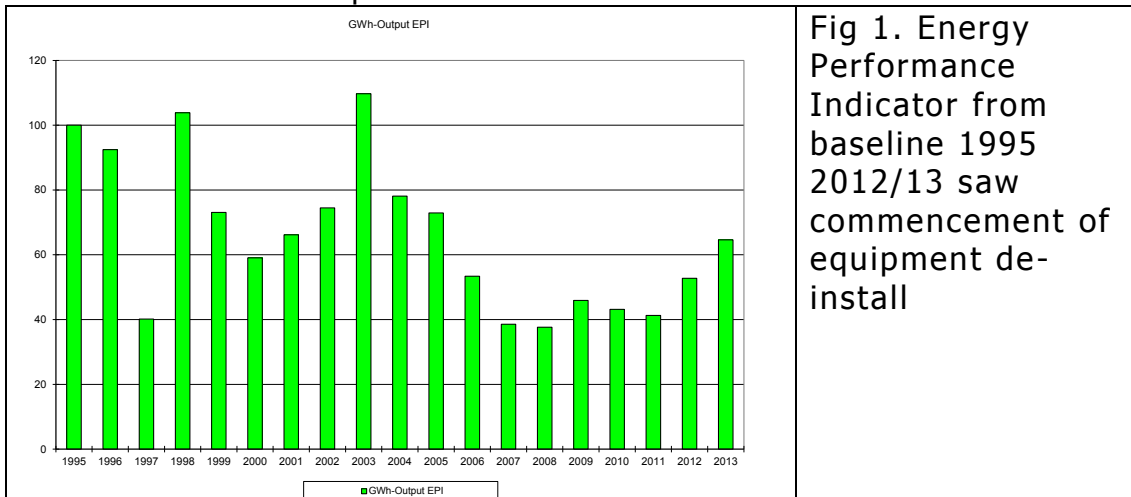


Fig 1. Energy Performance Indicator from baseline 1995 2012/13 saw commencement of equipment de-install

Over recent years in excess of €20m has been invested in energy efficiency retrofits. Some key projects included the complete changeout of lighting onsite to either intelligent occupancy lighting or LED fixtures, compressed air cross connect, heat recovery and chilled water control upgrades

The priority is to maintain the focus efficiency through commissioning, operational control and continued implementation of energy upgrade projects to reduce baseline consumption. The key areas of focus are completion of lighting upgrades, HVAC control improvements, VSD additions, heat recovery extension both in F24 and feasibility of extension of heat recovery to F10. The list is representative of the ongoing project implementation across the year.

Description	Target Date	kWh Saving	CO2 tonnes	Responsibility	Comment
Lighting upgrades	Q1 2015	438,000	184	Electrical department	Closeout of project currently underway
Fixed speed pumps to variable speed	Q3 2015	1,497,522	629	Mechanical department	Change of pressure control from valve to pump
AHU fan change from inlet guide vane control to variable speed on 28 fans	Q3 2015	87,600	37	Mechanical department	Change of pressure control from guide vane to fan
AHU control strategies	Q2 2015	547,500	230	Mechanical department	Optimise the use of AHU economisers
Full fresh air unit conversions	Q3 2015	533,265	741	Mechanical department	Change of AHU function from full fresh to recirculating units
Commissioning of new Heat recovery chiller in F24	Q1 2015	5,256,000	1,036	Construction Group	New heat recovery chiller added to provide heat for new loads
Golden boiler operation	Q2 2015	1,752,000	345	Mechanical department	Scheduling of most efficient boilers
Heat recovery extension to F10	Q4 2015	16,793,407	3,309	Mechanical department	Maximise use of heat recovery chillers in F14
Compressor scheduling	Q3 2015	1,314,000	790	Mechanical department	Ensure that the most efficient compressors meet the demand

Table 2.

Complaints and Incidents summary template		Lic No:	P0207-04	Year	2014
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
04/03/2014	Noise		CAG received a phone call from local resident stating that they have been unable to sleep due to a humming noise coming from the site.	Monitoring conducted at residents house. Meeting held with resident. Investigation showed Intel are within their IPPC limits for noise but has offered to do further detailed monitoring inside the property to determine if a different spec of windows would eliminate the issue. No response from resident.	Complete	13/05/2014	
04/07/2014	Noise		Local resident contacted CAG to inform them they had been woken up during the night by crashing & banging noise from the Intel site associated to construction noise.	CAG met with the resident & explained that a crane was operating onsite & that was the noise they heard. These works did not go through the appropriate approval process and therefore should not have happened at night. CAG assured the resident that this will not happen again and if there was a need for work to take place outside the factory at night time we would inform her beforehand	Complete	16/07/2014	
22/09/2014	Noise		Local Resident complained about noise coming from Intel site between 8am and 10am when he was in his farmyard.	A portable noise monitor was placed on the residents property. An extensive on site investigation was carried out. The report concluded that Intel was fully compliant with IE licence noise limits. Weather conditions significantly affect the noise levels at the property especially when wind speeds are low, other noise sources are reduced and wind is blowing from the site towards the property. This was communicated to the resident and he has made no other contact.	Complete	24/09/2014	
11/10/2014	Noise		Local resident contacted CAG over a weekend stating the noise from Intel over the last few weeks has increased & it was very annoying. CAG received a follow up text message from local resident on 13/01/2014 asking was monitoring still in place following previous	External monitor in stalled at residents house and interanal monitor was insalled 13/03/15	Ongoing		
23/10/2014	Noise		Two neighbours queried if a constant drone they heard was coming for the site. One resident stated there was a regular noise in the morning at the same time every day.	An investigation was conducted across the site but there was no definitive source identified that corresponded with the neighbours query. The filling of nitrogen tankers was examined as this had also been investigated previously but the site noise levels were in compliance with licence conditions. We have asked the neighbour to contact us at any time should there be a recurrence.	Complete	17/11/2014	
Total complaints open at start of reporting year		0					
Total new complaints received during reporting year		5					
Total complaints closed during reporting year		4					
Balance of complaints end of reporting year		1					

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 recurrence
04/12/2014	Other(exceedence of ELV found to be erroneous due to compliance sample contamination)	Licensed discharge point (SE1)	1. Minor	Sewer	Plant or equipment issues		Normal activities	EPA	New	The sampling line was flushed with water and periodically sampled to ensure that all residual tin was flushed out	The Intel Corporate Standard for waste water was updated to add a requirement for all new and non dedicated sampling equipment to be flushed and tested before use to avoid potential contamination.	Complete	26/02/2015	Low
Total number of incidents current year		1												
Total number of incidents previous year		6												
% decrease		83.33%												

