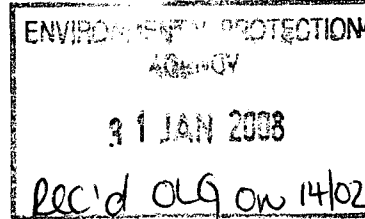




Gypsum Industries

Gypsum Industries Ltd
Kingscourt
Co. Cavan
Ireland
Tel +353 (0) 42 9698100
Fax +353 (0) 42 9667221
Website: www.gypsum.ie

Office Of Environmental Protection,
Environmental Protection Agency
Climate Change, Licensing & Resource Use
PO Box 3000,
Johnstown Castle Estate,
Co. Wexford



Your Ref: P0519-02/gc19NH

Date: 30th January 2008,

RE: Re-routing Raymond Mill 5 & Kettle 6 Dust Emmissions

Last year Gypsum Industries submitted a proposal to re-route a proportion of our dust emissions from Raymond Mill 5 & Kettle 6. We were informed that the proposal cannot proceed under Condition 1.2 and now request confirmation as to whether the proposal should be considered as a technical amendment or if a license review is required.

- **Details of the Change**

The dust emissions for Raymond Mill 5 & Kettle are currently routed through a local dist collector and then through the main plaster mill dust collector (ie in series). We propose to re-route all their emissions through the local dust collector only.

- **Reason for the change**

The current arrangement wastes a significant amount of energy. We have independently confirmed that the series configuration equates to a 40% higher electrical consumption. The main Dust Collector fan is 355kW so we have the potential to save 142kW which equates to 1,200 MW/hr annually (approx 820 tons of CO₂).

- **Details of any changes to emissions**

The emission levels (volume & dust level) will not increase, but will be emitted at different exhaust stacks.

- **Assessment of likely impact**

Please see attached copies of reports conducted during 2005 when Raymond Mill5 & Kettle 6 were commissioned. The results show that the emissions will easily meet license requirements.

Ref: Letter EPA Stacks 080130

I have also attached a copy of the reply provided in Dec 2007.

We believe that the proposed change will not have any impact on our license conditions for emissions while having a positive effect on our CO₂ emissions.

If you need to contact me please do not hesitate on 042 9698121.

I look forward to your response.

Yours sincerely,



Jason Carroll
Engineering Manager
Gypsum Industries Limited

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

Mr. Connel

**Report of Air Emissions Monitoring
from New Stacks;
Kettle 6 & Raymond Mill 5**

At

**Gypsum Industries Ltd.
Lisnabow
Kilmainhamwood
Kells
Co. Meath**

IPC Licence No. 688

By

**Q.E.D. Engineering Ltd.
11 Market Street
Monaghan
Tel: 047 72060
Fax: 047 72061**

July 2005

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

1. Introduction

Gypsum Industries Ltd. installed two new emission points at their site; Kettle 6 and Raymond Mill 5. Q.E.D. Engineering Ltd was commissioned to monitor emissions from the new stacks. Monitoring was conducted during normal site operation on the 20th of July 2005 by the following staff of QED Engineering Ltd.: Patricia Murtagh and Maureen Greene.

Particulate concentration from the emission points was determined following standard ISO9096. Thirty-minute particulate samples were taken. The instrumentation used was a Stackmite 9096. NO_x readings from the stacks were taken with a Quintox Flue Gas Analyser.

2. Results

Emission from Kettle 6 on 20/07/05

Parameter	Concentration mg/Nm ³ As Emitted	Emission Limits mg/m ³
Particulates - Test 1	0	50
Particulates - Test 2	0.5	50
Nitrogen Oxides (as NO ₂)	104	130-200
Oxygen %	14.7	
Temperature °C	152	-
Flow Rate m/s	11.7	
Gas Flow – Actual	51,799 m ³ /hr	-
Gas Flow – