



Poolbeg Generating Station



Annual Environmental Report

For the period of 1st January to 31st December 2012

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1. Introduction

1.1 IPPC Licence Number

P0 - 577- 03 (AER information is based on licence number PO 577 - 02 as the revised licence was issued recently during March 2013)

1.2 Name and Location

Electricity Supply Board
Poolbeg Generating Station
Pigeon House Road
Dublin 4

1.3 Description of Activities

The production of energy in combustion plant, rated thermal input of which is greater than 50 MW.

Poolbeg Generating Station currently has a total electricity generating capacity of 470MWe from a combined cycle gas turbine (CCGT) generating unit. The CCGT plant is made up of two gas turbines of 155 MWe each and a steam turbine of 170 MWe. The station is fired on natural gas from the national gas network and gas oil is stored as a secondary fuel which is normally only used for testing purposes and in times of grid system emergency.

On 31st March 2010, 510 MW of Thermal Generating Units ceased to operate. The CCGT will continue to operate into the future on the Poolbeg site.

1.4 Environmental Policy

See page 5.

1.5 Environmental Management Structure and Responsibility

Environmental Management is fully integrated into all aspects of management on site. The management structure is shown in figure 1.1. The Station Chemist is currently the Environmental Co-ordinator and is responsible for the co-ordination of all environmental activity at the station. The Environmental Co-ordinator works with the management team and environmental management group to ensure that

- The station prioritises full compliance with the provisions specified under its IPPC licence, other licences, planning permission and environmental legislation.
- The Station's EMS is operated and maintained to the required standard.
- By way of audit and review cycle, the EMS is effective, is adaptive to changing circumstances and is delivering continuous improvement.

The station has been ISO 14001 accredited since April 1999 and received its original Integrated Pollution Control Licence in April 2002, a revised Integrated Pollution Prevention and Control licence was issued in December 2004. A further revision to the licence was issued in March 2013, the current licence number is P0 577 – 03.

POOLBEG STATION ENVIRONMENTAL POLICY STATEMENT

Poolbeg Generating Station is situated in the heart of Dublin Bay, we are very aware of the areas of environmental importance in the locality. Poolbeg is bounded on the north by the River Liffey and to the east and south by Dublin Bay. South Dublin Bay is designated as a Natural Heritage Area, Special Area of Conservation and a Special Protection Area for Birds. In the vicinity is also the Bull Island Nature Reserve, Tolka Estuary Mudflats and Irishtown Nature Park. We are also aware of our presence in the local community.

Poolbeg station has a total electricity generating capacity of 470MWe from a combined cycle gas turbine (CCGT) generating unit. The 510 MW Thermal power station ceased operation on 31st March 2010.

We at Poolbeg commit ourselves to meeting customer demand for electricity in a safe, efficient, sustainable and environmentally responsible manner, while recognising the technical and financial constraints within which we must operate. Environmental risks are minimised by the use of appropriate technologies and working procedures. We strive for continual improvement in our environmental performance and prevention of pollution through the operation of the station's environmental management system and adherence to our Integrated Pollution Prevention and Control Licence No. P0 577-02. By maintaining both ISO 14001 and OHSAS 18001 accreditation, we will continue to operate and improve on our Environmental and Safety Performance.

We carry out our activities in conformance with the policy principles outlined below:

Responsibilities and Accountabilities

Regard the achievement of the station's annual environmental targets and objectives as a line management responsibility requiring personal involvement and commitment from all management and staff. Ensure that appropriate resources are allocated to environmental matters.

Compliance Issues

Ensure compliance with the terms and conditions of our IPPCL, Greenhouse Gas Permit and all other relevant legal requirements and conformance with all relevant in-house standards and procedures relating to environmental protection with proper monitoring and control systems in place.

Use of Natural Resources

Use environmental resources, including air, land and water in a responsible manner and make every effort to conserve finite natural resources by efficient use and careful planning.

Energy Conservation

Maintain the ongoing assessment of the efficiency with which energy is generated and used within the station with a view to optimisation.

Waste Materials

Reduce waste generation as far as possible and ensure supervision of the disposal of waste, to minimise its impact on the environment. Evaluate opportunities to recycle waste materials and implement these where practicable.

Environmental Awareness

Actively promote environmental awareness among staff through communication and training programmes and take into account the impacts on and concerns of the local community.

Suppliers of Goods and on Site Services

Ensure that appropriate suppliers of goods and on site services assess the environmental impacts in their dealings with Poolbeg. We will also encourage responsible environmental management and insist that they conform to all relevant legislation. For suppliers of on site services we will advise them of our site specific environmental policy and relevant environmental documentation.

Auditing and Reporting

Conduct regular internal and external audits to assess the level of performance and compliance with the environmental requirements of the company and regulatory bodies. Report, as appropriate, to staff, regulatory bodies and other interested parties.

Review

Carry out regular reviews of environmental policies and practices and keep abreast of any changing legislation or technology.

Sustainability

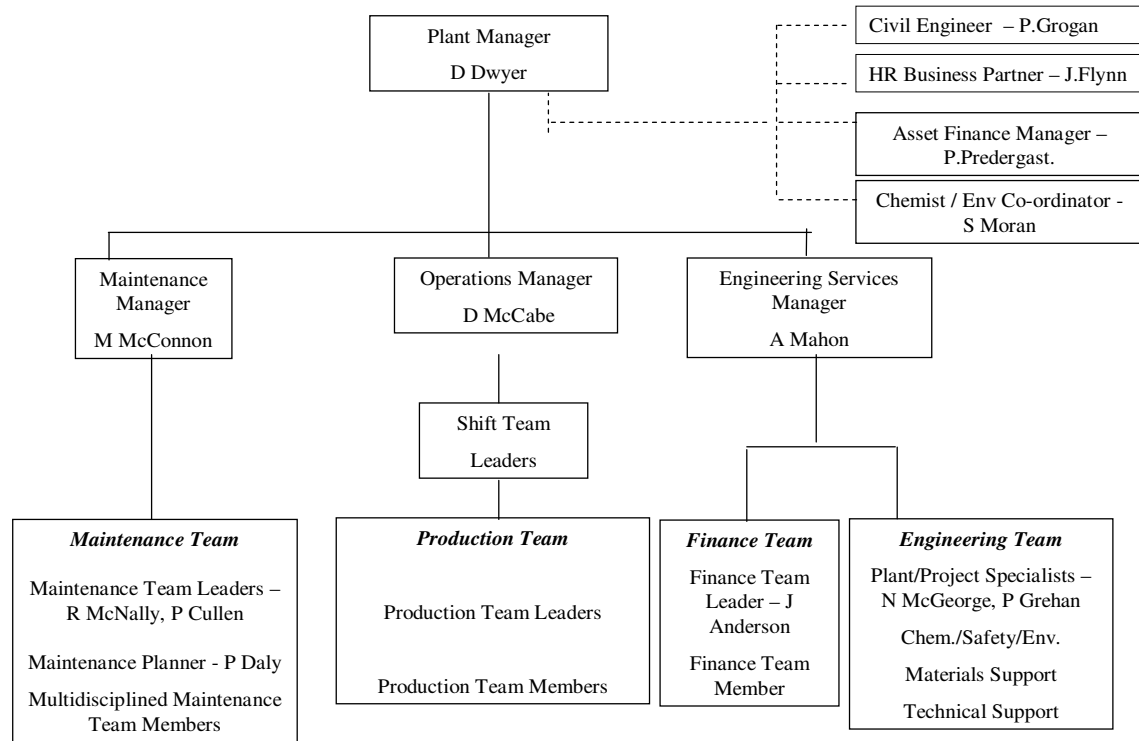
Embracing ESBs Sustainability Charter and promoting Sustainability in the workplace and at home.

Signed _____

David Dwyer, Plant Manager, September 2012

This policy has Corporate Body endorsement.

Figure 1.1 Poolbeg Organisational Structure



Poolbeg Structure

2. Emission Reports and Summary Information

Emissions to Water

ESB Poolbeg IPPCL refers to ten licensed emission points discharging to the Liffey Estuary.

- SW1 Condenser Cooling Water
- SW2 Water treatment neutralisation tank – Units 1, 2 and 3
- SW3 Water treatment neutralisation tank – CCGT
- SW4 Boiler blowdown (Unit 1)
- SW5 Boiler blowdown (Unit 2)
- SW6 Boiler blowdown (Unit 3)
- SW7 Boiler blowdown (CCGT B14)
- SW8 Boiler blowdown (CCGT B15)
- SW10 Screen Wash Water
- SW11 Screen Wash Water

Following the closure of Poolbeg Thermal Station on 31st March 2010 there will be no further discharges from the following emission points SW2, SW4, SW5, SW6 and SW10 and hence monitoring has been ceased at these emission points. These changes have been reflected in the revised IPPCL.

Monitoring of the remaining operational emission points SW1, SW3, SW7, SW8 and SW11 is carried out in accordance with Schedule 2(iii) of Poolbegs IPPC license.

2.1.1 Emission Point Reference Number SW1 - Condenser Cooling Water

Temperature

Table 2.1 SW1 Monthly average temperature differentials.

Month	Station Average ΔT °C
Emission Limit Value	11.5 °C
January	5.12
February	5.96
March	5.24
April	4.90
May	5.31
June	5.10
July	5.02
August	5.05
September	4.93
October	5.06
November	4.99
December	5.07

SW 1 - Condenser Cooling Water Compliance with Emission Limit Values

Temperature Rise

There were 6 hourly averages greater than 10°C but less than the maximum ELV of 11.5 °C, this equates to 99.93 % of hourly operating values being less than 10 °C and we remain within licence compliance as per Schedule 2(i).

Flow

The maximum volume to be emitted in any one day of 2,520,000 m³ and maximum rate per hour of 105,000 m³ was not exceeded in this reporting period.

The capacity of the CCGT pumps in Poolbeg is such that the maximum flow required to support full station output is 43,200 m³/hour and it is therefore not foreseen that the licence volume would be exceeded under any circumstances.

From the individual unit operating records, the volume of cooling water emitted for the reporting period is calculated at 306,060,006 m³ vs. a licensed volume emission of 919,800,000 m³.

Chlorine

The emission limit value of 0.1mg/l has not been exceeded in this reporting period.