WASTE SUMMARY	Lic No:	P0207-04	Year	2014
SECTION A-PRTR ON SITE WASTE TREATMENT AND WASTE TRANSFERS TAB- TO BE COMPLETED BY ALL IPPC AND WASTE FACILITIES		PRTR facility logon	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	
N/A	

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

P207-04 Schedule D: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

Design for the Environment (Technology Goals)

Intel Corporation develops and delivers a new chip manufacturing technology approximately every two years. The development cycle starts typically with six years external research in universities and government labs, followed by approximately four years joint research and development between Intel and suppliers followed by two years process development to produce a fully functional technology before transfer to high volume manufacturing (Figure 1). Intel has recognised that there is an opportunity for early engagement to effect change for environmental benefit during external and joint research, in addition to when the process is in high volume manufacturing mode. However, the optimum time to effect change for environmental design of the process is during the 2 years of final process development. The Intel Environmental Technology Development (TD) group is involved throughout this timeframe and has input into manufacturing process development, chemical selection, waste management, facility systems design and manufacturing equipment selection.

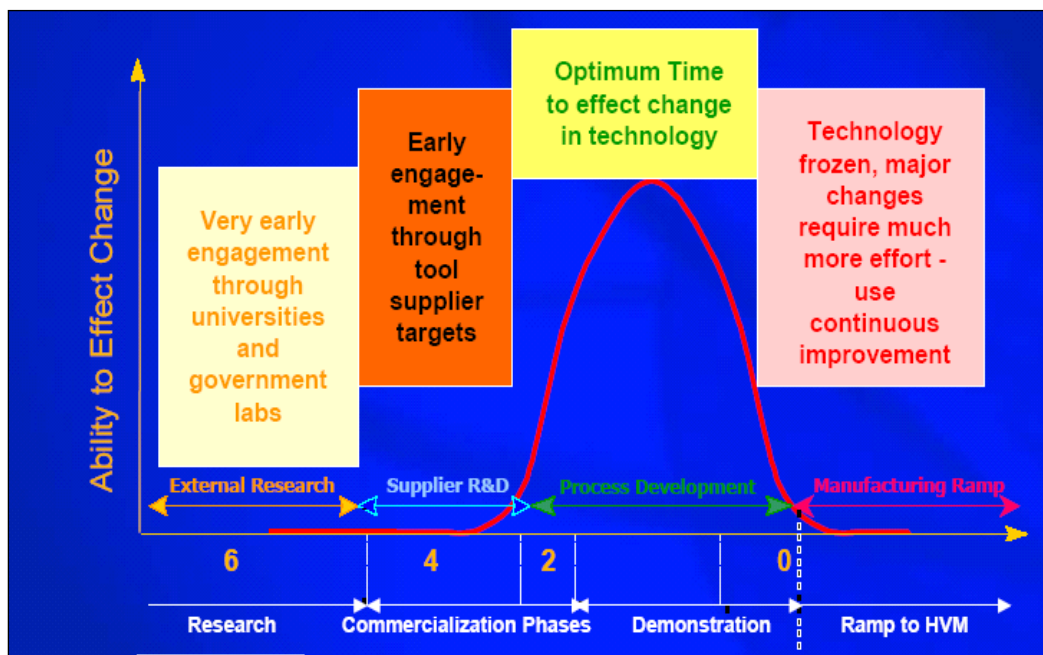


Figure 1: Effecting change during Intel process technology development

For each technology, goals are set for specific types of emissions, for example: - mass of VOCs or copper emitted per wafer produced. The methodology used for the setting of these goals is to first

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

evaluate the receiving environment at each of the High Volume Manufacturing (HVM) sites. Items considered during this review would include existing site permits, local area regulations, wastewater treatment plant capacity, air and water quality standards and demographic growth projections. Against this data is set projected wafer manufacturing capacities at each of the HVMs for each of the technologies. From this are derived acceptable emissions/wafer figures for each of the HVM sites. To set the corporate goal, the lowest emission/wafer figure so calculated is used. Once the goals have been ratified at the appropriate management level, measures are put in place during the development cycle to ensure the targets are met. Measures include material selection, material substitution, recipe optimisation, emissions treatment and waste segregation. In this way, the Corporation aims to ensure that the transfer of technologies to the HVMs can be successfully transferred without detrimental effect on the local environment.

Once the technology is transferred to a receiving HVM site, such as Intel Ireland, actual emissions per unit of product for each parameter are sampled and reported back to the development site and to the receiving factory site management to confirm that, when the technology is run in high volume manufacturing conditions, it performs to the goals that the Technology Development (TD) group is required to deliver.

The site is being developed to run the most advanced Intel technology and the benefits of this technologies emissions reduction goals will be realised once production starts.

Since the inception of the environmental technology goals process, a number of additional parameters have been included in the more recent years. Currently Intel has technology goals for reducing air, water and waste emissions per wafer produced.

Material Efficiency

Process Optimisation for Material Efficiency

Due to the very minute dimensions that are patterned onto a wafer during manufacture, process chemical and gas flow set points need to be very exact.

Process optimisation through the statistical 'Design of Experiments' methodology is a practice used extensively throughout the process to determine the wafer processing recipe set points such as gas and chemical flows and power during technology development.

Schedule D Reports: Report on the assessment of the efficiency of use of raw materials in processes and the reduction in waste generated.

Using this method, tests are carried out by varying equipment recipe set points and measuring the result on the wafer. For example, in a dry etch process; set-point variables for an etchant gas may be tested at varying flow rates. The flow that provides optimum results on the surface of the wafer is selected. Process optimisation ensures that excess chemicals, gases or energy are not consumed which conserves resources.

The current technology that will be manufactured in Intel Ireland uses a 12 inch (or 300mm) wafer which carries more than twice the number of dies that can be produced on the old 8 inch wafer. This economy of scale has given rise to an increase in production without a proportional increase in consumption of raw materials.

Yield Improvements

In all the manufacturing technologies operated on site, yield improvement is a focus area. This covers the line yield, (the number of wafers that are not scrapped in line), as well as die yield (which is the number of functioning die per wafer at end of line). The continuous effort to improve yield gives rise to more efficient use of raw material, thereby conserving resources.

For example; certain compounds reduce the number of defects on the product which can cause failures in circuits and reducing die yield. Failed circuits are discarded at end of process and require replacements. Use of these chemicals reduce these process losses and makes the manufacturing process more efficient, thereby reducing overall emissions and resource use per unit of production.

Proposed PRTR Parameters for 2015

Intel Ireland is proposing the following PRTR parameters for 2015. Please note that this is an indicative listing of pollutants to be emitted and may therefore change based upon actual manufacturing operations and emissions.

