Annual Environmental Report 2008

For

Flemings Fireclays Manufacturing Ltd.
The Swan
Athy
Co. Kildare

IPPC Reg. No. P0527-01

By

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1. Introduction

The following AER is submitted for Flemings Fireclays Manufacturing Ltd, The Swan, Athy, Co. Laois (IPC Licence No P0527-01).

The company manufactures coarse ceramics (flue liners and bricks). This deems that they are an activity under Class 13.4 of the IPC Licensing Regulations. The company was granted an IPC licence on 5th February 2002.

Mr. Ciaran O'Reilly is responsible for environmental management, and IPC licence compliance. Maintenance staff are responsible for keeping waste records and for taking water samples.

This is the company's sixth AER since obtaining the licence. It was drawn up following the EPA Guidance Note for Annual Environmental Report, 2000. It reports on the period January to December 2008.

2. Summary Information

2.1 Emissions to Atmosphere

There are 2 kilns on the site, which need to be monitored as follows:

Parameter	Frequency	Limit mg/m^3
SO_2	Annually	500
CO	Annually	200
Particulates	Annually	50
Chlorides (as HCL)	Quarterly	30
Fluorides (as HF)	Quarterly	10

In addition, the following volume emissions are set in the licence.

Kiln	Max rate/hr m^3/hr	Max rate/day m^3/day
Old Kiln, A2-1	20,000	480,000
New Kiln, Stack A	15,000	360,000

During 2008, emissions from the new kiln, Stack A were measured in March and August. The Old Kiln, A2-1 was decommissioned in 2007 and has not been in operation to date. Results are presented in the following tables.

Emission from Old Kiln, A2-1 - 2007

Kiln A2-1 was not monitored in 2008 as it was decommissioned in December 2007 and will not be in operation in the immediate future.

Emission from New Kiln, Stack A - 2008

Parameter	**07/08/2008 $mgNm^3$**	**19/03/2008 $mgNm^3$**	**28/06/07 $mgNm^3$**	**06/02/07 $mgNm^3$**	**Emission Limit Value $mgNm^3$**
Total Particulates	-	16	87	40	50
		-	-	26	50
Hydrogen Chloride	25.54	2	6	8	30
	-	-	-	3	30
Hydrogen Fluoride	13.76	0.34	0.43	1	10
	-	-	-	1.4	10
Sulphur Dioxide (SO_2)		202	110	0	500
Carbon Monoxide		170	166	86	200
Oxygen %		18	19	19	-
Temperature ^oC		132	131	122	-
Max. Volume Nm^3/hr		10,077	9,286	9,893	15,000
Max. Volume Nm^3/day		241,848	222,864	237,432	360,000

Third and Fourth quarter monitoring was not undertaken due to a halt in production in 2008. All emissions were within the set limits.

2.2 Emissions to Surface Waters

The licence requires that SW1, SW2, SW3, SW4 and SW5 are monitored quarterly for Suspended Solids and COD.

SW1 Kiln Discharge Point to Stream

Date of sampling	Suspended Solids Results 2008 mg/l	COD Results 2008 mg/l
20/03/08	5	19
25/06/08	No Discharge	No Discharge
10/09/08	No Discharge	No Discharge
05/12/08	2	16
	25 mg/l Emission Limit Value	

SW2 Old Kiln Discharge Point to Stream

Date of sampling	Suspended Solids Results 2008 mg/l	COD Results 2008 mg/l
20/03/08	3	24
25/06/08	<1	<4
10/09/08	No Discharge	No Discharge
05/12/09	1	17
	25 mg/l Emission Limit Value	

SW3 Quarry Settlement Pond Outlet

Date of sampling	Suspended Solids Results 2008 mg/l	COD Results 2008 mg/l
20/03/08	5	<4
25/06/08	5	5
10/09/08	6	4
05/12/09	5	7
	25 mg/l Emission Limit Value	

SW4 Stores and Grinding Area Discharge Point

Date of sampling	Suspended Solids Results 2008 mg/l	COD Results 2008 mg/l
20/03/08	17	10
25/06/08	No Discharge	No Discharge
10/09/08	No Discharge	No Discharge
05/12/09	3	<4
	25 mg/l Emission Limit Value	

SW5 Final Discharge Point into River Clough

Date of sampling	Suspended Solids Results 2008 mg/l	COD Results 2008 mg/l
20/03/08	6	24
25/06/08	13	132
10/09/08	<1	<4
05/12/09	2	4
	25 mg/l Emission Limit Value	

All of the samples taken in 2008 were within the emission limit value of 25mg/l for suspended solids.