Table 2.2 SW1 Weekly Chlorine Grab Sample Analysis

Date	Total Chlorine (mg/l)	Date	Total Chlorine (mg/l)
03-Jan-12	0.07	25-Jun-12	0.04
09-Jan-12	0.07	02-Jul-12	0.04
16-Jan-12	0.07	11-Jul-12	0.02
23-Jan-12	0.08	16-Jul-12	0.01
30-Jan-12	0.02	23-Jul-12	0.02
08-Feb-12	0.06	30-Jul-12	0.04
20-Feb-12	0.08	03-Aug-12	0.03
23-Feb-12	0.09	13-Aug-12	0.04
27-Feb-12	0.07	20-Aug-12	0.01
06-Mar-12	0.08	27-Aug-12	0.05
12-Mar-12	0.05	03-Sep-12	0.05
26-Mar-12	0.05	10-Sep-12	0.04
29-Mar-12	0.06	17-Sep-12	0.03
02-Apr-12	0.07	24-Sep-12	Cooling water system out of service
13-Apr-12	0.06	01-Oct-12	0.08
16-Apr-12	0.05	08-Oct-12	0.05
20-Apr-12	0.08	15-Oct-12	0.07
23-Apr-12	0.08	23-Oct-12	0.07
30-Apr-12	0.02	05-Nov-12	0.09
04-May-12	0.03	09-Nov-12	0.09
08-May-12	0.02	12-Nov-12	0.08
09-May-12	0.05	19-Nov-12	0.06
14-May-12	0.09	26-Nov-12	0.07
21-May-12	0.03	03-Dec-12	0.09
01-Jun-12	0.04	10-Dec-12	0.06
11-Jun-12	0.04	17-Dec-12	0.05
18-Jun-12	0.03	24-Dec-12	0.07

2.1.2 Emission Point Reference Number SW3

Water Treatment Neutralisation Tank – CCGT Monitoring Results

Table 2.3 Quarterly Monitoring Results of SW3

Parameter	Units	Q1	Q2	Q3	Q4	Emission Limit Value
Ammonia	mg/l	0.79	0.01	2.15	3.51	10
pH		6.8	7.1	7.0	8.9	
Suspended Solids	mg/l	2.60	5.40	11.60	21.00	No Limit
Iron ^{Note 1}	mg/l	-	-	-	-	No Limit
Vanadium ^{Note 1}	mg/l	-	-	-	-	No Limit

Note 1(In licence): Iron and Vanadium is not applicable to SW3. Iron and Vanadium was measured when discharging from the boiler effluent tank through the neutralisation sump in the Thermal station (SW2) CCGT does not have a boiler effluent tank and therefore Iron and Vanadium analysis is not carried out.

Compliance with Emission Limits

Flow

The maximum volume to be emitted in any one day of 200 m³ and the maximum rate per hour of 50 m³ has not been exceeded in this reporting period.

pH

The pH of the effluent is controlled automatically with the effluent dosed until the pH is within the range 6-9 before discharge.

Suspended Solids and Ammonia were not exceeded during the reporting period.

2.1.3 Emission Point Reference Number SW7

Table 2.4 Boiler Blowdown – (CCGT B14) Monitoring Results

Date	Oils (Monthly)	pH	Ammonia (mg/l)	Suspended Solids (mg/l)
Emission Limit Value		6-10	1	No Limit
January	Clean			
February	Clean	9.3	0.17	0.4
March	Clean			
April	Clean			
May	Clean	9.5	0.13	< 0.1
June	Clean			
July	Clean			
August	Clean			
September	Clean	9.0	0.14	< 0.1
October	Clean			
November	Clean			
December	Clean	9.3	< 0.2	< 0.1

Compliance with Emission limits

The emission limits for pH, Ammonia and Suspended Solids were not exceeded during the reporting period.

2.1.4 Emission Point Reference Number SW8

Table 2.5 Boiler Blowdown – (CCGT B15) Monitoring Results

Date	Oils (Monthly)	pH	Ammonia (mg/l)	Suspended Solids (mg/l)
Emission Limit Value		6-10	1	No Limit
January	Clean			
February	Clean	9.6	0.19	0.2
March	Clean			
April	Clean			
May	Clean	9.3	0.17	< 0.1
June	Clean			
July	Clean			
August	Clean			
September	Clean	9.2	0.15	< 0.1
October	Clean			
November	Clean			
December	Clean	9.2	< 0.2	< 0.1

Compliance with Emission Limits

The emission limits for pH, Ammonia and Suspended Solids were not exceeded during the reporting period.

2.1.5 Emission Point Reference Number SW11

Screen Wash Water (CCGT)

Table 2.6 SW11 Chlorine Monitoring

Date	Chlorine (mg/l)
Emission Limit Value	0.2
20-Feb-12	0.10
25-Jun-12	0.15
17-Sep-12	0.10
20-Dec-12	0.02

The emission limit for chlorine was not exceeded during the reporting period.

2.2 Summary of Emissions to Water

A summary of the monitoring results for mass emissions to water at each of the emission points is presented in the tables below.

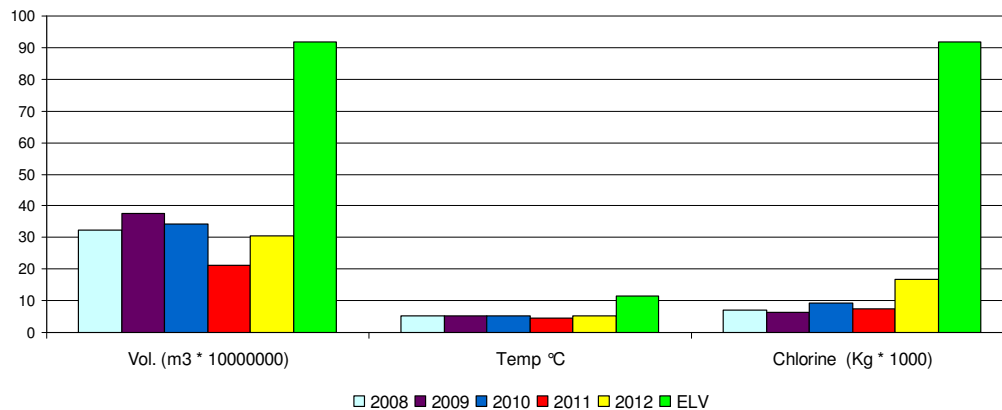
Note: Reduction in mass emission volumes for 2011 is due to the closure of Poolbeg Thermal Station on 31st March 2010 and the major outages in 2011.

2.2.1 SW1 Condenser Cooling Water

Table 2.7: SW1 Summary of Emissions to Water

Parameter	Units	Mass Emissions					Licensed Mass Emissions
		2008	2009	2010	2011	2012	
Volume	m ³	324,347,715 ²	377,067,154 ²	341,668,113 ²	212,766,696	306,060,006	919,800,000
Temp.	°C	5.3	5.2	5.2	4.5	5.1	11.5
Chlorine	Kg	6,950 ²	6,442 ²	9,309 ²	7,560	16,437 ³	91,980
Thermal Load ¹	MW _{th}	Not exceeded	Not exceeded	Not exceeded	Not exceeded	Not exceeded	1,000

Figure 2.1 SW1 Mass Emissions to Condenser Cooling Water 2008-2012



¹ Licence does not require monitoring of Thermal load

² Error in calculation of CW volume and hence incorrect chlorine volume also reported from 2008-2010, flow and chlorine reported in above table still well within licensed mass emission limits.

³ Increase in chlorine in 2012 is due to operating electrochlorination plant at higher concentrations to ensure no muscle growth in condenser.

2.2.2 SW3 Water Treatment Neutralisation Tank – CCGT

Table 2.8: SW3 Summary of Emissions to Water

Parameter	Units	Mass Emissions					Limits
		2008	2009	2010	2011	2012	
Volume	m ³	5,040	2,560	4,040	3,020	3,680	73,000
pH ⁴							6-9
Sus. solids	Kg	29.5	9.0	37.0	35.64	37.35	No ELV
Ammonia	Kg	1.57	1.53	0.6	1.30	5.9	730
Iron ⁵	Kg	-	-	-	-	-	No ELV
Vanadium ⁵	Kg	-	-	-	-	-	No ELV

⁴ The pH of the effluent is controlled automatically with the effluent until the pH is within the range 6-9 before discharge.

⁵ Iron and Vanadium analysis was only applicable to the Thermal Station from the burning of HFO. Boiler washes are not carried out in the CCGT.

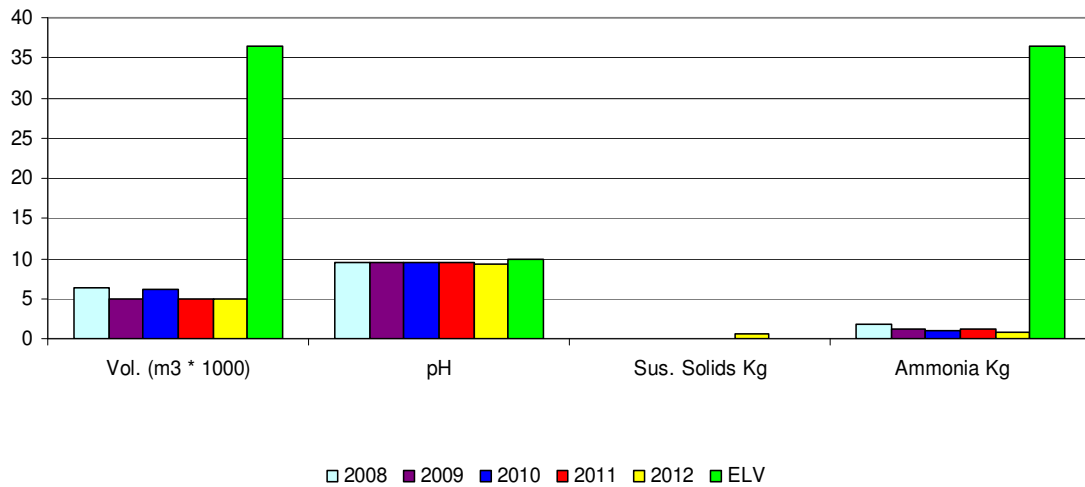
2.2.3 SW7 Boiler Blowdown (CCGT B14)

Table 2.9: SW7 Summary of Emissions to Water

Parameter	Units	Mass Emissions					Licensed Mass Emissions
		2008	2009	2010	2011	2012	
Volume	m ³	6,395	5,027	6,089	4,889	5,004	36,500
pH		9.6	9.6	9.6	9.5	9.4	6-10
Suspended Solids	Kg	n/d	n/d	n/d	n/d	0.5	No ELV
Ammonia	Kg	1.79	1.21	0.91	1.1	0.81	36.5

Figure 2.2 Summary of Mass Emissions to SW7 Boiler Blowdown CG14

Mass Emissions Boiler Blowdown CG14



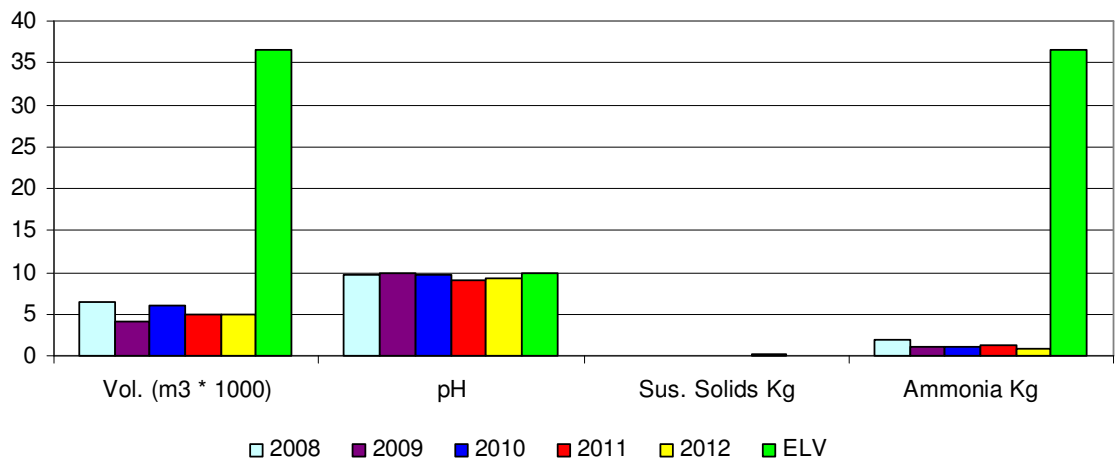
2.2.4 Boiler Blowdown (CCGT B15)

Table 2.10: SW8 Summary of Emissions to Water

Parameter	Units	Mass Emissions					Licensed Mass Emissions
		2008	2009	2010	2011	2012	
Volume	m ³	6,395	4,111	5,943	4,902	5004	36,500
pH		9.7	9.8	9.6	9.1	9.3	6-10
Suspended Solids	Kg	n/d	n/d	n/d	n/d	0.25	No ELV
Ammonia	Kg	2.04	1.10	1.05	1.21	0.89	36.5

Figure 2.3 Summary of Mass Emissions to SW8 Boiler Blowdown CG15

Mass Emissions Boiler Blowdown CG15



2.2.5 Screen Wash Water (CCGT)

Table 2.11: SW11 Summary of Emissions to Water

Parameter	Units	Mass Emissions					Licensed Mass Emissions
		2008	2009	2010	2011	2012	
Volume	m ³	56,940*	56,940*	56,940*	56,940*	56,940*	175,200
Chlorine	Kg	6.98	2.35	4.84	1.99	1.14	35.04

* Estimated based on pump usage

Table 2.12 Emissions to Water Non-Compliance Summary

Non - Compliance	Date	Details of Exceedence	Cause	Corrective Action
None				

2.3 Emissions to Sewer

Schedule 3(i) of Poolbeg's IPPC Licence sets out the requirement to monitor emissions to sewer having regard to Licence Conditions 3 and 7. ESB Poolbeg has one licensed emission point to Sewer S1-1, Laboratory Drains.

A grab sample is taken quarterly and analysed for the parameters below, results for 2012 are presented in the table below.

The laboratory based in Poolbeg thermal station is no longer in use since mid 2012 and hence there are no further Emissions to Sewer from S1-1. Hence the table below reflects analysis for Q1 and Q2 only.

Table 2.13 Emission Point Reference Number: S1-1 monitoring result

Parameter	Unit	Emission Limit Value	Quarter 1	Quarter 2
Temperature °C	° C	42° C	10.5	17.8
pH	pH unit	6-10	7.5	7.3
Chemical Oxygen Demand	mg/l	2,000	27.30	39.7
Biochemical Oxygen Demand	mg/l	1,000	9.89	9.02
Suspended Solids	mg/l	1,000	5.4	8.4
Total Phosphorus (As PO ₄)	mg/l	50	1.3	0.2
Detergents (As MBAS)	mg/l	100	0.057	< 0.05
Oils, Fats & Greases	mg/l	100	< 1	< 1
Sulphates (As SO ₄)	mg/l	400	21.4	27.8

2.4 Summary of Emissions to Sewer

Table 2.14: S1-1 Summary of Emission to Sewer

Parameter	Unit	Mass Emissions					Licensed Mass Emissions
		2008	2009	2010	2011	2012	
Volume	m ³	84	78	5*	5*	0.5	1460
Temperature	°C	15	17	17	17	14	42
pH		7.7	7.4	6.7	7.1	7.4	6-10
BOD	Kg	0.33	0.11	0.03	0.04	4.9	1095
COD	Kg	5.26	1.23	0.17	0.04	17.42	2190
Sus. Solids	Kg	3.34	0.67	0.11	0.05	3.59	876
Total Phosphorus	Kg	0.03	0.05	0.05	0.001	0.39	73
Sulphates	Kg	1.30	1.19	0.4	0.14	12.8	584
O,F,Gs	Kg	0.18	n/d	n/d	n/d	n/d	146
Detergents	Kg	0.12	0.005	0.001	0.00	0.015	146

*Estimate – Figure from 2010 onwards significantly reduced following Thermal station closure. 2012 figure signifies lab closure.

Table 2.15 Emission to Sewer Non-compliance Summary

Date	Non-compliance	Cause	Corrective Action
None			

Figure 2.4 S1-1 Summary of Mass Emissions to Sewer

Mass Emissions to Sewer 2008 - 2012

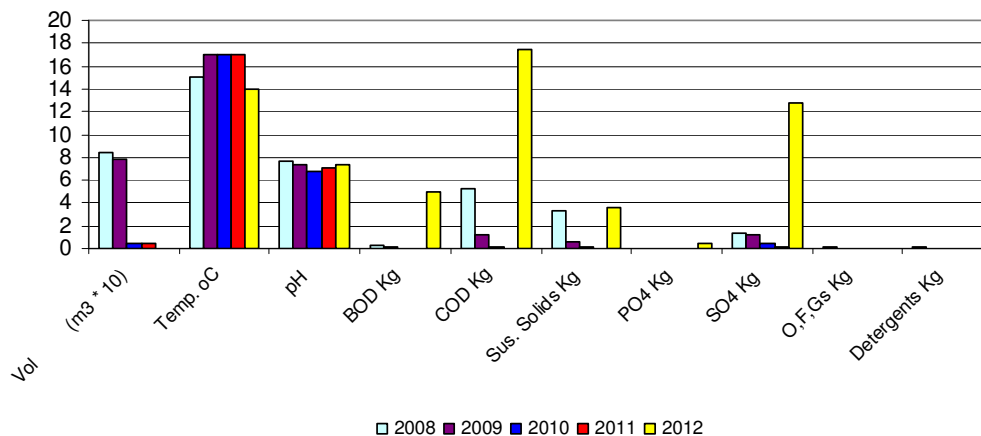


Table 2.16 Summary Table of Total Mass Emissions to Water and Sewer

Parameter	Units	Mass Emissions					Licensed Mass Emissions
		2008	2009	2010	2011	2012	
Volume	m ³	324,520,865*	377,709,824*	341,935,478*	212,836,452	306,130,635	921,232,260
Chlorine	Kg	6,996*	9,824*	9,314*	7,562	16,437	92,190
S. Solids	Kg	1,992	2,485	804	35.64	37.5	24,601
Ammonia	Kg	44	275	81	3.61	7.6	6,022
Iron	Kg	0	25	n/a	n/a	n/a	No ELV
Vanadium	Kg	0	0.15	n/a	n/a	n/a	No ELV
BOD	Kg	0.33	0.11	0.03	0.04	4.9	1,095
COD	Kg	5.26	1.23	0.17	0.04	17.4	2,190
Phosphorus	Kg	0.03	0.05	0.05	0.001	0.39	73
Sulphates	Kg	1.3	1.19	0.4	0.14	12.8	584
O,F& G's	Kg	0.18	n/d	n/d	n/a	n/d	146
Detergents	Kg	0.12	0.005	0.001	0.000	0.015	146

* Error in calculation of CW volume from 2008 – 2010 - volume and chlorine adjusted in above table

2.5 Emissions to Atmosphere

Schedule 1(iii) of Poolbeg's IPPC licence requires the monitoring of emissions to atmosphere at Emission Point Reference Nos. A1-1, A1-2, A1-3, A1-5 and A1-6 having regard to Licence Conditions 3 and 5.

Note: Following the closure of Poolbeg Thermal Station on 31st March 2010 there are no further Emissions to Air from the thermal station units and therefore monitoring at emission points A1-1, A1-2 and A1-3 ceased from that date.

2.5.1 Exhaust from CT14 HRSG and bypass from CT14

Table 2.17 A1-5 and A1-7 Summary of NO_x Emissions CT14

Month	CT14 Calendar Monthly Mean Conc. mg/Nm ³ NO _x (As NO ₂) corrected to 15% O ₂			
	Gas	Limit	Oil	Limit
January	29	80	-	720
February	27	80	-	720
March	26	80	-	720
April	31	80	-	720
May	25	80	-	720
June	25	80	-	720
July	29	80	-	720
August	28	80	-	720
September	33	80	-	720
October	36	80	-	720
November	29	80	-	720
December	28	80	-	720

Compliance with Emission Limits

We fully comply with Condition 3.1.1 of the licence, none of the calendar monthly means for NO_x exceeded the emission limit value and all the 48 hourly mean values were within 110% of the ELV.

2.5.2 Exhaust from CT15 HRSG and bypass from CT15

Table 2.18 A1-6 and A1-8 Summary of the NO_x Emissions CT15

Month	CT15 Calendar Monthly Mean Conc. mg/Nm ³ NO _x (As NO ₂) corrected to 15% O ₂			
	Gas	Limit	Oil	Limit
January	27	80	-	720
February	27	80	-	720
March	28	80	-	720
April	27	80	-	720
May	26	80	-	720
June	25	80	-	720
July	26	80	-	720
August	26	80	-	720
September	26	80	-	720
October	26	80	-	720
November	27	80	-	720
December	32	80	-	720

Compliance with Emission Limits

We fully comply with Condition 3.1.1 of the licence, none of the calendar monthly means for NO_x exceeded the emission limit value and all the 48 hourly mean values were within 110% of the ELV.

2.6 Summary of Emissions to Atmosphere

A summary of mass emissions to air is presented in the tables below.

Note: Reduction in mass emissions from 2011 due to the closure of Poolbeg Thermal Station on 31st March 2010.

2.6.1 A1-4 (Auxiliary Boiler)

We are not required to monitor emissions from the Auxiliary Boiler. During 2012 the boiler was operated in accordance with manufacturer guidelines and we did not exceed the emission limit value.

2.6.2 Exhaust from CT14 HRSG and Bypass from CT14

Table 2.19 A1-5 and A1-7 Summary of Emissions to Atmosphere

Parameter	Mass Emissions (Kg)					Licensed Mass Emissions (Kg)
	2008	2009	2010	2011	2012	
Nitrogen oxides (as NO ₂)	348,594	281,583	284,223	200,107	250,143	1,634,826

2.6.3 Exhaust from CT15 HRSG and Bypass from CT15

Table 2.20 A1-6 and A1-8 Summary of Emissions to Atmosphere

Parameter	Mass Emissions (Kg)					Licensed Mass Emissions (Kg)
	2008	2009	2010	2011	2012	
Nitrogen oxides (as NO ₂)	557,064	486,853	286,758	217,061	221,929	1,634,826

Table 2.21 Summary of Total Mass Emissions to Atmosphere

Parameter	Mass Emissions (Kg)					Licensed Mass Emissions (Kg)
	2008	2009	2010	2011	2012	
Nitrogen oxides (as NO ₂)	1,102,658	1,197,436	714,192	417,168	472,071	3,269,652
Oxides of sulphur (as SO ₂)	32,000	223,000	3,241	-	-	-
Particulates	11,000	28,000	6,654	-	-	-

2.6.4 Emissions to Atmosphere Non-compliance Summary

There were no non-compliances in relation to Emissions to Atmosphere in 2012.