Emissions to Air:

Sector-Specific PRTR Pollutants

No. Annex II	Name
06	Ammonia (NH ₃)
03	Carbon dioxide (CO ₂)
02	Carbon monoxide (CO)
04	Hydro-fluorocarbons (HFCs)
08	Nitrogen oxides (NO _x /NO ₂)
05	Nitrous oxide (N ₂ O)
09	Perfluorocarbons (PFCs)
10	Sulphur hexafluoride (SF ₆)
80	Chlorine and inorganic compounds (as HCl)
86	Particulate Matter (PM ₁₀)

Note that 3 additional parameters were proposed in last year's AER to be included within the PRTR as these were included within the indicative sector-specific list. However, on review, methane was not included in the 2014 PRTR as emissions are comparable with ambient atmospheric levels.

01	Methane
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The following parameter was proposed and included within the 2014 PRTR. However, due to the estimated low emissions of this parameter (< 1% of the PRTR threshold value), we are proposing to omit this going forward.

11	Sulphur oxides (SO _x /SO ₂)
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On review of the EPA’s guidance note No. 4 EPA Guidance Note: Annual Environmental Report Annex on AER/PRTR Reporting and all PRTR parameters listed in Annex II of EC Regulation 166 of 2006, we wish to include non-methane volatile organic compounds in Intel’s 2015 PRTR/AER under “Remaining PRTR Pollutants”.

Remaining PRTR Pollutants

No. Annex II	Name
84	Fluorine and inorganic compounds (as HF)
07	Non-methane volatile organic compounds (NMVOC)

Emissions to Wastewater:

Sector-Specific PRTR Pollutants

No. Annex II	Name
12	Total Nitrogen
13	Total Phosphorus
17	Arsenic and compounds (as As)
19	Chromium and compounds(as Cr)
20	Copper and compounds (as Cu)
22	Nickel and compounds (as Ni)
23	Lead and compounds (as Pb)
24	Zinc and compounds (as Zn)
76	Total Organic Carbon (TOC) (as total C or as COD/3)
79	Chlorides (as total Cl)
82	Cyanides (as total CN)
83	Fluorides (as total F)

[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.18

REFERENCE YEAR	2014
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1. FACILITY IDENTIFICATION

Parent Company Name	Intel Ireland Limited
Facility Name	Intel Ireland Limited
PRTR Identification Number	P0207
Licence Number	P0207-03

Classes of Activity	
No.	class_name
	- Refer to PRTR class activities below

Address 1	Collinstown Industrial Park
Address 2	Leixlip
Address 3	
Address 4	
	Kildare
Country	Ireland
Coordinates of Location	-6.51258 53.3749
River Basin District	IEEA
NACE Code	2611
Main Economic Activity	Manufacture of electronic components
AER Returns Contact Name	Mark Rutherford
AER Returns Contact Email Address	mark.g.rutherford@intel.com
AER Returns Contact Position	EHS Manager
AER Returns Contact Telephone Number	01-6068896
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	
Production Volume	
Production Volume Units	
Number of Installations	
Number of Operating Hours in Year	
Number of Employees	4500
User Feedback/Comments	Owing to the new technology introduced to the site in 2014 and the associated chemicals/processes and abatement systems, some emissions have increased while some have decreased from 2013.
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
9(c)	Installations for surface treatment of substances, objects or products using organic solvents, in particular dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating
1(c)	Thermal power stations and other combustion installations
50.1	General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	Yes
Have you been granted an exemption?	No
If applicable which activity class applies (as per Schedule 2 of the regulations)?	5 - Other surface cleaning
Is the reduction scheme compliance route being used?	No

4. WASTE IMPORTED/ACCEPTED ONTO SITE

[Guidance on waste imported/accepted onto site](#)

Do you import/accept waste onto your site for on-site treatment (either recovery or disposal activities)?	No
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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs					QUANTITY		
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	Acid Gas Scrubbers Emission Point 2	Ammonia Scrubbers Emission Point 3	VOC Emission Points Emission Point 4	Trimix Emission Point 5	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description								
06	Ammonia (NH3)	M	EN 14791:2005		0.0	0.0	76.84	0.0	117.7	194.54	0.0	0.0
02	Carbon monoxide (CO)	M	EN 15058:2004		67.0	0.0	0.0	3180.0	1800.0	5047.0	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	M	EN 14792:2005		8636.2	0.0	0.0	1615.7	194.6	10446.5	0.0	0.0
80	Chlorine and inorganic compounds (as HCl)	M	EN 1911-1 to 3:2003		0.0	79.9	0.0	0.0	0.0	79.9	0.0	0.0
03	Carbon dioxide (CO2)	C	ETS		27616500.0	0.0	0.0	1453500.0	0.0	29070000.0	0.0	0.0
04	Hydro-fluorocarbons (HFCs)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC. Fugitive losses based upon estimates losses from on-site chillers	0.0	7.0	0.0	0.0	0.0	1154.0	0.0	1147.0
05	Nitrous oxide (N2O)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC.	0.0	6400.0	0.0	0.0	0.0	6400.0	0.0	0.0
10	Sulphur hexafluoride (SF6)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC.	0.0	8.0	0.0	0.0	0.0	8.0	0.0	0.0
09	Perfluorocarbons (PFCs)	C	OTH	Mass Balance Calculations and Emission Factors from IPPC.	0.0	98.0	0.0	0.0	0.0	98.0	0.0	0.0
86	Particulate matter (PM10)	C	OTH	Mass Balance Calculations and Emission Factors	1633.6	0.0	0.0	1021.4	0.0	2655.0	0.0	0.0
11	Sulphur oxides (SOx/SO2)	C	OTH	Mass Balance Calculations and Emission Factors	128.9	454.37	0.0	7.9	0.0	591.17	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs				
No. Annex II	Name	M/C/E	Method Used		Emission Point 1	Acid Gas Scrubbers Emission Point 2	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description					
84	Fluorine and inorganic compounds (as HF)	M	ISO/DIS 15713:2004		132.5	0.0	132.5	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

POLLUTANT		METHOD			Please enter all quantities in this section in KGs						
Pollutant No.	Name	M/C/E	Method Used		Emission Point 1	Acid Gas Scrubbers Emission Point 2	VOC Emission Points Emission Point 3	Speciality Exhaust Emission Point 3	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
			Method Code	Designation or Description							
330	Organic solvents	C	MAB	Determined using emission factors for solvents used e.g. for wipes	0.0	1102.0	0.0		28913.0	0.0	27811.0
351	Total Organic Carbon (as C)	M	CRM EN 1911-1 to	Continuous emissions monitoring data and periodic flow measurements	0.0	424.13	0.0		424.13	0.0	0.0
235	Total acids	M	3:2003	Part 1 only and IC analysis	575.7	0.0	0.0		575.7	0.0	0.0
210	Dust	M	ALT EN 13284-1		0.0	0.0	61.6		61.6	0.0	0.0

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
17	Arsenic and compounds (as As)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	0.64082312	0.64082312	0.0	0.0
18	Cadmium and compounds (as Cd)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	2.52	2.52	0.0	0.0
79	Chlorides (as Cl)	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	84271.132579	84271.132579	0.0	0.0
20	Copper and compounds (as Cu)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	62.7373772	62.7373772	0.0	0.0
83	Fluorides (as total F)	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	7482.518837	7482.518837	0.0	0.0
23	Lead and compounds (as Pb)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	1.25654082	1.25654082	0.0	0.0
21	Mercury and compounds (as Hg)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	1.68	1.68	0.0	0.0
22	Nickel and compounds (as Ni)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	2.820633734	2.820633734	0.0	0.0
12	Total nitrogen	M	OTH	Total Nitrogen Analyser IS EN 12160:2003	26104.94632	26104.94632	0.0	0.0
76	Total organic carbon (TOC) (as total C)	M	OTH	Calculated from COD/3. "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4500-PB and Method 4500-PD published by the APHA, AWWA and WEF	26785.72839	26785.72839	0.0	0.0
13	Total phosphorus	M	OTH	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	1031.059798	1031.059798	0.0	0.0
24	Zinc and compounds (as Zn)	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	124.004144	124.004144	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER					Please enter all quantities in this section in KGs			
POLLUTANT		METHOD			QUANTITY			
Pollutant No.	Name	M/C/E	Method Code	Method Used	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	M	OTH	Method based on APHA, 2005, 21st Edition, Method 4500-NH3 F	11834.068954429	11834.068954429	0.0	0.0
303	BOD	M	OTH	Method based on APHA, 2005, 21st Edition, Method 5210-B.	45856.8427	45856.8427	0.0	0.0
327	Nitrate (as N)	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	8984.145886463	8984.145886463	0.0	0.0
343	Sulphate	M	OTH	Ion chromatography method based on "Standard Methods for the Examination of Water and Wastewater, 2005, 21st edition, Method 4110B published by the APHA, AWWA and WEF	1128793.48373815	1128793.48373815	0.0	0.0
240	Suspended Solids	M	OTH	Method based on APHA, 2005, 21st Edition, Method 2540-D	46170.93191	46170.93191	0.0	0.0
363	Total Dissolved Solids	M	OTH	Method based on APHA, 2005, 21st Edition, Method 2540C	1733947.064	1733947.064	0.0	0.0
347	Total heavy metals	M	CRM	U.S. EPA method 200.8 (supplement 1 rev. 5.4 May 1994)	247.5617887	247.5617887	0.0	0.0

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Licence/Permit No of Next Destination Facility Non-Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste - Address of Next Destination Facility Non-Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	06 01 01	Yes	293.58	sulphuric acid and sulphurous acid	D9	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	06 01 01	Yes	46.104	sulphuric acid and sulphurous acid	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
To Other Countries	06 01 02	Yes	1.424	hydrochloric acid	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
To Other Countries	06 01 03	Yes	0.722	hydrochloric acid	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
Within the Country	06 01 04	Yes	91.58	phosphoric and phosphorous acid	D9	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	06 01 05	Yes	0.12	nitric acid and nitrous acid	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
To Other Countries	06 01 06	Yes	8.207	other acids	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
To Other Countries	06 02 05	Yes	0.142	other bases	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
To Other Countries	07 01 03	Yes	4.219	organic halogenated solvents, washing liquids and mother liquors	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port, South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port, South Wirral Cheshire CH65 4 EQ,United Kingdom
Within the Country	08 03 18	No	0.315	waste printing toner other than those mentioned in 08 03 17	R12	M	Weighed	Offsite in Ireland	Brian Kehoe,WFP-CW-11-06-01	Bagenalstown Industrial Estate,Royal Oak Road,Bagenalstown,,Co. Carlow,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
Within the Country	08 04 99	No	0.69	wastes not otherwise specified	R4	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
Within the Country	11 01 06	Yes	21.12	acids not otherwise specified sludges and filter cakes other than those mentioned in 11 01 09	D9	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
Within the Country	11 01 10	No	121.0	sludges and filter cakes other than those mentioned in 11 01 09	D5	M	Weighed	Offsite in Ireland	Greenstar (Knockharley Landfill),W146-02	Knockharley,Navan,Co. Meath,,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