2.3 Waste Management

There was No hazardous waste removed from the site in 2008 due to the closure of the factory.

Non-Hazardous Waste
The following non-hazardous wastes are generated on this site:

Details	EWC	Waste Carrier	Destination
Commercial Mixed Waste	20 03 01	Greenstar Ltd. Collection Permit: WCP/KK/054(A)/A8	Wet Waste- Ballynagran Landfill, Dublin (W0165-01) Dry Waste- Millennium Park Material Recovery Facility (MRF) (WO183-01)
Metal (both ferrous & non-ferrous)	16 01 18 16 01 17	AES, Kilkenny (WCP/KE/051c/02b)	Recycled by Clearway in Belfast

Commercial Mixed Waste
In 2008 general mixed waste was taken by Greenstar Ltd, Sandyford, Dublin. This waste was placed in skips, taken off-site and some was disposed of to landfill while were possible cardboard, plastic and paper streams were segregated and sent to the Material Recovery Facility at unit 6 Hebron estate, Kilkenny. There was a decrease in waste generated in 2008 compared to 2007.

Year	Tonnes
Total 2008	**45.42**
Total 2007	46.8
Total 2006	29.12
Total 2005	9.58
Total 2004	2.28
Total 2003	5.17
Total 2002	2.26

Metal Waste
No metal waste was taken by Greenstar, for recycling in 2008.

Year	Tonnes
2008	**0**
2007	0.45
2006	-
2005	-
2004	3.44
2003	7.2

Interceptor waste

There was no interceptor waste removed off site in 2008

Year	Tonnes
Total 2008	0
Total 2007	52.6

Hazardous Waste
The following hazardous wastes are generated on this site:

Details	**EWC**	**Waste Carrier**	**Destination**
Waste Oil	13 02 04	Atlas Oils (WCP/KK//059/02)	Recycled
Fluorescent Bulbs	20 01 21	Irish Lamp Recycling, Athy (WCP/Ke/61c/05)	Recycled by Irish Lamp Recycling W02-200-b)

Waste Oil

There was no waste oil removed off site in 2008 due to the closure of the facility.

Year	Litres
Total 2008	**0**
Total 2007	-
Total 2006	3,000
Total 2003	4,770
Total 2002	15,550

Fluorescent Bulbs

There were no fluorescent bulbs disposed of in 2008 due to the closure of the facility

Year	Tonnes
Total 2008	0

Records of fluorescent bulb disposal were not kept prior to 2003.

Batteries

No Batteries were disposed of in 2008.

Year	Tonnes
Total 2008	0

2.4 Resource Consumption

Energy source	Consumption 2008	Consumption 2007	Consumption 2006	Consumption 2005	Consumption 2004
Electricity (MWh)	1,713	3,340	2,920	2,959	3,736
Light Fuel Oil (MWh)	7,597	13,324	15,935	-	-
DERV (MWh)	981	938	1,607	-	-
Total Oil (MWh)	8,578	14,262	17,542	33,895	45,425
Propane (MWh)	8,651	10,938	12,912	-	-

Energy consumption fell dramatically in 2008; this was due to the closure of the facility and cease in production.
Electricity usage fell by nearly 50% while the total oil usage decreased by 40%. Propane usage also decreased by 21% on the previous year.

2.5 Environmental Complaints & Incidents

No environmentally related complaints were recorded in 2008.

Monitoring of Kiln A2-1 ceased in 2007 as it is no longer in use. Monitoring of Kiln A was conducted in March and August of 2008. All emissions were within the set limits.

3. Management of the Activity

3.1 Production figures

Material	2008 Tonnes Produced	2007 Tonnes Produced
Brick	13543.94	25090.49
Flues	3795.4	9797.9
Pots	134	142.9

From the above table of figures we can see that production of brick decreased by 46%, production of Flues decreased by 61% and production of Chimney pots decreased by nearly 10%. The dramatic decrease in production was due to the closure of the Facility in 2008.

3.2 Summary of Objectives and Targets

The schedule of Objectives and Targets proposed by the company is as follows.

Objective	Target
Reduce the Non-Compliances regarding the air emissions in Kiln A	To reduce the overall emissions from kiln A by continually working with specialist consultants and applying the Best Available Technology Not Entailing Excessive Cost Principle (BATNEEC)
Reduce the Energy Consumption at the Site	To reduce the overall consumption by implementing the findings of the Energy Audit 2006 for the site and working with kiln specialists to reduce energy consumption of the kiln. Make an Energy Saving of 15% by the next Energy Audit.
Increase waste segregation and reduction in the amount of waste going to landfill	To reduce the amount going to landfill through increased waste elimination, minimisation, reuse, recycling & recovery. It is envisaged that a 25% reduction in waste going directly to landfill on the 2005 figure can be achieved by 2009.
Continually improve site housekeeping and site bunding.	Ensure that no non-compliance or site observations are issued regarding these issues to the site in 2009 regarding bunding and site housekeeping.