2.7. Surface Water Discharge Monitoring

Following the closure of the Thermal station and the removal of all hazardous materials such as chemicals and oil from the thermal station part of site, a request to reduce the monitoring at SW9 was submitted to the EPA in May 2012. This request was approved and monitoring at SW9 is now quarterly for pH and COD and a weekly inspection of the sump at SW9. (P0577-02/ap05PK)

In addition we are now monitoring at SW12 which is a new surface water monitoring point at the discharge from the Class 1 interceptors on the CCGT section of the site.

The monitoring parameters agreed for SW12 are as follows

pH
 Temperature
 COD
 Suspended Solids
 Total ammonia
 Mineral Oil
 Oils, Fats and Greases

Table 2.22 Monitoring Results for Emission Point SW9

Parameter	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4
pH		7.9	7.1	7.2	7.3
Temperature	°C	8.0	11.7	n/a	n/a
BOD	mg/l	1.49	1.53	n/a	n/a
Oils, Fats and Greases	mg/l	< 1	< 1	n/a	n/a
COD	mg/l	n/a	n/a	13.4	15.6

Table 2.23 Quarterly monitoring results for SW12 are presented in the following table.

Parameter	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4
pH		7.5	8.2	7.94	6.9
Temperature	oC	11.6	16.1	19.6	11.0
BOD	mg/l	2.58	2.85	n/a	n/a
Suspended Solids	mg/	1.8	0.6	4.4	1.4
Total Ammonia	mg/	0.462	3.85	0.56	1.11
Phosphate	mg/	< 0.05	< 0.05	n/a	n/a
Oils Fats and Greases	mg/	< 1	< 1	< 1	< 1
Mineral Oil	mg/	< 1	< 1	< 1	0.05
COD	mg/	n/a	n/a	20.6	76.5

n/a – scope of analysis agreed as above 28th June 2012 P057-02/ap05PK

2.8 Agency Monitoring and Enforcement

Two monitoring visits were carried out by the EPA in 2012. One visit to take samples from water emission points and one visit for air monitoring. The results of the water sampling analysis and air monitoring are as per the following tables.

Samples from water and surface water emission points were collected by the Agency on 6th March.

Table 2.24 Surface Water (SW9) sampling analysis

Substance Monitored	Date	Units	SW9	Emission Limit Values
pH	06/03/2012	pH Units	7.5	6 - 9
Biochemical Oxygen Demand	06/03/2012	mg/l O ₂	< 2	No limit

Table 2.25 Water Emission points sampling analysis

Substance Monitored	Date	Units	SW7	Emission Limit Values
pH	06/03/2012	pH Units	8.8	6 -10
Suspended Solids	06/03/2012	mg/l	< 10	No limit
Ammonia(As N)	06/03/2012	mg/l N	0.15	1

Table 2.26 Air Monitoring Results

Parameter	Date	A1-5	A1-6	Emission Limit Value
Nitrogen Oxides as NO ₂	21/03/2012	35.5 mg/m ³	36.6 mg/m ³	80 mg/m ³

Compliance

All monitoring carried out by the EPA was in compliance with licence emissions limit values.

2.9 Fuel Use and Energy Input

2.9.1 Fuel Use

Table 2.27 Run hours on Natural Gas

Unit	Run hours on Natural Gas				
	2008	2009	2010	2011	2012
Unit 1	1,835	2,486	1,072	Thermal station closed in 2010.	Thermal station closed in 2010.
Unit 2	1,026	2,341	825		
Unit 3	0	0	0		
CG14	7,280	7,374	8,203	6,817	8,287
CG15	7,182	7,562	8,379	6,392	8,379

Run hours on Heavy Fuel Oil

Following the closure of Poolbeg Thermal Station, HFO stored on site was sold to the oil market and subsequently shipped offsite. All saleable HFO has now been removed from Poolbeg.

Table 2.28 Run hours on Gas Oil

Unit	Run hours on Gas Oil				
	2008	2009	2010	2011	2012
CG14	-	-	0.1 ⁶	3*	4*
CG15	-	-	0	4*	2*

* Test purposes only

2.9.2 Energy Input

Table 2.29 Energy Consumption

Fuel (MWhrs)	2008	2009	2010	2011	2012
Natural Gas	6,026,995	5,931,634	5,608,041	3,936,753	4,939,947
Distillate Oil	0	0	0	0	0
Heavy Fuel Oil	17,102	112,245	0	0	0

Decrease in Energy consumption in 2011 due to major overhauls on both gas turbines and steam turbine taking place which corresponds to reduced running hours.

⁶ Fuel changeover test.

2.9.3 Water Consumption

Table 2.30 Water Consumption

Water Consumption m ³	2008	2009	2010	2011	2012
	261,019	194,315	125,681	76,368	72,501

2.10 Environmental Incidents and Complaints

2.10.1 Complaints

There were no Environmental complaints or reportable incidents in 2012.

Table 2.31 Complaints

Date	Description	Actions Taken	Authorities contacted
	None		

2.10.2 Incidents

Table 2.32 Summary of reportable incidents

Date	Incident Description	Action Taken	Authorities Contacted
	None		

3. Management of the Activity

3.1 5 year Environmental Objectives and Targets 2013 – 2018

Ref	Objective	Target 2013 - 2018
1	Ensure 100% compliance with IPPCL	<ul style="list-style-type: none"> • 2013- 2018: Implement and maintain the conditions of IPPCL through our EMS, monitoring, reporting and achieving targets set out in our EMP. • 2013: Technical Amendment to be submitted to EPA to remove Networks HV compounds/ GIS area and DCC area for lease from scope of licence. • 2013: Consider licence implications if NORA lease HFO and Diesel oil farms. • 2013: Consider projects and additional requirements in relation to revised IPPC licence.
2	Identify and implement opportunities for improvements in energy usage	<ul style="list-style-type: none"> • 2013: Sustainability Plan to be implemented. • 2013: BGE gas data signals to be incorporated into DCS. • 2013: Energy monitors to be installed in administration building. • 2013: Carry out offline compressor washes and IGV handwash during outages. • 2013: Priority drain valves to be replaced. • 2013- 2018: An energy audit will be repeated at intervals as required by the Agency.
3	Reduce the potential for discharge to surface and ground water.	<ul style="list-style-type: none"> • 2013: Biannual borehole monitoring to be carried out and trends reported to the Agency in the AER. • 2013: Networks to complete bunding of underground cable oil tanks. • 2013: Carry out bunding as per bund test schedule and repairs as necessary. • 2013: Feasibility study into the remote operation of the final sump pump to be carried out.
4	To identify improvements in waste management through ongoing assessment of waste streams and initiatives within the station to improve staff awareness.	<ul style="list-style-type: none"> • 2013 - 2018 Monitor and set targets for waste recycling on site. • 2013: Recycling target 50% as collected. (This includes for General waste, recyclables, timber, glass and WEEE) • 2013: Chemical agents to be disposed from the closed Thermal station lab.
5	Water Usage Reduction	<ul style="list-style-type: none"> • 2013- 2018: Minimise water use on site. • 2013: Towns water use target : Daily rolling average < 180 m3 Reduce town's water usage – Continue water monitoring and repair leaks as necessary. • 2013: Reduce treated water use. • 2013: Water treatment plant resins to be replaced. • 2013: Valve survey to be carried out on boiler valves and valves replaced as required.
6	Training	<ul style="list-style-type: none"> • 2013: Carry out as per EMP and training plan.

3.2 Environmental Management Program Report 2012

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
1.1	To ensure 100% compliance with IPPCL.	Implement required monitoring/recording.	To ensure compliance with licence by implementing required measurement and reporting of emissions.	Carry out AST on CCGT CEMS.	T & E	Completed by ESG in December - successful AST.	Q 4
1.2				Technical Amendment to Licence - Licence boundary to be updated for removal of Networks HV Compounds and GIS and also area to be leased to DCC. Site investigation and new IPPCL boundary drawings complete.	SM	Technical amendment to be sent to EPA in 2012. Awaiting start dates from DCC and also Networks underground tank work to be completed. Carry forward to 2013.	Q 2
1.3				Consider licence implications if NORA lease HFO and Diesel oil farms.	DMcC SM	No progress with NORA to date on this issue – ongoing consultations/discussion.	Q 4
1.4				Consider any items in relation to noise reduction on site if required.	SM	No current noise issues on site.	Q 4
1.5				Report on RMP to be completed for Thermal site.	DMcC SM	Complete and submitted to EPA.	Q 2
1.6				Chlorine meter at outfall to be integrated into DCS.	KP AM	Tile available for chlorine reading on CC analysis panel and tested ok. Has been included in the thermal//CCGT electrical separation work scope due to be carried out in 2013.	Q 4

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
2.1	Identify areas for improvement in Energy Efficiency	To optimise Energy efficiency of the CCGT.	To optimise Energy efficiency of the CCGT and reduce CO2 emissions.	Follow up from Thermal Performance Efficiency Testing	AM T& E	Complete	Q 4
2.2				Sustainability Plan for 2012 to include the following projects ; <ol style="list-style-type: none"> Continue review of CW pump running and reducing to one pump if feasible. Review regeneration rinse times to reduce water consumption. Continue Thermal Station power use and reduction. Continue review of Start ups to ensure they are as efficient as possible. Will be reviewing warm and hot starts when 2 shifting commences. Investigate recycling of sampling station water. 	AM JB DMcC DD PM	<ol style="list-style-type: none"> Review complete and not viable to run with one CW pump. Not completed as resins require replacement. Ongoing Ongoing Included in budget for 2013 	Q 4
3.1	Reduce the potential for discharge to surface and ground water	Bund testing programme	To ensure integrity of containment structure and to eliminate risk of leak reaching surface water.	Carry out 3 yearly retention tests as per Bund Test Schedule and carry out repairs to defective bunds as required. Retention testing and bund marking ongoing.	MMcC PG	Number of bunds due to be tested in 2012. Bunds to be marked with test mark and further details on the bunds being added to the testing matrix. Chemstores/portable bund were added to bund list, tested and numbers painted on them.	Q 4
3.2		Assess Networks oil tanks associated with oil filled cables.	To prevent oil contamination of soil	Networks bunding of cable oil tanks to be completed.	Networks DMcC	Inchicore tanks to be brought above ground and banded. Need outage on line to complete the bunding work.	