Within the Country	11 01 10	No	433.28	sludges and filter cakes other than those mentioned in 11 01 09	R1	M	Weighed	Offsite in Ireland	Lagan Cement Limited,P0487-06	Killaskillen,Kinnegad,,Co. Meath,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	11 01 11	Yes	347.28	aqueous rinsing liquids containing dangerous substances	R5	M	Weighed	Abroad	Koppers UK Ltd.,EA (UK) BV770IL Variation FP30345E	Port Clarence Works Huntsman Drive,Huntsman Drive,Port Clarence Middlebrough,TS215D ,United Kingdom	Koppers UK Ltd.,EA (UK) BV770IL Variation FP30345E Variation DP35325R	Port Clarence Works Huntsman Drive,Huntsman Drive,Port Clarence Middlebrough,TS215D ,United Kingdom
To Other Countries	11 01 16	Yes	2.595	saturated or spent ion exchange resins	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,AS1G00508	125541,,Brunsbüttel,,Germany	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
Within the Country	11 01 16	Yes	5.95	saturated or spent ion exchange resins	R4	E	Weighed	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	11 02 05	Yes	3.45	wastes from copper hydrometallurgical processes containing dangerous substances	R4	M	Weighed	Abroad	Veolia Environmental Services Technical solutions Ltd. (c/o Eco-safe Systems Ltd.),W0054-02,Unit 1A,Allied Industrial Estate, Kylesmore Road Ballyfermot ,D10,Ireland	Unit 1A,Allied Industrial Estate, Kylesmore Road Ballyfermot ,D10,Ireland	Mastermelt Refining Services Ltd.,CB,LNS12WL Sava GmbH & Co. Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
To Other Countries	12 01 16	Yes	1.518	waste blasting material containing dangerous substances	D10	C	Volume Calculation	Abroad	Sava GmbH & Co. Kg,AS1G00508	125541,,Brunsbüttel,,Germany	Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	125541,,Brunsbüttel,,Germany
Within the Country	13 02 08	Yes	3.85	other engine, gear and lubricating oils	R9	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Enva Ireland Ltd.,W0184-01,Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland
Within the Country	13 05 07	Yes	5.18	oily water from oil/water separators	D8	E	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Enva Ireland Ltd.,W0184-01,Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland
To Other Countries	14 06 01	Yes	0.646	chlorofluorocarbons, HCFC, HFC	R11	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	A-Gas Limited,EPR/BP3390F5,Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom	Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom
Within the Country	14 06 03	Yes	572.58	other solvents and solvent mixtures	R2	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050 02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	15 01 01	No	1.6	paper and cardboard packaging	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188 01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Greenstar West Dublin,W0188 01	Greenstar West Dublin,W0188 01
Within the Country	15 01 02	No	9.62	plastic packaging	R13	M	Weighed	Offsite in Ireland	Greenstar Bray,W0053-03	Greenstar Limited,Bray Depot,Fassaroe,Bray Co. Wicklow,Ireland Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland	Greenstar Bray,W0053-03	Greenstar Bray,W0053-03
Within the Country	15 01 03	No	3071.89	wooden packaging	R12	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01	Greyhound Recycling and Recovery,W0205-01	Greyhound Recycling and Recovery,W0205-01	Greyhound Recycling and Recovery,W0205-01
Within the Country	15 01 06	No	197.82	mixed packaging	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188 01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Greenstar West Dublin,W0188 01	Greenstar West Dublin,W0188 01
To Other Countries	15 01 10	Yes	2.966	packaging containing residues of or contaminated by dangerous substances	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,AS1G00508	125541,,Brunsbüttel,,Germany	Sava GmbH & Co. Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany
To Other Countries	15 02 02	Yes	121.9447	absorbents, filter materials, wiping cloths and protective clothing contaminated by dangerous substances	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,AS1G00508	125541,,Brunsbüttel,,Germany	Sava GmbH & Co. Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany
Within the Country	15 02 03	No	27.28	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188 01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Greenstar West Dublin,W0188 01	Greenstar West Dublin,W0188 01
Within the Country	16 02 14	No	2.96836	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	D5	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-09-0012-01	Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin	Electrical Waste Management Ltd,WFP-DS-09-0012-01	Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin
Within the Country	16 02 14	No	145.4496	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	Electrical Waste Management Ltd,WFP-DS-09-0012-01	Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin	Electrical Waste Management Ltd,WFP-DS-09-0012-01	Block 648,Jordanstown Drive,Greenogue Ind Est,Rathcoole,Co. Dublin
Within the Country	16 02 14	No	18.7402	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	D5	E	Volume Calculation	Offsite in Ireland	Rilta Environmental Ltd.,Waste licence 192-02	Block 402 Greenogue Business Park Rathcoole,,Dublin,Ireland	Rilta Environmental Ltd.,Waste licence 192-02	Block 402 Greenogue Business Park Rathcoole,,Dublin,Ireland

