

Comhairle Contae Thiobraid Árann Thuaidh
North Tipperary County Council



Water Services Section,
Civic Offices,
Limerick Road,
Nenagh,
Co. Tipperary

The Administrator,
Office of Environmental Enforcement,
Environmental Protection Agency,
PO Box 3000,
Johnston Castle Estate,
Co. Wexford.

28/2/13

**Re: AER for 2012 (Cloughjordan Agglomeration).
Licence Register Number: D0475-01.**

Dear Sir/Madam,

Please find attached one original completed Annual Environmental Report for 2012 as per Condition 6.10 of the Waste Water Discharge Licence for Cloughjordan Agglomeration. The content of the Full PDF AER uploaded to the EPA website is a true copy of the original Annual Environmental Report.

Yours Sincerely,

Jim McGuire,
Senior Engineer.

Annual Environmental Report 2012 Cloughjordan Agglomeration

Cloughjordan Agglomeration was issued with a Waste Water Discharge Licence on 21/03/11. Licence Register Number D0475-01.

This is the Annual Environmental Report (AER) for 2012 as required under Condition 6.10 of said Licence.

It contains the information required under Schedule D of the Licence.

1. Discharges from the agglomeration

Cloughjordan Agglomeration uses the same primary discharge point and stormwater overflow as identified in the Waste Water Discharge Authorisation Licence Application. There have been no changes to these discharge points since the application was lodged in 2008.

The primary discharge point was sampled 13 times in 2012, 12 Composite Surveillance samples and 1 grab investigative sample. Cloughjordan WWTP has difficulty satisfying the criteria set out under the Urban Waste Water Treatment Regulations.

Many of the samples taken of the primary discharge since the WWDL was issued were not within the Emission Limit Values (ELV) for Cloughjordan as set out in Schedule A of the Licence.

Please find attached an Excel Spreadsheet called “**Appendix No.1 Cloughjordan WWTP Final Effluent Test Results 2012**”. This spreadsheet shows all sample test results for Cloughjordan WWTP Final effluent in 2012.

2. Summary report on (i) monthly influent monitoring and (ii) loading removal efficiencies

2.(i) In 2012, 12 composite surveillance influent samples were taken at Cloughjordan WWTP at regular intervals. Please find attached an Excel Spreadsheet called “**Appendix No.2(i) Cloughjordan WWTP Influent Test Results 2012**” (This spreadsheet shows all sample test results for Cloughjordan WWTP Influent in 2012.)

2(ii) 12 No. Composite Surveillance Final Effluent samples were also taken on the same days as the Plant Influent samples. By comparing the percentage reduction of the relevant parameters in the effluent samples, the loading removal efficiencies were estimated.

Please find attached an Excel Spreadsheet called “**Appendix No.2(ii) Summary Report on Loading Removal Efficiencies Cloughjordan WWTP 2012**” (which gives a breakdown for all the parameters mentioned in **Schedule A:A.1**).

The average BOD removal rate was 82%. The range varied from 67.59% to 91.62%.

The average Ammonia removal rate was 71.38%. The range varied from 45.55% to 87.89%.

The average COD removal rate was 79.43%. The range varied from 71.14% to 87.28%.

The average Suspended solids removal rate was 76.73%. The range varied from 63.64% to 87.97%.

The average Orthophosphate removal rate was 31.08%. The range varied from 0% to 56.26%.

3. Data collection and reporting requirements under the Urban Waste Water Treatment Directive

Cloughjordan Agglomeration's WWTP is included in North Tipperary County Council's 2012 Annual Waste Water Returns Report to the EPA. This report was lodged by North Tipperary County Council with the EPA by 28 February 2013.

4. Complaints summary

There have been no environmental complaints about Cloughjordan Agglomeration in 2012.

5. Pollutant Release and Transfer Register- report for previous year

A Pollutant Release and Transfer Register (Condition 4.14) has been completed for Cloughjordan Agglomeration for the year 2012. This report has been submitted electronically and is included in this AER.

6. Pollutant Release and Transfer Register- report for current year

There is no expected change from the 2012 PRTR for 2013.

7. Ambient monitoring summary

In 2012, ambient sampling consisted of 5 grab samples (4 No. Surveillance and 1 No. Investigative) taken (i) upstream and (ii) downstream of the primary discharge point. Please find attached 2 No. Excel Spreadsheets called "**Appendix No.7(i) Cloughjordan WWTP Upstream Test Results 2012**" and "**Appendix No.7(ii) Cloughjordan STP Downstream Test Results 2012**" attached. These spreadsheets show all test result values for samples taken upstream and downstream of Cloughjordan WWTP's Primary Discharge Point in 2012.