3.3		Biannual borehole monitoring.	To monitor ground water on site.	Biannual samples taken at 4 boreholes by external contractor. Trends to be included in AER.	SM	Complete.	Q 4
3.4		Improve identification of site drainage systems.	To identify site drainage systems.	All manholes, drains, sumps, interceptors etc to be painted and colour coded. New drainage drawings to be prepared. Drain survey work	MMcC DMcC	80% completed – manholes have been identified and painted Drain survey completed on a section of drains we considered at a higher risk i.e in around WTP and boiler – No issues.	Q 3
3.5		Oil spill materials	Tidy and identify the spill material hut contents.	Label/Identify/relocate if necessary the spill materials in the 'Nurses Hut'. Nurses hut to be revamped – shelving and new door required. Work to go on Kilwex list. Any materials not required to be disposed. Tidy up of current material and labelling required. Current stocks for CC to be stored here.	MMcC DMcC	Carry forward to 2013	Q 4
3.6		Emergency preparedness	To enable the final sump pump be switched out from the control room	Consider remote operation of the final sump pump. Large work scope and Siemens C&I input required.	MMcC DMcC	Carry forward to 2013	Q 4

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Due Date
4.1	Identify improvements in waste management through ongoing assessment of waste streams and initiatives within the station to improve staff awareness.	To improve current waste practices by ensuring all recyclable materials are segregated and recycled.	To improve waste management on site by encouraging good waste management by all staff and contractors.	Waste Recycling target – 45% This target includes for general waste, recyclables, timber, glass and WEEE. Review and track monthly.	SM DMcC MMcC	2012 non haz recycling rate – 63 % Including metal the rate is 77%. (2011 - 25% non haz recycling 43% incl.metal)	Ongoing
4.2				Waste Policy to be developed	SM	Waste Policy should be developed for all ESB Generation.	Q 3
4.3				Waste stream location drawing to be produced.	SM	Complete.	Q 3
4.4				Ensure GT filters changed during outages go for SRF.	SM	GT filters are being diverted from landfill to solid fuel recycling.	Q 4
5.1	Reduction in water usage	To reduce the amount of water used on site.	To optimise water usage in the station	Ongoing water monitoring and investigations to be carried out to ensure leaks and use are minimised. 2012 : Target : rolling daily average < 150 m3	D.McC PM	Water Use 2012 – 72, 501 m3 Line at Thermal WTP leaks blanked. Leaks at thermal U1/2 repaired. While this figure is down from the 2011 usage of 76,368 m3 we are still above the daily rolling average target. Recent process valve leak identified and isolated with a saving of 30t/day.	Q 4
5.2		To reduce treated water consumption	To optimise water and chemical usage in the station	Treated water use in CCGT to be monitored by regular drop tests. Study on sampling station water reuse to be carried out and length of regeneration times.	D.McC PTL SM KP	Ongoing. Not carried out as resins require replacement.	Q 4

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Due Date
7.1	Training	Carry out Environmental Training	To ensure that all staff are aware of our IPPCL and Environmental aspects associated with their work on site.	Internal audit refresher	SM	Ongoing as process audits are being carried out.	Ongoing
7.2				Weekly CEMS QAL 3 familiarisation with Production Team.	SM	Ongoing during weekly tests.	Weekly
7.3				CEMS Training – Equipment and Maintenance	T and E	Ongoing during JG visits.	Q 4
7.4				Environmental Awareness Training	STL and FLMs	Updated presentation being briefed by STLs during weekend training.	Q 4
7.5				Waste Training	SM	Completed in October.	Q 3
7.6				Emergency Preparedness	RM/DMcC	Chemical spill exercise completed in October. Report on SMS IDM.	Q 4

3.3 Environmental Management Program Proposal 2013

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
1.1	To ensure 100% compliance with IPPCL.	Implement required monitoring/recording.	To ensure compliance with licence by implementing required measurement and reporting of emissions.	Carry out AST on CG15 and QAL 2 required on CT14.	T & E		Q 4
1.2				Technical Amendment to Licence - Licence boundary to be updated for removal of Networks HV Compounds and GIS and also area to be leased to DCC.	SM	Site investigation and new IPPCL boundary drawings complete. Technical amendment to be sent to EPA. Awaiting start dates from DCC and also Networks underground tank work to be completed.	Q 4
1.3				Consider licence implications if NORA lease HFO and Diesel oil farms.	DMcC SM		Q 4
1.4				Consider any items in relation to noise reduction on site if required.	SM	No current noise issues on site.	n/a
1.5				Chlorine meter at outfall to be integrated into DCS.	NMcG	Has been included in the thermal//CCGT electrical separation work scope due to be tendered/carried out in 2013.	Q 4
1.6				Consider projects in relation to revised licence requirements due to be issued early 2013.	SM	.	Q 2

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
2.1	Identify areas for improvement in Energy Efficiency	To optimise Energy efficiency of the CCGT.	To optimise Energy efficiency of the CCGT and reduce CO2 emissions.	Sustainability Plan for 2013 to include the following projects (Detailed SIP on IDM) 1. Continue review of start ups to ensure they are as efficient as possible. Will be reviewing warm and hot starts if/when 2 shifting commences. 2. BGE gas data signals to be incorporated into DCS which will allow tracking of gas flow CV and other gas composition parameters to enable more accurate efficiency calculations. 3. Energy monitor to be installed in admin building. 4. Performance test to be carried out before and after outage in March 5. Priority drain valves as to be replaced during outages. 6. Offline compressor washes/handwash IGVs	1. DMcC 2. AM 3. MMcC 4. AM 5. MMcC 6. MMcC		
3.1	Reduce the potential for discharge to surface and ground water	Bund testing programme	To ensure integrity of containment structure and to eliminate risk of leak reaching surface water.	Carry out 3 yearly retention tests as per Bund Test Schedule and carry out repairs to defective bunds as required.	MMcC PG		Ongoing
3.2		Assess Networks oil tanks associated with oil filled cables.	To prevent oil contamination of soil	Networks bunding of cable oil tanks to be completed.	DMcC Networks		Q 4
3.3		Biannual borehole monitoring.	To monitor ground water on site.	Biannual samples taken at 4 boreholes by external contractor. Trends to be included in AER.	SM		Q 2 and Q 4

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
3.4	Reduce the potential for discharge to surface and ground water	Improve identification of site drainage systems.	To identify site drainage systems.	Complete painting of manholes, drains, sumps, interceptors etc New drainage drawings to be prepared. Drain survey to be carried out (Section of site to be decided based on risk)	DMcC		Q 4
3.5		Oil spill materials	Tidy and identify the spill material hut contents.	Label/Identify/relocate if necessary the spill materials in the 'Nurses Hut'. Nurses hut to be revamped – shelving and new door required. Work to go on Kilwex list. Any materials not required to be disposed. Tidy up of current material and labelling required. Current stocks for CC to be stored here.	MMcC DMcC		Q 4
3.6		Emergency preparedness	To enable the final sump pump be switched out from the control room	Consider remote operation of the final sump pump – feasibility plan to be carried out in 2013. Discuss with Siemens in March 2013 and include on C+I list.	AM MMcC DMcC		Q 4
4.1	Identify improvements in waste management through ongoing assessment of waste streams and initiatives within the station to improve staff awareness.	To improve current waste practices by ensuring all recyclable materials are segregated and recycled.	To improve waste management on site by encouraging good waste management by all staff and contractors.	Waste Recycling target – 50 % This target includes for general waste, recyclables, timber, glass and WEEE. Review and track monthly.	SM		Ongoing
4.2				Ensure GT filters changed during outages go for SRF (Coalesers and socks)	SM		Q 2 and Q 3
4.3				Chemicals agents no longer required to be disposed from closed Thermal station lab.	SM/KP		Q 2

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
5.1	Reduction in water usage	To reduce the amount of water used on site.	To optimise water usage in the station	Ongoing water monitoring and investigations to be carried out to ensure leaks and use are minimised. 2013 : Target : rolling daily average < 180 m3 Passing valves to be replaced during outages	PM DMcC		Ongoing Q 2
5.2		To reduce treated water consumption	To optimise water and chemical usage in the station	Treated water use in CCGT to be monitored by regular drop tests. Water treatment plant resins to be replaced. Sampling station water reuse project to be carried out Valve survey to be carried out on boiler valves. Valves identified as requiring replacement will be replaced during outages in 2013.	DMcC MMcC SM PM		Ongoing Q 3 Q 4 Q 2, Q 3

Ref	Objective	Target	Reason	Project Summary	Resp.	Status	Date Due
6.1	Training	Carry out Environmental Training	To ensure that all staff are aware of our IPPCL and Environmental aspects associated with their work on site.	Process audit training.	SM	Ongoing as process audits are being carried out.	Ongoing
6.2				Environmental Awareness Training	STL and FLMs	Awaiting revised licence.	Q 3
6.3				Emergency Preparedness Weekend training ongoing.	DMcC	Annual exercise – type to be decided.	Q 4
7.1	Legislation	Legislation Compliance	To ensure compliance with any legislation as required.	Air conditioning systems with ODS/F gases to be maintained/replaced as per register.	MMcC		Q 4

4. Licence Specific Reports

4.1 Total Annual Emissions of SO₂, NO_x, CO₂ and Particulates.

Parameter (Tonnes)	2008	2009	2010	2011	2012
SO ₂	36	223	3	-	-
NO ₂	1,103	1,197	714	417	472
CO ₂	1,243,721	1,254,381	1,163,925	817,263	1,024,130
Particulates	11	28	7	-	-

2008

SO₂ and CO₂ were calculated from fuel use. NO₂ and Particulates were calculated from CEMS.

2009/2010

NO₂, SO₂ and Particulates were calculated from CEMS. CO₂ was calculated from fuel use and analysis as per ETS procedures.

2011/2012

NO₂ is calculated from CEMS. CO₂ was calculated from fuel use and analysis as per ETS procedures. There is no further particulate and SO₂ emission measurements following the Thermal station closure.

4.2 List 1/List 2 substances

Reports on sodium hypochlorite and ammonia usage have been submitted to the EPA previously. Following the Thermal station closure the quantity of these chemicals used on site has substantially reduced.

4.3 Bund Testing Report – See next page

4.3 Bund Testing Report 2012

ID	Bund	Location	Type	Test/Cert Date	Next Due	Pass/ Fail	Comment
6 - 9	C1 – C4 HFO	Thermal Station - Oil Farm	Oil	13/01/2013	13/01/2016	Passed	Visual Inspection by Civil Engineer- porous design, integrity good. Saleable HFO removed, residual oil/sludge remains.
10	C5 HFO	Thermal Station - Oil Farm	Oil	13/01/2013	13/01/2016	Passed	Visual Inspection by Civil Engineer. Agreement with EPA that it is inappropriate to carry out a water retention test. HFO removed, 500 t unsalable oil remains.
11	T2003	Thermal Station - Transformer	Oil	01/09/2010	31/08/2013	Passed	Repairs carried out in 2010. Certified by Civil Engineer 13th December 2010. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
12	UT3	Thermal Station - Transformer	Oil	03/06/2010	02/06/2013	Passed	Certified by Civil Engineer 15 th June 2010. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
13	T2002	Thermal Station - Transformer	Oil	01/09/2010	31/08/2013	Passed	Repairs carried out in 2010. Certified by Civil Engineer 13th December. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
14	UT2	Thermal Station - Transformer	Oil	27/05/2010	26/05/2013	Passed	Certified by Civil Engineer 13th September 2010. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.