Within the Country	16 02 14	No	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	E	Volume Calculation	Offsite in Ireland	Rilita Environmental Ltd., Waste licence 192-02	Block 402 Greenogue Business Park, Rathcoole, Dublin, Ireland		
Within the Country	16 03 03	Yes	inorganic wastes containing dangerous substances	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	Veolia Environmental Services Technical Solutions Ltd, W0050-02, Corrin, Fermoy, Co. Cork, Ireland	Corrin, Fermoy, Co. Cork, Ireland
To Other Countries	16 03 03	Yes	inorganic wastes containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	Sava GmbH & Co. Kg, A51G00508, Osterweute 125541, Brunsbuttel, Germany	Osterweute 125541, Brunsbuttel, Germany
Within the Country	16 03 04	No	inorganic wastes other than those mentioned in 16 03 03	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland		
To Other Countries	16 03 05	Yes	organic wastes containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	Sava GmbH & Co. Kg, A51G00508, Osterweute 125541, Brunsbuttel, Germany	Osterweute 125541, Brunsbuttel, Germany
Within the Country	16 03 05	Yes	organic wastes containing dangerous substances	R1	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	Veolia Environmental Services Technical Solutions Ltd, W0050-02, Corrin, Fermoy, Co. Cork, Ireland	Corrin, Fermoy, Co. Cork, Ireland
To Other Countries	16 03 05	Yes	organic wastes containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	Veolia Environmental Services, B55193IE, Ellesmere Port Incinerator, Cleanaway Limited	Ellesmere Port Incinerator, Cleanaway Limited
To Other Countries	16 05 04	Yes	gases in pressure containers (including halons) containing dangerous substances	R11	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	A-Gas Limited, EPR/BP3390F5, Banyard Road, Portbury West, Bristol, BS207XH, United Kingdom	Banyard Road, Portbury West, Bristol, BS207XH, United Kingdom
To Other Countries	16 05 08	Yes	discarded organic chemicals consisting of or containing dangerous substances	D10	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland	Sava GmbH & Co. Kg, A51G00508, Osterweute 125541, Brunsbuttel, Germany	Osterweute 125541, Brunsbuttel, Germany
Within the Country	16 05 09	No	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd, W0050-02	Corrin, Fermoy, Co. Cork, Ireland		
Within the Country	16 06 01	Yes	lead batteries	R4	M	Weighed	Offsite in Ireland	KMK Metals Recycling Limited, W0113-03	Offaly, Ireland	H.J. Enthoven & Sons, BL5598, Darley Dale Smelter, South Darley, Matlock, DE4 2LP, United Kingdom	Darley Dale Smelter, South Darley, Matlock, DE4 2LP, United Kingdom
Within the Country	17 01 07	No	mixture of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06	R12	E	Weighed	Offsite in Ireland	Roadstone Wood Limited, WFP-DS-11-0005-01	Belgard Quarry, Fortunestown, Tallaght, Dublin 24, Ireland		
Within the Country	17 02 02	No	glass	R12	M	Weighed	Offsite in Ireland	Glassco Recycling Limited, WFP-KE-08-0357-01	Road, Naas Co. Kildare, Ireland	Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Dublin 22, Ireland	
Within the Country	17 02 03	No	plastic	R12	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery, W0205-01	Hammond Lane	Hammond Lane	
Within the Country	17 04 01	No	copper, bronze, brass	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal, WFP-DC-09-0013-01	Hammond Lane	Metal, Pigeon house Road, Dublin 4, Ireland	
Within the Country	17 04 02	No	aluminium	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal, WFP-DC-09-0013-01	Hammond Lane	Metal, Pigeon house Road, Dublin 4, Ireland	
Within the Country	17 04 05	No	iron and steel	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal, WFP-DC-09-0013-01	Hammond Lane	Metal, Pigeon house Road, Dublin 4, Ireland	
Within the Country	17 04 07	No	mixed metals	R12	M	Weighed	Offsite in Ireland	Hammond Lane Metal, WFP-DC-09-0013-01	Hammond Lane	Metal, Pigeon house Road, Dublin 4, Ireland	
Within the Country	17 08 02	No	gypsum-based construction materials other than those mentioned in 17 08 01	R13	M	Weighed	Offsite in Ireland	Allied Waste Management Limited, WFP-KE-08-0347-01	Clonmellon Industrial Estate, Clonmellon, Navan, Ireland		
To Other Countries	17 09 03	Yes	other construction and demolition wastes (including mixed wastes) containing dangerous substances	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg, A51G00508	Osterweute 125541, Brunsbuttel, Germany	Sava GmbH & Co. Kg, A51G00508, Osterweute 125541, Brunsbuttel, Germany	Osterweute 125541, Brunsbuttel, Germany
Within the Country	18 01 03	Yes	wastes whose collection and disposal is subject to special requirements in order to prevent infection	D10	M	Weighed	Offsite in Ireland	SRCL Limited, W0055-02	430 Beech Road, Western Industrial Estate, Naas Road, Dublin 12, Ireland	SRCL Limited, W0055-02, 430 Beech Road, Western Industrial Estate, Naas Road, Dublin 12, Ireland	430 Beech Road, Western Industrial Estate, Naas Road, Dublin 12, Ireland
Within the Country	20 01 01	No	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Balleys Recycling, WFP-FG-08-0002-01	Park, Ballycoolin Road, Dublin 11, Ireland		
Within the Country	20 01 02	No	glass	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin, W0188-01	MRF West Dublin Site 14b 3A, Greenogue Industrial Estate, Rathcoole, Dublin, Ireland		
Within the Country	20 01 08	No	biodegradable kitchen and canteen waste	R12	M	Weighed	Offsite in Ireland	College Proteins Ltd., P0037-03	College Road, Nobber, Co. Meath, Ireland		
Within the Country	20 01 08	No	biodegradable kitchen and canteen waste	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin, W0188-01	MRF West Dublin Site 14b 3A, Greenogue Industrial Estate, Rathcoole, Dublin, Ireland		
Within the Country	20 01 21	Yes	fluorescent tubes and other mercury-containing waste	R5	M	Weighed	Offsite in Ireland	Irish lamps Recycling Co. Ltd., WFP-KE-08-0348-01	Woodstock Ind. Estate, Kilkenny Road, Athy, Co. Kildare, Ireland	Irish lamps Recycling Co. Ltd., WFP-KE-08-0348-01, Woodstock Ind. Estate, Kilkenny Road, Athy, Co. Kildare, Ireland	Woodstock Ind. Estate, Kilkenny Road, Athy, Co. Kildare, Ireland
Within the Country	20 01 25	No	edible oil and fat	R13	M	Weighed	Offsite in Ireland	Frylite, WFP-DS-10-0009-01	Unit 12, Ballymount Industrial Estate, Ballymount, Dublin 12, Ireland		
Within the Country	20 01 35	Yes	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R12	M	Weighed	Offsite in Ireland	Irish lamps Recycling Co. Ltd., WFP-KE-08-0348-01	Woodstock Ind. Estate, Kilkenny Road, Athy, Co. Kildare, Ireland	Irish lamps Recycling Co. Ltd., WFP-KE-08-0348-01, Woodstock Ind. Estate, Kilkenny Road, Athy, Co. Kildare, Ireland	Woodstock Ind. Estate, Kilkenny Road, Athy, Co. Kildare, Ireland
Within the Country	20 01 35	Yes	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R12	M	Weighed	Offsite in Ireland	Rehab recycling, WFP-DS-10-0008-03	Unit 77 Broomhill Road, Tallaght, Dublin, Ireland	Rehab Enterprises Limited, WFP-DS-10-0008-03, Unit 77, Broomhill Road, Tallaght, Dublin 24, Ireland	Unit 77 Broomhill Road, Tallaght, Dublin 24, Ireland
Within the Country	20 01 36	No	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R12	M	Weighed	Offsite in Ireland	Rehab recycling, WFP-DS-10-0008-03	Unit 77 Broomhill Road, Tallaght, Dublin, Ireland		
Within the Country	20 01 38	No	wood other than that mentioned in 20 01 37	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park, W0183-01	Millennium Park, Cappagh Road, Ballycoolin, Dublin 11, Ireland		
Within the Country	20 01 38	No	wood other than that mentioned in 20 01 37	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin, W0188-01	MRF West Dublin Site 14b 3A, Greenogue Industrial Estate, Rathcoole, Dublin, Ireland		
Within the Country	20 01 40	No	metals	D13	M	Weighed	Offsite in Ireland	Greenstar Bray, W0053-03	Wicklow, Ireland	Greenstar Limited, Bray Depot, Fassaroe, Bray Co. Wicklow, Ireland	
Within the Country	20 01 40	No	metals	R13	M	Weighed	Offsite in Ireland	Greenstar Millennium Park, W0183-01	Millennium Park, Cappagh Road, Ballycoolin, Dublin 11, Ireland		
Within the Country	20 01 40	No	metals	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin, W0188-01	MRF West Dublin Site 14b 3A, Greenogue Industrial Estate, Rathcoole, Dublin, Ireland		