The ambient monitoring samples were compared to the criteria for calculating surface water ecological status and ecological potential as set out under Schedule 5 of the European Communities Environmental Objectives (Surface Waters) Regulations 2009. The grab samples taken upstream of Cloughjordan WWTP, were classified as having a "good" water status, by comparing the Total Ammonia, BOD and Orthophosphate parameters to the parameters set out in Schedule 5. Similarly, the grab samples taken downstream were classified as having a "high" water status, by comparing the Total Ammonia, BOD and Orthophosphate parameters to the parameters set out in Schedule 5. The discharge from Cloughjordan WWTP appears to have no adverse impact on the water quality of the Ballyfinboy River.

8. Storm water overflow inspection and assessment report

No Storm water overflow inspection and assessment report has been completed in 2012. It is expected to be completed in the coming years.

North Tipperary County Council visually inspects the overflow daily and has found that the stormwater overflow only performs in stormwater conditions.

9. Reported incidents summary

There were 4 no. orthophosphate ELV exceedences for Cloughjordan WWTP in 2012. North Tipperary Co. Council has remedied this situation by installing chemical phosphorus removal facilities (Ferric Sulphate dosing facilities) at Cloughjordan. These facilities were installed in June 2012. Only one of the orthophosphate exceedences occurred after ferric dosing commenced. Ferric dosing appears to be working successfully in Cloughjordan to significantly reduce orthophosphate emissions.

There were 5 Ammonia ELV exceedences in 2012. In mitigation, the average concentration of Ammonia was 9.3mg/L (Ammonia ELV is 10mg/L).

There were 5 No. Suspended Solids ELV exceedences in 2012, 5 No. BOD ELV exceedences and 1 No. COD ELV exceedence.

In general the plant is working much better than in 2011. There have been operational improvements made in the plant in 2012, and this has resulted in a better quality effluent especially in the latter part of 2012.

10. Any other items

North Tipperary Co. Council started dosing ferric sulphate at Cloughjordan WWTP in June 2012, in order to remove phosphorus compounds from the final effluent. In addition, mechanical refurbishment of trickling filters was completed in the first half of 2012. These and other operational measures will improve the performance of Cloughjordan WWTP.

A new automated mechanical inlet screen has been installed at the inlet works in Cloughjordan WWTP, in early 2012.

North Tipperary Co. Council has looked for funding from the DoEHLG under the Rural Water Programme (Small Schemes funding) for the provision of a new clarifier, more efficient ferric dosage equipment and an upgrade of the percolating filters at Cloughjordan WWTP.

North Tipperary Co. Council has also looked for funding from the DoEHLG under the Rural Water Programme (Small Schemes funding) for the design and construction of an Integrated Constructed Wetland, to ensure the effluent standards from Cloughjordan will achieve the appropriate licence standards.

Appendix No.1 Cloughjordan WWTP Final Effluent Test Results 2012

SampleDate	19/01/2012	28/02/2012	21/03/2012	26/04/2012	15/05/2012	12/06/2012	12/07/2012	16/08/2012	11/09/2012	09/10/2012	12/10/2012	#####	04/12/2012
Ammonia (mg/l as N)	5.07	15.74	19.98	18.1	14.41	1.14	1.81	1.25	7.62	13.6	7.56	8.79	4.31
Ammonium (mg/l NH4)	6.52	20.24	25.68	23.26	18.52	1.46	2.32	1.6	9.8	17.48	9.72	11.3	5.53
BOD (mg/l O2)	14	28	47	51	35	8	8	10	21	32		20	11
Chemical Oxygen Demand (mg/l O2)	39	81	184	114	102	32	26	26	72	111	83	66	40
Chloride (mg/l Cl)	51.66	96.61	103.56	102.5	132.06	35.89	40.59	32.24	64.75	101.4		64.03	46.65
Nitrates (mg/l NO3 as N)	4.85	2.16	1.09	1.77	3.13	5.63	5	4.79	3.85	2.55		3.19	4.53
Nitrites (mg/l NO2 as N)	0.352	0.431	0.848	0.403	1.19	0.205	0.278	0.346	0.484	0.616		0.576	0.281
O-Phos (mg/l PO4 as P)	1.32	2.48	3.37	3.08	3.65	0.835	0.667	0.761	2.3	4.04	1.85	1.25	0.94
O-Phos (mg/l PO4)	4.05	7.59	10.35	9.44	11.19	2.56	2.05	2.33	7.05	12.38	5.67	3.84	2.88
pH (pH units)	7.91	7.62	7.79	7.43	7.76	7.51	7.88	7.44	7.53	7.65		7.43	7.87
Sulphate (mg/l SO4)	29.25	30.59	42.18	28.27	44	21.39	25.22	15.72	26.34	43.46		28.32	18.78
Suspended Solids (mg/l)	29.6	31.2	98.8	61.6	49.2	14.8	16.8	24	37.6	52	47.2	28	18.4
Temperature (oC)	8.5	10.6	9.7	9.5	9.5	12.2	13.5	14.7	18.1	11		11.4	4.4
Total Nitrogen (mg/l as N)	16.8	24	31.2	30.4	8.5	11.2	11.9	9.8	20.3	30.8		18.8	13
Total Oxidised Nitrogen (mg/l TON as N)	5.2	2.59	1.93	2.18	4.33	5.84	5.28	5.14	4.33	3.16		3.76	4.81
Total Phosphorus (mg/l as P)	2.16	3.12	5.16	4.24	4.6	1.22	0.95	1.27	2.56	4.12		1.91	1.31

Appendix No.2(i) Cloughjordan WWTP Influent Test Results 2012

SampleDate	19/01/2012	28/02/2012	21/03/2012	26/04/2012	15/05/2012	12/06/2012	12/07/2012	16/08/2012	11/09/2012	09/10/2012	#####	04/12/2012
Ammonia (mg/l as N)	20.13	54.47	49.53	33.24	52.01	9.41	9.16	6.68	27.2	49.66	24.77	16.99
Ammonium (mg/l NH4)	25.87	70.01	63.66	42.73	66.85	12.1	11.78	8.59	35.01	63.8	31.84	21.84
BOD (mg/l O2)	104	334	145	195	244	69	41	40	114	192	144	68
Chemical Oxygen Demand (mg/l O2)	286	637	905	395	637	182	103	108	334	513	320	163
Chloride (mg/l Cl)	81.86	202.8	185.25	150.5	205.24	48.08	51.9	43.92	102.7	180.7	80.73	63.6
Nitrates (mg/l NO3 as N)	0.28	0.02	0.04	0.51	<0.01	1.13	1.57	1.29	0.05	0.17	0.1	BLD
Nitrites (mg/l NO2 as N)	0.386	0.03	0.023	1.85	0.02	0.623	0.51	0.35	BLD	BLD	BLD	0.198
O-Phos (mg/l PO4 as P)	2.16	5.67	5.39	3.76	5.64	0.985	0.934	0.757	3	4.98	2.56	1.87
O-Phos (mg/l PO4)	6.63	17.4	16.54	11.54	17.32	3.02	2.86	2.32	9.21	15.29	7.86	5.73
pH (pH units)	8.19	8.44	8.02	8.12	8.1	7.84	7.91	7.72	8.1	8.15	8.1	8.14
Sulphate (mg/l SO4)	30.36	54.46	64.38	41.2	55.13	30.35	23.77	19.77	37.16	52.79	43.3	27.28
Suspended Solids (mg/l)	129	233	316	188	305	123	86	66	142	205	168	70
Temperature (oC)	8.5	10.3	9.5	8.3	9.3	13	14	17.6	14.8	12	11.3	8.8
Total Nitrogen (mg/l as N)	26.6	64.8	62	39	12.9	17.1	14.9	12	32.6	56.5	34.5	24
Total Oxidised Nitrogen (mg/l TON as N)	0.67	0.05	0.06	2.36	0.02	1.76	2.08	1.64	0.05	0.17	0.1	0.2
Total Phosphorus (mg/l as P)	3.85	8.2	8.8	5.55	9.85	2.36	1.88	1.49	4.84	7.05	4.6	3.16

Appendix 2(ii) Summary Report on Loading Removal Efficiencies at Cloughjordan WWTP in 2012

2012 % Reductions

Date	BOD	COD	Suspended Solids	Ammonia	Orthophosphate
19/01/2012	86.54	86.36	77.05	74.81	38.89
28/02/2012	91.62	87.28	86.61	71.10	56.26
21/03/2012	67.59	79.67	68.73	59.66	37.48
26/04/2012	73.85	71.14	67.23	45.55	18.09
15/05/2012	85.66	83.99	83.87	72.29	35.28
12/06/2012	88.41	82.42	87.97	87.89	15.23
12/07/2012	80.49	74.76	80.47	80.24	28.59
16/08/2012	75.00	75.93	63.64	81.29	0.00
11/09/2012	81.58	78.44	73.52	71.99	23.33
09/10/2012	83.33	78.36	74.63	72.61	18.88
13/11/2012	86.11	79.38	83.33	64.51	51.17
04/12/2012	83.82	75.46	73.71	74.63	49.73

2012 % Reductions

	Average Value	Max Value	Min Value
BOD	82	91.62	67.59
COD	79.43	87.28	71.14
S.Solids	76.73	87.97	63.64
Ammonia	71.38	87.89	45.55
Orthophosphate	31.08	56.26	0

Appendix No.7(i) Cloughjordan WWTP Upstream Test Results 2012

SampleDate	21/03/2012	12/06/2012	11/09/2012	12/10/2012	13/11/2012
Ammonia (mg/l as N)	0.018	0.024	0.019	0.018	0.012
Ammonium (mg/l NH4)	0.023	0.03	0.025	0.023	0.016
BOD (mg/l O2)	1.1	1.4	1.4		1.6
Chemical Oxygen Demand (r	24	30	22	67	34
Chloride (mg/l Cl)	19.81	17.45	17.85		16.96
Conductivity @ 20°C (uS/cm)	659	615	635		654
Dissolved Oxygen (ppm O2)	10.47	8.22	8.59	7.37	8.23
Nitrates (mg/l NO3 as N)	2.1	1.76	2.98		1.37
Nitrites (mg/l NO2 as N)	<0.01	0.007	0.011		BLD
O-Phos (mg/l PO4 as P)	0.052	0.022	0.023	0.019	0.021
O-Phos (mg/l PO4)	0.16	0.067	0.07	0.059	0.064
pH (pH units)	8.02	7.72	7.88		7.74
Sulphate (mg/l SO4)	20.79	19.91	14.6		18.58
Suspended Solids (mg/l)	5.6	2.8	2	14.4	2.8
Temperature (oC)	9.3	12.6	12.4	10.8	11
Total Nitrogen (mg/l as N)	2.6	2.2	3.2		2.3
Total Oxidised Nitrogen (mg	2.1	1.77	2.99		1.37
Total Phosphorus (mg/l as P)	0.08	0.02	0.07		0.06

Appendix No.7(ii) Cloughjordan WWTP Downstream Test Results 2012

SampleDate	21/03/2012	12/06/2012	11/09/2012	12/10/2012	13/11/2012
Ammonia (mg/l as N)	0.063	0.045	0.028	0.027	0.018
Ammonium (mg/l NH4)	0.081	0.058	0.036	0.035	0.023
BOD (mg/l O2)	0.9	1.3	1.3		1.3
Chemical Oxygen Demand (mg/l O2)	21	27	20	64	32
Chloride (mg/l Cl)	20.1	17.83	18.68		17.2
Conductivity @ 20°C (uS/cm)	677	627	675		679
Dissolved Oxygen (ppm O2)	10.06	8.28	8.48	8.08	8.48
Nitrates (mg/l NO3 as N)	2.53	2.14	2.03		1.63
Nitrites (mg/l NO2 as N)	<0.01	0.007	0.01		BLD
O-Phos (mg/l PO4 as P)	0.026	0.027	0.019	0.025	0.017
O-Phos (mg/l PO4)	0.078	0.083	0.06	0.076	0.051
pH (pH units)	7.89	7.7	7.76		7.69
Sulphate (mg/l SO4)	21.93	19.1	14.62		18.04
Suspended Solids (mg/l)	4.8	3.2	1.2	12	2
Temperature (oC)	9.4	12.6	12.3	9.8	11.1
Total Nitrogen (mg/l as N)	3.1	2.5	5.4		2.9
Total Oxidised Nitrogen (mg/l TON as N)	2.53	2.14	2.04		1.63
Total Phosphorus (mg/l as P)	0.05	0.05	0.03		0.05



Environmental Protection Agency

| PRTR# : D0475 | Facility Name : Cloughjordan Waste Water Treatment Plant |
Filename : D0475_2012.xls | Return Year : 2012 |[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	North Tipperary County Council
Facility Name	Cloughjordan Waste Water Treatment Plant
PRTR Identification Number	D0475
Licence Number	D0475-01

Waste or IPPC Classes of Activity

No.	class_name
30.4	General

Address 1	Water Services Section
Address 2	Civic Offices
Address 3	Limerick Road
Address 4	Nenagh, County Tipperary
	Tipperary
Country	Ireland
Coordinates of Location	-8.050070652 52.947
River Basin District	IEGBNISH
NACE Code	3700
Main Economic Activity	Sewerage
AER Returns Contact Name	Kevin McDonnell
AER Returns Contact Email Address	kmcdonnell@northtippcoco.ie
AER Returns Contact Position	Environmental Technician Grade 11
AER Returns Contact Telephone Number	067 44833
AER Returns Contact Mobile Phone Number	0879276625
AER Returns Contact Fax Number	06731773
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	1
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(f)	Urban waste-water treatment plants

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
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4.1 RELEASES TO AIR

[Link to previous years emissions data](#)

| PRTR# : D0475 | Facility Name : Cloughjordan Waste Water Treatment Plant | Filename : D0475_2012.xls | Return Year : 2012 |

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SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

POLLUTANT		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	F (Fugitive) KG/Year
01	Methane (CH4)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	0.0	0.0	0.0	0.0
02	Carbon monoxide (CO)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	0.0	0.0	0.0	0.0
03	Carbon dioxide (CO2)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	0.0	706.0	0.0	706.0
05	Nitrous oxide (N2O)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	0.0	0.0	0.0	0.0
07	Non-methane volatile organic compounds (NMVOC)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	0.0	0.0	0.0	0.0
08	Nitrogen oxides (NOx/NO2)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	0.0	0.0	0.0	0.0
11	Sulphur oxides (SOx/SO2)	E	ESTIMATE	5.0 EPA UWWTP Tool Version	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			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			QUANTITY			
Pollutant No.	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

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: Please enter summary data on the quantities of methane flared and / or utilised	Cloughjordan Waste Water Treatment Plant				
	T (Total) kg/Year	M/C/E	Method Code	Designation or Description	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#: D0475 | Facility Name : CloughJordan Waste Water Treatment Plant | Filename : D0475_2012.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

POLLUTANT		RELEASURES TO WATERS			Please enter all quantities in this section in KGs				
No. Annex II	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	
34	1,2-dichloroethane (EDC)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
25	Alachlor	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
26	Aldrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
61	Anthracene	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
17	Arsenic and compounds (as As)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.064	0.065	0.0	0.001
27	Atrazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.001	0.001	0.0	0.0
62	Benzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.002	0.002	0.0	0.0
91	Benzo(g,h,i)perylene	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
63	Brominated diphenylethers (PBDE)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
18	Cadmium and compounds (as Cd)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.03	0.03	0.0	0.0
28	Chlordane	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
29	Chlordecone	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
30	Chlorfenvinphos	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
79	Chlorides (as Cl)	M	OTH	Standard methods for Water and Wastewater 21st Edition	8233.904	8307.322	0.0	73.418	
31	Chloro-alkanes, C10-C13	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.024	0.024	0.0	0.0
32	Chlorpyrifos	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
19	Chromium and compounds (as Cr)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.091	0.091	0.0	0.0
20	Copper and compounds (as Cu)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.34	0.346	0.0	0.006
82	Cyanides (as total CN)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.332	0.335	0.0	0.003
33	DDT	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
70	Di-(2-ethyl hexyl) phthalate (DEHP)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.104	0.107	0.0	0.003
35	Dichloromethane (DCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.005	0.005	0.0	0.0
36	Dieldrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
37	Diuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.003	0.003	0.0	0.0
38	Endosulphan	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
39	Endrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
65	Ethyl benzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.002	0.002	0.0	0.0
88	Fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.0	0.0	0.0	0.0
83	Fluorides (as total F)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		26.63	26.881	0.0	0.251
40	Halogenated organic compounds (as AOX)	E	ESTIMATE	EPA UWWTP Tool Version 5.0		0.27	0.273	0.0	0.003