ID	Bund	Location	Type	Test/Cert Date	Next Due	Pass/ Fail	Comment
15	T2001	Thermal Station - Transformer	Oil			Failed test in 2012.	Transformer not operating and was being stored as a strategic spare for ESB. Decision made to retire transformer and oil being drained for reuse by Networks in March 2013. Bund inspected weekly.
16	UT1	Thermal Station - Transformer	Oil			Failed test in 2012.	Transformer not operating and was being stored as a strategic spare for ESB. Decision made to retire transformer and oil being drained for reuse by Networks in March 2013. Bund inspected weekly.
17	ST21	Thermal Station - Transformer	Oil	23/05/2012	23/05/2015	Passed	Certified by Civil Engineer 24/07/2012 Transformer in use and bund inspected weekly.
18	TF3	Thermal Station - Transformer	Oil	10/06/2010	09/06/2013	Passed	Repairs completed in 2010. Certified by Civil Engineer 15th June 2010. Transformer in use and bund inspected weekly.
19	TF4	Thermal Station - Transformer	Oil			Failed test in 2012	ESB Networks asset, repair being scheduled by Networks. Bund inspected weekly.
20	TF1	Thermal Station - Transformer	Oil	31/05/2010	30/05/2013	Passed	Repairs carried out in 2010. Certified by Civil Engineer 15th June 2010. Transformer in use and bund inspected weekly.
21	ST11	Thermal Station - Transformer	Oil	18/06/2012	18/06/2015	Passed	Certified by Civil Engineer 24/07/2013 Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
22	ST17	Thermal Station - Transformer	Oil	21/02/2012	20/02/2015	Passed	Certified by civil engineer 30/03/2012. Transformer in use and bund inspected weekly.
23	ST18	Thermal Station - Transformer	Oil	21/02/2012	20/02/2015	Passed	Certified by Civil Engineer 30/03/2012. Transformer in use and bund inspected weekly.

ID	Bund	Location	Type	Test/Cert Date	Next Due	Pass/Fail	Comment
24	ST12	Thermal Station - Transformer	Oil	18/06/2012	18/06/2015	Passed	Certified by Civil Engineer 24/07/2012. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
25	Hot 1	Thermal Station - Transformer	Oil	04/06/2010	03/06/2013	Passed	Certified by Civil Engineer 13th Sept 2010. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
26	Hot 2	Thermal Station - Transformer	Oil	04/06/2010	03/06/2013	Passed	Certified by Civil Engineer 11th June 2009. Retested 04/06/2010 and ok. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
27	Hot 3	Thermal Station - Transformer	Oil	04/06/2010	03/06/2013	Passed	Certified by Civil Engineer 13th September 2010. Transformer not operating, currently being stored as a strategic spare for ESB. Bund inspected weekly.
28	Hot 7	Thermal Station - Transformer	Oil	04/06/2010	03/06/2013	Passed	Certified by Civil Engineer 13th September 2010. Transformer in use and bund inspected weekly.
29	Hot 8	Thermal Station - Transformer	Oil	04/06/2010	03/06/2013	Passed	Certified by Civil Engineer 13th September 2010. Transformer in use and bund inspected weekly.
32	Hydrochloric Acid Store Container		Chem.	04/05/2007	03/05/2010	Passed	Empty and no longer in use – will be tested if put into service again.
33	Sodium Hypochlorite Store Container		Chem.	04/05/2007	03/05/2010	Passed	Empty and no longer in use – will be tested if put into service again.
34	Fyrquel Store Container		Chem.	15/06/2010	14/06/2013	Passed	Emptied, will be used during 2011 CCGT overhaul for chemical storage.
35	Oil Storage Compound Bunds labelled 1- 8		Oil	09/09/2010	08/09/2013	Passed	8 bunds labelled and only these will be used following Thermal station closure. Certified by civil engineer September 2010.
36	Waste Oil Storage Area beside HFO pump house		Waste Oil	10/03/2012	10/03/2015	Passed	Certified by Civil Engineer 23/05/2012

ID	Bund	Location	Type	Test/Cert Date	Next Due	Pass/Fail	Comment
37	16 UGD	CC - H ₂ SO ₄	Chem.	15/09/2012	15/09/2015	Passed	Certified by Civil Engineer 17/09/2012
38	16 UGD	CC - NAOH	Chem.	15/09/2012	15/09/2015	Passed	Certified by Civil Engineer 17/09/2012
39	16 UGD	CC - Brine	Chem.	15/09/2012	15/09/2015	Passed	Certified by Civil Engineer 17/09/2012
40	16 UPQ	CC - Electrochl HCl unloading	Chem.	16/02/2013	16/02/2016	Passed	Certified by Civil Engineer 14th September
41	16 UPQ	CC - Hypochlorite storage tank bund	Chem.	14/02/2010	13/02/2013	Passed	Cert. issued by Civil Engineer 08/03/2013
42	14UHA	CC - Ammonia	Chem.	15/09/2012	15/09/2015	Passed	Certified by Civil Engineer 17/09/2012
43	14UHA	CC - Hydrazine	Chem.	15/09/2012	15/09/2015	Passed	Certified by Civil Engineer 17/09/2012 Hydrazine no longer in use in station and tank has been emptied and cleaned.
44	14UMB	CC - Lube Oil Skid	Oil	16/02/2013	16/02/2016	Passed	Certified by Civil Engineer 08/03/2016
45	Distillate Bund	CC - Distillate	Oil	13/02/2013	13/02/2016	Passed	Visual Inspection by Civil Engineer integrity good. Agreement with EPA that it is inappropriate to carry out a water retention test. Minor repairs carried out in 2012.
46	Aux Boiler	CC - Diesel Day Tank	Oil	14/02/2010	13/02/2013	Passed	Cert. issued by Civil Engineer 22nd Feb 2010. March 2013 - Bund dimensions and test mark in process of being reviewed and testing scheduled.
47	T2014	CC - Holding Tank	Oil	05/03/2013			Bunds 47 – 50 have a common holding tank. Visual inspection of tank carried out 5th March and recommendations as per Civil Engineers report to be completed prior to retention test being completed. Holding tank structurally sound.
48	UT14	Combined Cycle	Oil	05/03/2013			As above
49	T2015	CC - Holding Tank	Oil	05/03/2013			As above
50	UT15	Combined Cycle	Oil	05/03/2013			As above

ID	Bund	Location	Type	Test/Cert Date	Next Due	Pass/Fail	Comment
51	T2016	CC - Main Trafo Sump	Oil	16/03/2013	16/03/2016	Passed	Bund 51- 53 treated as one bund.
52	Hot 16A	Combined Cycle - T2016	Oil	16/03/2013	16/03/2016	Passed	As above
53	Hot 16B	Combined Cycle - T2016	Oil	16/03/2013	16/03/2016	Passed	As above
54	Hot 16C	Combined Cycle - Chlorine room	Oil	14/02/2010	13/02/2013	Passed	Cert. issued by Civil Engineer 22nd Feb 2010. March 2013 - Bund dimensions and test mark in process of being reviewed and testing scheduled.
55	Hot 16D	Combined Cycle - Chlorine room	Oil	14/02/2010	13/02/2013	Passed	Cert. issued by Civil Engineer 22nd Feb 2010. March 2013 - Bund dimensions and test mark in process of being reviewed and testing scheduled.
56	ST13	Combined Cycle	Oil	25/07/2010	24/07/2013	Passed	Certified by Civil Engineer 13th September 2010
57	Hot 17	Combined Cycle	Oil	25/07/2010	24/07/2013	Passed	Certified by Civil Engineer 13th September 2010
58	14 UHA	CC - Dosing Room	Chem	15/09/2012	15/09/2015	Passed	Certified by Civil Engineer 13/09/2012
59	15 UMB	CC - Wash Water Sump	Chem	20/11/2010	19/11/2013	Passed	Certified by civil Engineer 18th November.
60	15 UMB	CC - Fuel Oil Pump Skid	Oil	08/09/2010	07/09/2013	Passed	Certified by Civil Engineer 13th September 2010
61	15 UMB	CC - Lube Oil Skid	Oil	16/02/2013	16/02/2016	Passed	Certified by Civil Engineer 14th September
62	14 UMB	CC - Fuel Oil Pump Skid	Oil	March 2013			Testing in progress
63	14 UMB	CC - Wash Water Sump	Chem	16/06/2010	15/06/2013	Passed	Certified by Civil Engineer 13/09/2011

ID	Bund	Location	Type	Test/Cert Date	Next Due	Pass/ Fail	Comment
64	15 URB/MPR	CC - Holding Tank	Oil	10/06/2009	09/06/2012	Passed	Drained to tank beside storage oil tank for T2014/5. Tank underground. 'Certified by Civil Engineer 13th August 2009
65	14URB	CC - Phase 2 Fin Fan Cooler	Chem	14/02/2010	13/02/2013	Passed	Certified by Civil Engineer 22nd Feb 2010. March 2013 - Bund dimensions and test mark in process of being reviewed and testing scheduled.
66	16 UPQ	CC - Electrochl HCl tank bund	Chem	15/02/2013		Failed	Repairs in progress by external contractor.
67	Chem gas and oil storage compound no 1.	On stones opposite CCGT WTP	Chem	18/07/2010	17/07/2013	Passed	Certified by Civil Engineer 13th Sept 2010
68	Chem gas and oil storage compound no 2.	On stones opposite CCGT WTP	Chem	18/07/2010	17/07/2013	Passed	Certified by Civil Engineer 13th Sept 2011
69	Chemstore Unit	Waste oil storage bund	Chem/oil	05/07/2012	05/07/2015	Passed	Certified by Civil Engineer 24/07/2012

Note: Not included in the bund report are all mobile and portable bunds on site which have been tested and passed retention tests, they have also all been designated numbers and the associated numbers painted on the bunds.

4.4 Ground Water Monitoring - See next page

Borehole BH1 Results 2010 - 2012

Parameter	Units	MDL	IGV	GW Regs	Feb 2010	Jul 2010	Feb 2011	Jul 2011	Feb 2012	Aug 2012
TPH >C5-C6 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C6-C8 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AL	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C7 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C7-C8 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH C5-C35 ALI + AROM	ug/l	10	10	10	-	-	-	-	-	-
Benzene	ug/l	1	1	0.75	-	-	-	-	-	-
Toluene	ug/l	2	10	10	-	-	-	-	-	-
Ethylene	ug/l	2	10	10	-	-	-	-	-	-
Xylenes	ug/l	3	10	10	-	-	-	-	-	-
MTBE	ug/l	2	30	30	-	-	-	-	-	-
Acenaphthene	ug/l	0.1	nv	nv	-	-	-	0.03	0.23	0.04
Acenaphthylene	ug/l	0.08	nv	nv	-	-	-	-	-	-
Anthracene	ug/l	0.08	10000	10000	-	-	-	-	-	-
Benzo(a)anthracene	ug/l	0.09	nv	nv	-	-	-	-	-	-
Benzo(ghi)perylene*	ug/l	0.12	0.05	0.05	-	-	-	-	-	-
Benzo(a)pyrene	ug/l	0.12	0.01	0.0075	-	-	-	-	-	-
Benzo(b)+Benzo(k) fluoranthene*	ug/l	0.26	0.05	0.05	-	-	-	-	-	0.02
Chrysene	ug/l	0.1	nv	nv	-	-	-	-	-	-
Coronene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Dibenzo(ah)anthracene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Fluoranthene	ug/l	0.09	1	1	-	-	-	0.02	0.02	-
Fluorene	ug/l	0.07	nv	nv	-	-	-	0.05	0.04	-
ndeno(123cd)pyrene*	ug/l	0.1	0.05	0.05	-	-	-	-	-	-
Naphthalene	ug/l	0.1	1		-	-	-	0.04	0.05	0.02
Phenanthrene	ug/l	0.07	nv	nv	-	-	-	0.07	0.02	-
Pyrene	ug/l	0.12	nv	nv	-	-	-	0.02	0.02	-
Total 4 PAHs	ug/l	nv	0.1	0.1	-	-	-	-	-	-
Total 17 PAHs	ug/l	nv	nv	0.075	-	-	-	0.23	0.38	0.1
BOD	mg/l	1	nv		-	-	5	-	-	-
COD	mg/l	7	nv		12	60.5	38	29	13	67
Faecal Coliforms	counts/ 100 ml	1	0		0	0	0	0	0	0
Total Coliforms	counts/ 100 ml	1	0		600	1000	7.4	154	0	2420