Within the Country	20 03 01	No	1415.16	mixed municipal waste	R12	M	Weighed	Offsite in Ireland	Greyhound Recycling and Recovery,W0205-01	Crag Avenue,Clondalkin Industrial Estate,Clondalkin,Dublin 22,Ireland		
Within the Country	20 03 03	No	28.0	street-cleaning residues	D8	C	Volume Calculation	Offsite in Ireland	Dublin City Council (Ringsend WWTP),D0034-01	Drainage Services ,Environmental and Engineering Department ,Civic Offices Wood Quay ,Dublin 8,Ireland		
Within the Country	20 03 07	No	0.4237	bulky waste	D13	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01	Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland		
Within the Country	20 03 07	No	1.8063	bulky waste	R12	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01	Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland		
Within the Country	20 03 07	No	92.2545	bulky waste	D13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	20 03 07	No	392.1777	bulky waste	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	08 03 18	No	0.1786	waste printing toner other than those mentioned in 08 03 17	R13	M	Weighed	Offsite in Ireland	Brian Kehoe,WFP-CW-11-06-01	Bagenalstown Industrial Estate,Royal Oak Road,Bagenalstown, Co. Carlow,Ireland		
Within the Country	15 01 02	No	1.64	plastic packaging	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	17 01 01	No	3168.0	concrete	R10	M	Weighed	Offsite in Ireland	Behans Land Restoration,W0247-01	Blackhall Soil Recovery Facility,Blackhall ,Punchestown ,Naas Co. Kildare,Ireland		
Within the Country	17 05 04	No	171.4	soil and stones other than those mentioned in 17 05 03	R10	M	Weighed	Offsite in Ireland	Arthurstown Landfill,W0004-04	Arthurstown Landfill,Arthurstown ,Co. Kildare,Ireland		
Within the Country	17 05 04	No	4428.0	soil and stones other than those mentioned in 17 05 03	R10	M	Weighed	Offsite in Ireland	Behans Land Restoration,W0247-01	Blackhall Soil Recovery Facility,Blackhall ,Punchestown ,Naas Co. Kildare,Ireland		
Within the Country	17 05 04	No	1075.25	soil and stones other than those mentioned in 17 05 03	R10	M	Weighed	Offsite in Ireland	Punchersgrange,WFP-KE-13-0068-01	Punchersgrange ,Kilmeague ,Naas, Co. Kildare,Ireland		
Within the Country	19 09 05	No	25.44	saturated or spent ion exchange resins	D13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	17 05 04	No	39.1	soil and stones other than those mentioned in 17 05 03	R10	M	Weighed	Offsite in Ireland	Mylerstown,COR-KE-08-0003-01	Mylerstown,,Roberstown ,Co. Kildare,Ireland		
Within the Country	17 03 02	No	468.0	bituminous mixtures containing other than those mentioned in 17 03 01	R10	M	Weighed	Offsite in Ireland	Behans Land Restoration,W0247-01	Blackhall Soil Recovery Facility,Blackhall ,Punchestown ,Naas Co. Kildare,Ireland		
Within the Country	20 01 01	No	1.958	paper and cardboard	R13	M	Weighed	Offsite in Ireland	Greenstar Millennium Park,W0183-01	Millennium Park,Cappagh Road,Ballycoolin,Dublin 11,Ireland		
Within the Country	20 01 08	No	93.0	biodegradable kitchen and canteen waste	R13	M	Weighed	Offsite in Ireland	BEOFS Ltd.,WFP-KX-09-0004-01	Campbell Community ,Ballytobin ,Callan ,Co. Kilkenny,Ireland		
Within the Country	20 01 35	Yes	2.84	discarded electrical and electronic equipment other than those mentioned in 20 01 21 and 20 01 23 containing hazardous components	R12	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland	Electrical Waste Management Limited,WFP-DS-09-0012-01,Block 648,Jordanstown Drive ,Greenogue Industrial Estate,Rathcoole Co. Dublin,Ireland	Block 648,Jordanstown Drive ,Greenogue Industrial Estate,Rathcoole Co. Dublin,Ireland
Within the Country	20 01 36	No	1.807	discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35	R12	M	Weighed	Offsite in Ireland	Electronic Recycling,WFP-DC-09-0015-01	Unit 20 Jamestown Business Park,Jamestown Road,Finglas,Dublin 11,Ireland		
Within the Country	20 01 38	No	11.46	wood other than that mentioned in 20 01 37	R12	M	Weighed	Offsite in Ireland	CIS Irish Forest Products Limited,P0337-01	Irish Forest Products Limited,Shannon Street,Mountrath,Co. Laois,Ireland		
Within the Country	20 03 07	No	1.1178	bulky waste	R13	M	Weighed	Offsite in Ireland	Greenstar West Dublin,W0188-01	MRF West Dublin Site 14b 3A,Greenogue Industrial Estate,Rathcoole,Dublin,Ireland		
Within the Country	17 05 04	No	1412.8	soil and stones other than those mentioned in 17 05 03	R10	M	Weighed	Offsite in Ireland	Phoenix Rock Enterprises Ltd.,WFP-MH-11-0012-01	Phoenix Rock Enterprises Ltd.,Moylin ,Longwood, Co. Meath,Ireland		
To Other Countries	06 01 01	Yes	0.76	sulphuric acid and sulphurous acid	R6	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,AS1G00508,Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany
To Other Countries	06 01 05	Yes	0.037	nitric acid and nitrous acid	D10	M	Weighed	Abroad	Sava GmbH & Co. Kg,AS1G00508	Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany	
Within the Country	06 13 02	Yes	1.7	spent activated carbon (except 06 07 02)	D10	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Umweltservice,N/A,Krombacher Strasse ,42 - 46,Kreuztal-Krombach,57223,Germany	Krombacher Strasse ,42 - 46,Kreuztal-Krombach,57223,Germany
To Other Countries	11 01 11	Yes	101.61	aqueous rinsing liquids containing dangerous substances	R5	M	Weighed	Abroad	Veolia Environmental Services,Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Veolia Environmental Services,BSS193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
To Other Countries	11 01 11	Yes	148.9	aqueous rinsing liquids containing dangerous substances	R5	M	Weighed	Abroad	Edelchemie (UK) Ltd.,Eco-Option House Lockstock Works ,Griffiths Road Lockstock,Northwich CW9 &NU,United Kingdom	Edelchemie (UK) Ltd.,Eco-Option House Lockstock Works ,Griffiths Road Lockstock,Northwich CW9 &NU,United Kingdom	Edelchemie (UK) Ltd.,Eco-Option House Lockstock Works ,Griffiths Road Lockstock,Northwich CW9 &NU,United Kingdom	Edelchemie (UK) Ltd.,Eco-Option House Lockstock Works ,Griffiths Road Lockstock,Northwich CW9 &NU,United Kingdom
To Other Countries	11 05 04	Yes	3.29	spent flux	R11	M	Weighed	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	A-Gas Limited,EPR/BP3390FS,Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom	Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom
To Other Countries	08 04 99	No	1.2	wastes not otherwise specified	D10	M	Weighed	Abroad	Veolia Environmental Services,Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom		
Within the Country	13 05 07	Yes	3.373	oily water from oil/water separators	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	13 05 07	Yes	64.2	oily water from oil/water separators	D10	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0184-01	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Enva Ireland Ltd.,W0184-01,Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland	Clonminam Industrial Estate ,,Portlaoise,Co. Laois,Ireland
Within the Country	13 08 99	Yes	2.02	wastes not otherwise specified	R2	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	14 06 03	Yes	906.045	other solvents and solvent mixtures	D10	M	Weighed	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland

Within the Country	15 02 03	No	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	15.798	D10	M	Weighted	Offsite in Ireland	Lagan Cement Limited,P0487-06	Killaskillen,Kinnegad,,Co. Meath,Ireland		
To Other Countries	15 02 03	No	absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02	25.603	D10	M	Weighted	Abroad	Sava GmbH & Co. Kg,A51G00508	Osterweute 125541,,Brunsbüttel,,Germany		
Within the Country	16 02 14	No	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	8.38	R4	M	Weighted	Offsite in Ireland	A1 Metals/Hegarty's Metal Processors (International) Ltd.,ATF WMP007E	,Aeragar,Mountmellick,Co. Laois,Ireland		
Within the Country	16 02 14	No	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	32.2	D10	M	Weighted	Offsite in Ireland	A1 Metals/Hegarty's Metal Processors (International) Ltd.,ATF WMP007E	,Aeragar,Mountmellick,Co. Laois,Ireland		
Within the Country	16 02 16	No	components removed from discarded equipment other than those mentioned in 16 02 09 to 16 02 13	3.53	R4	M	Weighted	Offsite in Ireland	Mastermelt Refining Services Ltd.,CB/LN5512WL	Staden Lane,Ashbourne Road,Buxton,Derbyshire SK17 9RZ,United Kingdom		
Within the Country	16 03 03	Yes	inorganic wastes containing dangerous substances	0.63	R2	M	Weighted	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	16 03 06	No	organic wastes other than those mentioned in 16 03 05	0.001	D10	M	Weighted	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		
To Other Countries	16 05 04	Yes	gases in pressure containers (including halons) containing dangerous substances	1.571	D10	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	A-Gas Limited,EPR/BP3390FS,Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom	Banyard Road,Portbury West,Bristol,BS207XH,United Kingdom
To Other Countries	16 05 04	Yes	gases in pressure containers (including halons) containing dangerous substances	0.04	D10	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Remondis 71075031,Niederlassung Bramsche,Am Kanal 9,,49565 Bramsche,Germany	Niederlassung Bramsche,Am Kanal 9,,49565 Bramsche,Germany
Within the Country	16 05 06	Yes	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	0.03	R2	M	Weighted	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
Within the Country	16 05 07	Yes	discarded inorganic chemicals consisting of or containing dangerous substances	9.58	D9	C	Volume Calculation	Offsite in Ireland	Enva Ireland Ltd.,W0041-01	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Enva Ireland Ltd.,W0041-01,Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland	Smithstown Industrial Estate,,Shannon,Co. Clare,Ireland
To Other Countries	16 05 07	Yes	discarded inorganic chemicals consisting of or containing dangerous substances	0.06	D10	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany
To Other Countries	16 05 07	Yes	discarded inorganic chemicals consisting of or containing dangerous substances	0.03	R2	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
Within the Country	16 05 08	Yes	discarded organic chemicals consisting of or containing dangerous substances	0.04	R2	M	Weighted	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02,Corrin,Fermoy,Co. Cork,,Ireland	Corrin,Fermoy,Co. Cork,,Ireland
To Other Countries	16 05 08	Yes	discarded organic chemicals consisting of or containing dangerous substances	0.16	D10	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
To Other Countries	16 05 09	No	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08	0.36	D10	M	Weighted	Abroad	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany		
Within the Country	16 05 09	No	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08	4.43	R2	M	Weighted	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Cappincur Industrial Estate,Daingean Road,Tullamore,Co Offaly,Ireland	
Within the Country	16 06 02	Yes	Ni-Cd batteries	3.086	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Limited,W0113-03	Offaly,Ireland	Accure: Gmbh,52.03.06.06-ACCU-9/99,Wiehagen 12-14,,Mülheim an der Ruhr,45472,Germany	Wiehagen 12-14,,Mülheim an der Ruhr,45472,Germany
Within the Country	16 06 05	No	other batteries and accumulators	0.12	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Limited,W0113-03	Offaly,Ireland		
To Other Countries	16 10 02	No	aqueous liquid wastes other than those mentioned in 16 10 01	8.84	D13	M	Weighted	Abroad	Sava GmbH & Co. Kg,A51G00508,Osterweute 125541,,Brunsbüttel,,Germany	Osterweute 125541,,Brunsbüttel,,Germany		
Within the Country	16 10 02	No	aqueous liquid wastes other than those mentioned in 16 10 01	0.075	D10	M	Weighted	Offsite in Ireland	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland		
To Other Countries	17 06 05	Yes	construction materials containing asbestos (18)	0.5	D1	M	Weighted	Abroad	Rilta Environmental Ltd.,Waste licence 192-02	Block 402 Greenogue Business Park ,Rathcoole,,Dublin,Ireland	Grossenasper Entsorgungsgesellschaft mbH & Co KG,EG0108,Biomohler,Str 57a,DE 24623,Grossenasp,Germany	Biomohler,Str 57a,DE 24623,Grossenasp,Germany
To Other Countries	20 01 27	Yes	paint, inks, adhesives and resins containing dangerous substances	0.4	D10	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Veolia Environmental Services,BS5193IE,Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom	Ellesmere Port Incinerator,Cleanaway Limited Bridges Road,Ellesmere Port,South Wirral Cheshire CH65 4 EQ,United Kingdom
Within the Country	20 01 33	Yes	batteries and accumulators included in 16 06 01, 16 06 02 or 16 06 03 and unsorted batteries and accumulators containing these batteries	0.397	R4	M	Weighted	Offsite in Ireland	KMK Metals Recycling Limited,W0113-03	Offaly,Ireland	KMK Metals Recycling Limited,W0113-03,Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland	Cappincur Industrial Estate,Daingean Road,Tullamore,Co. Offaly,Ireland
To Other Countries	14 06 01	Yes	chlorofluorocarbons, HCFC, HFC	0.45	D10	M	Weighted	Abroad	Veolia Environmental Services Technical Solutions Ltd,W0050-02	Corrin,Fermoy,Co. Cork,,Ireland	Pyros Environmental Limited,HP383SUZ,Charlestone Road,Hardley Hythe,Southampton SO453ZA,United Kingdom	Charlestone Road,Hardley Hythe,Southampton SO453ZA,United Kingdom
Within the Country	20 03 06	No	waste from sewage cleaning	28.5	D8	M	Volume Calculation	Offsite in Ireland	Dublin City Council (Ringsend WWTP),D0034-01	,Civic Offices Wood Quay ,Dublin 8,Ireland Ballymount		
Within the Country	15 01 01	No	paper and cardboard packaging	31.22	R12	M	Weighted	Offsite in Ireland	Irish Packaging Recycling Ltd.,W0263-01	Road,,Walkinstown,Dublin 12,Ireland		