3.3 Report on EMP of 2008

1. To increase controls on the kilns, with a view to energy savings and reduction in air emissions.

Kiln A2-1 was decommissioned in December 2007 and therefore No monitoring could be conducted. Air emissions monitoring was carried out on kiln A as part of IPPC licence requirements. The company are still working with specialists with the aim of creating an energy saving and reducing air emissions.

2. Reduce the Energy consumption at the site.

An energy audit was completed in 2006 for the site. Energy consumption decreased dramatically on site during 2008 but this was due to the closure of the facility. The company are dedicated to improving energy efficiency and to reducing the overall energy consumption during 2009 by approximately 15% of the 2006 figures.

3. Increasing waste segregation, recycling and reducing the amount of waste going to landfill.

The volume of municipal waste sent to landfill in 2008 decreased by 3%. There was no hazardous waste disposed of in 2008 due to the closure of the facility. Municipal waste figures did not dramatically decrease due to clean up activities that were on going during the closure period.

4. Ensure protection of groundwaters

All samples taken in 2008 were within the emission limit value of 25mg/l for suspended solids. The remedial works mentioned in the 2007 AER were not addressed in 2008 due to the closure of the facility.

5. Energy

The transition to move to more environmentally friendly energy sources did not occur in 2008 due to the closure of the facility.

3.4 EMP Proposal for 2009

OBJECTIVE 1	**To increase controls on the kilns, with a view to energy savings and reduction in air emissions**
TARGET 1 **AND IMPLEMENTATION DETAILS** **RESPONSIBILITY:** **Ciaran O'Reilly** **Time Frame: On-going**	Contract specialist consultants to carry out further studies on the remaining kiln with the overall aim to reduce energy use and to address non-compliance air emissions from the kiln

OBJECTIVE 2	**Reduce the Energy Consumption at the Site**
TARGET 2 **AND IMPLEMENTATION DETAILS** **RESPONSIBILITY:** **Ciaran O'Reilly** **Time Frame: 2009**	To reduce the overall consumption by implementing the findings of the Energy Audit 2006 for the site and working with kiln specialists to reduce energy consumption of the remaining kiln. Make a 15% Energy Saving on 2006 figures in 2009.

OBJECTIVE 3	**Increasing waste segregation, recycling and reducing the amount of waste going to landfill**
TARGET 3 **AND IMPLEMENTATION DETAILS** **RESPONSIBILITY:** **Ciaran O'Reilly** **Time Frame: On-going**	Reduce the amount going to landfill by 10% on the 2008 figure.

OBJECTIVE 4	**Ensure protection of Surfacewaters**
TARGET 4 **AND IMPLEMENTATION DETAILS** **RESPONSIBILITY:** **Ciaran O'Reilly** **Time Frame: On-going**	Replace damaged sections of foul sewer line as highlighted in Inspection report in February 2007. In addition, replace the underground fuel line from the main oil tank to the new kiln.

OBJECTIVE 5	**Prevent accumulation of waste stockpiles on site**
TARGET 5 **AND IMPLEMENTATION DETAILS** **RESPONSIBILITY:** **Ciaran O'Reilly** **Time Frame: On-going**	The company will strive to ensure that all wastes are removed promptly from site by licensed waste contractors.

OBJECTIVE 6	**Review of Residuals Management and Quarry Restoration Plan**
TARGET 6 **AND IMPLEMENTATION DETAILS** **RESPONSIBILITY:** **Ciaran O'Reilly** **Time Frame: On-going**	A report of residuals management and quarry restoration was submitted previously. There are no changes to the details already submitted to report in this AER.

4. Licence-Specific Reports

4.1 Energy Audit

An Energy Audit was completed in 2006 and was submitted with a previous AER.

4.2 Noise Survey Report

The Noise Survey Report for 2008 is enclosed.

4.3 Tank and Pipeline Testing and Inspection Report

The fuel and foul sewer surveys that were carried out at the site in 2007 were submitted to the agency with a previous AER. A washing sump integrity tightness assessment was carried out in 2008 and is enclosed.

4.4 Bund Integrity Testing Report

A Bund integrity testing report was carried out in 2006. It is envisaged this will be carried out again in 2009.