Borehole MW2 Results 2010 - 2012

Parameter	Units	MDL	IGV	GW Regs	Feb 2010	Aug 2010	Feb 2011	July 2011	Feb 2012	Aug 2012
TPH >C5-C6 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C6-C8 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AL	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C7 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C7-C8 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH C5-C35 ALI + AROM	ug/l	10	10	10	-	-	-	-	-	-
Benzene	ug/l	1	1	0.75	-	-	-	-	-	-
Toluene	ug/l	2	10	10	-	-	-	-	-	-
Ethylene	ug/l	2	10	10	-	-	-	-	-	-
Xylenes	ug/l	3	10	10	-	-	-	-	-	-
MTBE	ug/l	2	30	30	-	-	-	-	-	-
Acenaphthene	ug/l	0.1	nv	nv	-	-	-	0.07	0.06	0.02
Acenaphthylene	ug/l	0.08	nv	nv	-	-	-	0.02	0.03	-
Anthracene	ug/l	0.08	10000	10000	-	-	-	-	-	-
Benzo(a)anthracene	ug/l	0.09	nv	nv	-	-	0.03	-	-	-
Benzo(ghi)perylene*	ug/l	0.12	0.05	0.05	-	-	0.04	-	-	-
Benzo(a)pyrene	ug/l	0.12	0.01	0.0075	-	-	0.05	-	-	-
Benzo(b)+Benzo(k) fluoranthene*	ug/l	0.26	0.05	0.05	-	-	0.05	-	-	-
Chrysene	ug/l	0.1	nv	nv	-	-	0.02	-	-	-
Coronene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Dibenzo(ah)anthracene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Fluoranthene	ug/l	0.09	1	1	-	-	0.02	0.03	0.04	-
Fluorene	ug/l	0.07	nv	nv	-	-	-	0.1	0.08	-
Indeno(123cd)pyrene*	ug/l	0.1	0.05	0.05	-	-	-	-	-	-
Naphthalene	ug/l	0.1	1		-	-	0.03	0.07	0.06	-
Phenanthrene	ug/l	0.07	nv	nv	-	-	0.02	0.14	0.05	
Pyrene	ug/l	0.12	nv	nv	-	-	0.02	0.02	0.03	
Total 4 PAHs	ug/l	nv	0.1	0.1	-	-	0.12	-	-	
Total 17 PAHs	ug/l	1.61	nv	0.075	-	-	0.46	0.45	0.35	
BOD	mg/l	1	nv		-	3.04	4	7	-	-
COD	mg/l	7	nv		8	116	15	35	9	67
Faecal Coliforms	counts/100 ml	1	0		0	0	0	0	0	0
Total Coliforms	counts/100 ml	1	0		0	400	42	120	0	2420

Borehole MW3 Results 2010 -2012

Parameter	Units	MDL	IGV	GW Regs	Feb 2010	Jul 2010	Feb 2011	July 2011	Feb 2012	Aug 2012
TPH >C5-C6 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C6-C8 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AL	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C7 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C7-C8 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH C5-C35 ALI + AROM	ug/l	10	10	10	-	-	-	-	-	-
Benzene	ug/l	1	1	0.75	-	-	-	-	-	-
Toluene	ug/l	2	10	10	-	-	-	-	-	-
Ethylene	ug/l	2	10	10	-	-	-	-	-	-
Xylenes	ug/l	3	10	10	-	-	-	-	-	-
MTBE	ug/l	2	30	30	-	-	-	-	-	-
Acenaphthene	ug/l	0.1	nv	nv	-	-	-	-	-	-
Acenaphthylene	ug/l	0.08	nv	nv	-	-	-	-	-	-
Anthracene	ug/l	0.08	10000	10000	-	-	-	-	-	-
Benzo(a)anthracene	ug/l	0.09	nv	nv	-	-	-	-	-	-
Benzo(ghi)perylene*	ug/l	0.12	0.05	0.05	-	-	-	-	-	-
Benzo(a)pyrene	ug/l	0.12	0.01	0.0075	-	-	-	-	-	-
Benzo(b)+Benzo(k) fluoranthene*	ug/l	0.26	0.05	0.05	-	-	-	-	-	-
Chrysene	ug/l	0.1	nv	nv	-	-	-	-	-	-
Coronene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Dibenzo(ah)anthracene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Fluoranthene	ug/l	0.09	1	1	-	-	-	-	-	-
Fluorene	ug/l	0.07	nv	nv	-	-	-	-	-	-
ndeno(123cd)pyrene*	ug/l	0.1	0.05	0.05	-	-	-	-	-	-
Naphthalene	ug/l	0.1	1		-	-	-	-	-	-
Phenanthrene	ug/l	0.07	nv	nv	-	-	-	-	-	-
Pyrene	ug/l	0.12	nv	nv	-	-	-	-	-	-
Total 4 PAHs	ug/l	nv	0.1	0.1	-	-	-	-	-	-
Total 17 PAHs	ug/l	nv	nv	0.075	-	-	-	-	-	-
BOD	mg/l	1	nv		2.79	-	5	-	-	-
COD	mg/l	7	nv		8	333	57	286	9	52
Faecal Coliforms	counts/ 100 ml	1	0		0	0	0	0	0	0
Total Coliforms	counts/ 100 ml	1	0		0	0	2	10	0	63

Borehole MW4 Results 2010 - 2012

Parameter	Units	MDL	IGV	GW Regs	Feb 2010	July 2010	Feb 2011	July 2011	Feb 2012	Aug 2012
TPH >C5-C6 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C6-C8 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 ALI	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AL	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 ALI	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C7 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C7-C8 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C8-C10 AROM	ug/l	5	nv	nv	-	-	-	-	-	-
TPH >C10-C12 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C12-C16 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C16-C21 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C21-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH >C5-C35 AROM	ug/l	10	nv	nv	-	-	-	-	-	-
TPH C5-C35 ALI + AROM	ug/l	10	10	10	-	-	-	-	-	-
Benzene	ug/l	1	1	0.75	-	-	-	-	-	-
Toluene	ug/l	2	10	10	-	-	-	-	-	-
Ethylene	ug/l	2	10	10	-	-	-	-	-	-
Xylenes	ug/l	3	10	10	-	-	-	-	-	-
MTBE	ug/l	2	30	30	-	-	-	-	-	-
Acenaphthene	ug/l	0.1	nv	nv	-	-	-	0.06	0.05	0.03
Acenaphthylene	ug/l	0.08	nv	nv	-	-	-	0.02	0.02	-
Anthracene	ug/l	0.08	10000	10000	-	0.47	-	-	-	-
Benzo(a)anthracene	ug/l	0.09	nv	nv	-	0.85	0.02	-	0.02	-
Benzo(ghi)perylene*	ug/l	0.12	0.05	0.05	-	0.49	0.02	-	-	-
Benzo(a)pyrene	ug/l	0.12	0.01	0.0075	-	0.48	0.02	-	-	-
Benzo(b)+Benzo(k) fluoranthene*	ug/l	0.26	0.05	0.05	-	1.21	0.03	-	-	-
Chrysene	ug/l	0.1	nv	nv	-	0.8	0.02	-	-	-
Coronene	ug/l	0.01	nv	nv	-	-	-	-	-	-
Dibenzo(ah)anthracene	ug/l	0.01	nv	nv	-	0.4	-	-	-	-
Fluoranthene	ug/l	0.09	1	1	-	0.55	-	0.04	0.03	-
Fluorene	ug/l	0.07	nv	nv	-	0.18	-	0.1	0.02	-
Indeno(123cd)pyrene*	ug/l	0.1	0.05	0.05	-	0.4	-	-	-	-
Naphthalene	ug/l	0.1	1	1	-	-	-	0.05	0.04	-
Phenanthrene	ug/l	0.07	nv	nv	-	0.37	-	0.17	0.1	-
Pyrene	ug/l	0.12	nv	nv	-	0.61	0.02	0.03	0.31	-
Total 4 PAHs	ug/l	nv	0.1	0.1	-	2.1	0.05	-	-	-
Total 17 PAHs	ug/l	nv	nv	0.075	-	6.8	0.14	0.47	0.59	0.03
BOD	mg/l	1	nv		-	-	5	6	-	-
COD	mg/l	7	nv		-	18.7	18	12	-	14
Faecal Coliforms	counts/ 100 ml	1	0		0	0	0	0	0	2
Total Coliforms	counts/ 100 ml	1	0		0	0	16.9	57.6	0	9050

MDL- Method Detection Limit **IGV** – Interim Guideline Values **GW Regs** – Groundwater Regulations 2010

Comments on Ground Water Results from 2012

February 2012

Results have been screened against the Groundwater Regulation Threshold Values (2010) and EPA Interim Guideline Values (IGVs) for groundwater. Results from the two sampling rounds indicate that:

- Similar to previous rounds the concentrations of TPH, BTEX and MTBE were not detected above the laboratory method detection limit (MDL);
- PAHs have slightly increased in BH1 and MW4. Acenaphthylene concentrations in BH1 and Pyrene in MW4 have increased since July 2011.
- Coliforms were not detected in any of the samples this round.
- Overall the impact is considered to be minor.

August 2012

- Similar to previous rounds the concentrations of TPH, BTEX and MTBE were not detected above the laboratory method detection limit (MDL);
- PAH concentrations were relatively low in all four samples collected with reported concentrations below MDL or appropriate IG. This is broadly consistent with previous monitoring rounds;
- Overall there was a decrease in reported PAH concentrations since the February 2012 monitoring event; and
- Total coliform numbers exceeded the IG in samples collected from BH1, MW02, MW03, and MW04, marking a significant increase compared to the February 2012 event, where total coliforms were not reported in the samples analysed. There was also an exceedence of the IG for faecal coliforms in samples MW2 and MW4.