41	Heptachlor	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
90	Hexabromobiphenyl	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
42	Hexachlorobenzene (HCB)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
43	Hexachlorobutadiene (HCBDD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
89	Isodrin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
67	Isoproturon	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
23	Lead and compounds (as Pb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.344	0.356	0.0	0.012
45	Lindane	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
21	Mercury and compounds (as Hg)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
46	Mirex	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
68	Naphthalene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
22	Nickel and compounds (as Ni)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.482	0.486	0.0	0.004
64	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.009	0.01	0.0	0.001
87	Octylphenols and Octylphenol ethoxylates	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
69	Organotin compounds (as total Sn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
48	Pentachlorobenzene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
49	Pentachlorophenol (PCP)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
71	Phenols (as total C)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.103	0.195	0.0	0.092
50	Polychlorinated biphenyls (PCBs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
72	Polycyclic aromatic hydrocarbons (PAHs)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
51	Simazine	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.002	0.002	0.0	0.0
52	Tetrachloroethylene (PER)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.007	0.007	0.0	0.0
53	Tetrachloromethane (TCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
73	Toluene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.411	0.427	0.0	0.016
12	Total nitrogen	M	OTH	Standard methods for Water and Wastewater 21st Edition	2140.634	2167.237	0.0	26.603
76	Total organic carbon (TOC) (as total C or COD/3)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1044.794	1059.639	0.0	14.845
13	Total phosphorus	M	OTH	Standard methods for Water and Wastewater 21st Edition	308.006	312.872	0.0	4.866
59	Toxaphene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
74	Tributyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
54	Trichlorobenzenes (TCBs)(all isomers)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
57	Trichloroethylene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
77	Trifluralin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
75	Triphenyltin and compounds	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

60	Vinyl chloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
78	Xylenes	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.013	0.015	0.0	0.002
24	Zinc and compounds (as Zn)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	5.594	5.732	0.0	0.138

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

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		M/C/E	Method Used		QUANTITY			
No. Annex II	Name		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)

RELEASES TO WATERS					Please enter all quantities in this section in KGs			
POLLUTANT		M/C/E	Method Used		QUANTITY			
Pollutant No.	Name		Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
398	Total Hardness (mg/l CaCO3)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	22862.512	23192.215	0.0	329.703
370	Selenium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
205	Antimony (as Sb)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.018	0.019	0.0	0.001
368	Molybdenum	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.002	0.0	0.002
358	Tin	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.016	0.016	0.0	0.0
373	Barium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	1.501	1.542	0.0	0.041
374	Boron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	6.925	7.026	0.0	0.101
356	Cobalt	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.02	0.02	0.0	0.0
386	Vanadium	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.309	0.315	0.0	0.006
388	Dichlobenil	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
383	Linuron	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
385	Mecoprop Total	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.012	0.012	0.0	0.0
380	2,4 Dichlorophenol (2,4 D)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.006	0.006	0.0	0.0
384	MCPA	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.01	0.01	0.0	0.0
382	Glyphosate	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.174	0.174	0.0	0.0
389	Benzo[a]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
390	Benzo[b]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
391	Benzo[k]fluoranthene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
392	Indeno[1,2,3-c,d]pyrene	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
393	Carbon tetrachloride	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
394	2,6-Dichlorobenzamide	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.009	0.009	0.0	0.0
395	Dicofol	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
396	Hexabromocyclodecane (HBCD)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
397	PFOS	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0

238	Ammonia (as N)	M	OTH	Standard methods for Water and Wastewater 21st Edition	1055.925	1055.925	0.0	0.0
303	BOD	M	OTH	Standard methods for Water and Wastewater 21st Edition	2691.374	2691.374	0.0	0.0
306	COD	M	OTH	Standard methods for Water and Wastewater 21st Edition	8433.009	8433.009	0.0	0.0
362	Kjeldahl Nitrogen	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
327	Nitrate (as N)	M	OTH	Standard methods for Water and Wastewater 21st Edition	401.723	401.723	0.0	0.0
372	Nitrite (as N)	M	OTH	Standard methods for Water and Wastewater 21st Edition	56.774	56.774	0.0	0.0
332	Ortho-phosphate (as PO4)	M	OTH	Standard methods for Water and Wastewater 21st Edition	714.942	714.942	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# : D0475 | Facility Name : Cloughjordan Waste Water Treatment Plant | Filename : D0475_2012.xls | Return Year : 2012]

28/02/2013 17:04

Please enter all quantities on this sheet in Tonnes

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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	Haz Waste : Address of Next Destination Facility	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		Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Non Haz Waste: Address of Recover/Disposer		
Within the Country	19 08 01	No	3.0	screenings	D5	E	Volume Calculation	Offsite in Ireland	AES Ltd.,WCP/OY/08/601/101	AES Ltd., Springfort Cross,Nenagh,Co. Tipperary,Ireland		
Within the Country	19 08 05	No	1163.78	sludges from treatment of urban waste water	R10	E	Volume Calculation	Offsite in Ireland	Roscrea waste water treatment plant,Waste Water Discharge Licence D0025-01	Monastery Road ,Roscrea Co. Tipperary.,Tipperary,Ireland		

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