(Refer also to report submitted to EPA 25/01/2011)

APPENDIX I

PRTR



| PRTR# : P0577 | Facility Name : Electricity Supply Board | Filename : P0577_2012(1).xls | Return Year : 2012 |

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[Guidance to completing the PRTR workbook](#)

AER Returns Workbook

Version 1.1.15

REFERENCE YEAR	2012
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1. FACILITY IDENTIFICATION

Parent Company Name	Electricity Supply Board
Facility Name	Electricity Supply Board
PRTR Identification Number	P0577
Licence Number	P0577-02

Waste or IPPC Classes of Activity

No.	class name
2.1	The operation of combustion installations with a rated thermal input equal to or greater than 50MW

Address 1	ESB Poolbeg Generating Station
Address 2	Pigeon House Road
Address 3	Ringsend
Address 4	Dublin 4
	Dublin
Country	Ireland
Coordinates of Location	-6.18650 53.3391
River Basin District	IEEA
NACE Code	3511
Main Economic Activity	Production of electricity
AER Returns Contact Name	Suzanne Moran
AER Returns Contact Email Address	suzanne.moran@esb.ie
AER Returns Contact Position	Environmental Coordinator
AER Returns Contact Telephone Number	016189677
AER Returns Contact Mobile Phone Number	0879692713
AER Returns Contact Fax Number	016388181
Production Volume	2372.0
Production Volume Units	GWhours
Number of Installations	1
Number of Operating Hours in Year	8760
Number of Employees	34
User Feedback/Comments	
Web Address	www.esb.ie

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
1(c)	Thermal power stations and other combustion installations

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

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

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
--	----

This question is only applicable if you are an IPPC or Quarry site

4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : P0577 | Facility Name : Electricity Supply Board | Filename : P0577_2012(1).xls | Return Year : 2012 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASERS TO AIR		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	POLLUTANT Name	M/C/E	Method Used		QUANTITY			
			Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
03	Carbon dioxide (CO2)	C	ETS	As per M and R protocol. As per VGB expert group and ESB calculations.	1024130000.0	1024130000.0	0.0	0.0
05	Nitrous oxide (N2O)	C	OTH	As per VGB expert group and ESB calculations.	17989.35	17989.35	0.0	0.0
01	Methane (CH4)	C	OTH	As per VGB expert group and ESB calculations.	71938.34	71938.34	0.0	0.0
02	Carbon monoxide (CO)	C	OTH	As per VGB expert group and ESB calculations.	827052.73	827052.73	0.0	0.0
07	Non-methane volatile organic compounds (NMVOC)	C	OTH	As per VGB expert group and ESB calculations.	9001.82	9001.82	0.0	0.0
62	Benzene	C	OTH	As per VGB expert group and ESB calculations.	90.1	90.1	0.0	0.0
72	Polycyclic aromatic hydrocarbons (PAHs)	C	OTH	As per VGB expert group and ESB calculations.	0.002	0.002	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	M	ISO 10849:1996	CEMs	472072.0	472072.0	0.0	0.0
21	Mercury and compounds (as Hg)	C	OTH	As per VGB expert group and ESB calculations.	1.03	1.03	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

RELEASERS TO AIR		METHOD			Please enter all quantities in this section in KGs			
No. Annex II	POLLUTANT Name	M/C/E	Method Used		QUANTITY			
			Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	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)

RELEASERS TO AIR		METHOD			Please enter all quantities in this section in KGs			
Pollutant No.	POLLUTANT Name	M/C/E	Method Used		QUANTITY			
			Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

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

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T (Total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill:	Electricity Supply Board				
Please enter summary data on the quantities of methane flared and / or utilised	T (Total) kg/Year	M/C/E	Method Used		Facility Total Capacity m3 per hour
	Total estimated methane generation (as per site model)	0.0			N/A
	Methane flared	0.0			0.0 (Total Flaring Capacity)
	Methane utilised in engine/s	0.0			0.0 (Total Utilising Capacity)
	Net methane emission (as reported in Section A above)	0.0			N/A

4.2 RELEASES TO WATERS

[Link to previous years emissions data](#)

| PRTR# : P0577 | Facility Name : Electricity Supply Board | Filename : P0577_2012(1).xls | Return Year : 2012 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this only concerns Releases fr

POLLUTANT		Method Used			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	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 Used			QUANTITY			
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	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 Used			QUANTITY					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	SW3	SW7	SW8	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
238	Ammonia (as N)	M	OTH	Poolbeg Procedure EMS 11.1.14	5.9	0.81	0.89	7.6	0.0	0.0
240	Suspended Solids	M	OTH	Poolbeg Procedure EMS 11.1.13	37.35	0.1	0.05	37.5	0.0	0.0

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

4.3 RELEASES TO WASTEWATER OR SEWER

[Link to previous years emissions data](#)

| PRTR# : P0577 | Facility Name : Electricity Supply Board | Filename : P0577_2012(1).xls | Return Y

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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 Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
						0.0	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 Designation or Description	S1-1 Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
303	BOD	M	OTH	Poolbeg Procedure EMS 11.1.17		4.92	4.92	0.0
306	COD	M	OTH	External Lab - ISO 6060- 1989		17.42	17.42	0.0
240	Suspended Solids	M	OTH	Poolbeg Procedure EMS 11.1.13		3.59	3.59	0.0
308	Detergents (as MBAS)	M	OTH	External Lab Method - TM249 Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998		0.015	0.015	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Poolbeg Procedure EMS 11.1.19		0.39	0.39	0.0
343	Sulphate	M	OTH	Poolbeg Procedure EMS 11.1.19		12.79	12.79	0.0
314	Fats, Oils and Greases	M	OTH	External Lab TM235 - Determination of Total Petroleum Hydrocarbons (TPH) in Waters By Infra-Red Spectroscopy		0.0	0.0	0.0

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

4.4 RELEASES TO LAND

[Link to previous years emissions data](#)

| PRTR# : P0577 | Facility Name : Electricity Supply Board | Filename : P0577_2012(1).xls | Return Year : 2012 |

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SECTION A : PRTR POLLUTANTS

POLLUTANT		METHOD			Please enter all quantities in this section in KGs		
RELEASES TO LAND		METHOD			QUANTITY		
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	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)

POLLUTANT		METHOD			Please enter all quantities in this section in KGs		
RELEASES TO LAND		METHOD			QUANTITY		
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

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

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : P0577 | Facility Name : Electricity Supply Board | Filename : P0577_2012(1).xls | Return Year : 2012 |

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Please enter all quantities on this sheet in Tonnes

0

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and 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						
To Other Countries	15 02 02	Yes	0.26	absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances	R1	M	Weighed	Abroad	Enva Environmental ,W0184-01	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	
To Other Countries	16 05 08	Yes	0.18	discarded organic chemicals consisting of or containing dangerous substances	R1	M	Weighed	Abroad	Enva Shannon,W041-01 Enva Shannon W041-01 . Co. Clare Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	
To Other Countries	16 05 06	Yes	0.06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals	R1	M	Weighed	Abroad	Enva Shannon,W041-01,Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	
Within the Country	17 02 01	No	13.26	wood	R3	M	Weighed	Offsite in Ireland	Midlands Waste Disposal,W0131 -02	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	17 04 05	No	22.87	iron and steel	R4	M	Weighed	Offsite in Ireland	Hegarty Metals,WP 05-04	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	15 01 06	No	4.52	mixed packaging	R3	M	Weighed	Offsite in Ireland	Midlands Waste Disposal,W0131 -02	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	20 03 01	No	14.67	mixed municipal waste	D1	M	Weighed	Offsite in Ireland	Midlands Waste Disposal,W0131 -02	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	20 03 07	No	6.68	bulky waste	R1	M	Weighed	Offsite in Ireland	Midlands Waste Disposal,W0131 -02	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	16 02 14	No	0.06	discarded equipment other than those mentioned in 16 02 09 to 16 02 13	R4	M	Weighed	Offsite in Ireland	KMK Metals (WEEE recycle),W0113 - 03	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	16 02 16	No	0.44	discarded equipment other than those mentioned in 16 02 15	R4	M	Weighed	Offsite in Ireland	KMK Metals (WEEE recycle),W0113 - 03	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	16 02 13	Yes	1.14	discarded equipment containing hazardous components (16) other than those mentioned in 16 02 09 to 16 02 12	R4	M	Weighed	Offsite in Ireland	KMK Metals (WEEE recycle),W0113 - 03	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	20 01 21	Yes	0.04	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	KMK Metals (WEEE recycle),W0113 - 03	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	20 01 21	Yes	0.116	fluorescent tubes and other mercury-containing waste	R4	M	Weighed	Offsite in Ireland	Enva Environmental ,W0184-01	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Irish Lamp Recycling Ltd.,WFP - KE-08-0348-01,Irish Lamp Recycling,Woodstock Ind. Estate,Athy,Co. Kildare,Ireland	Irish Lamp Recycling,Woodstock Ind. Estate,Athy,Co. Kildare,Ireland	
Within the Country	16 02 11	Yes	0.11	discarded equipment containing chlorofluorocarbons, HCFC, HFC	R4	M	Weighed	Offsite in Ireland	KMK Metals (WEEE recycle),W0113 - 03	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
To Other Countries	16 05 04	Yes	0.095	gases in pressure containers (including halons) containing dangerous substances	R4	M	Weighed	Abroad	Enva Environmental ,W0184-01 Clonminam Ind. Estate Portlaoise Co. Laois . Ireland	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Remonds Industrie Service GmbH & Co. KG,H09037950, Hauptverwal tung Lunen ,Brunnenstrase 138,,44536 Lunen,Germany	Hauptverwaltung Lunen ,Brunnenstrase 138,,44536 Lunen,Germany	
Within the Country	16 05 08	Yes	0.055	discarded organic chemicals consisting of or containing dangerous substances	R1	M	Weighed	Offsite in Ireland	Enva Environmental ,W0184-01	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Enva Shannon,W041-01,Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	

Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and 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					
To Other Countries	15 01 10	Yes	0.065	packaging containing residues of or contaminated by dangerous substances	R1	M	Weighed	Abroad	Enva Environmental ,W0184-01 Clonminam Ind. Estate Portlaoise Co. Laois . Ireland	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
To Other Countries	20 01 29	Yes	0.081	detergents containing dangerous substances	R1	M	Weighed	Abroad	Enva Environmental ,W0184-01	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
To Other Countries	13 07 01	Yes	0.02	fuel oil and diesel	R1	M	Weighed	Abroad	Enva Shannon,W041-01 Enva Shannon W041-01 . Co. Clare Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany
Within the Country	13 05 07	Yes	45.42	oily water from oil/water separators	R9	M	Volume Calculation	Offsite in Ireland	Enva Environmental ,W0184-01 Enva Shannon,W041-01 Enva Shannon W041-01 . Co. Clare Ireland	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Lindenschmidt KG ,04 714 98089,Lindenschmidt KG ,Umweitservice Krombacher Strasse 42-46,57223 Kreuztal,,Germany	Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland
Within the Country	06 01 03	Yes	4.654	hydrochloric acid	D9	M	Weighed	Offsite in Ireland	Enva Shannon,W041-01 Enva Shannon W041-01 . Co. Clare Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland	Enva Environmental ,W0184-01, Clonminam Ind. Estate,Portlaoise,Co. Laois,,Ireland	Enva Shannon,W041-01,,Co. Clare,Ireland
To Other Countries	17 06 05	Yes	0.52 (18)	construction materials containing asbestos	D1	M	Weighed	Abroad	Riita Environmental,W0192-03	Block 402 Grants Drive,Greenogue Business Park,Rathcoole,Co. Dublin,Ireland	KG,IRE/AG019/11,Bimohler Str. 57 a,,Grosenasp,DE24623,Germany	Bimohler Str. 57 a,,Grosenasp,DE24623,Germany

* Select a row by double-clicking the Description of Waste then click the delete button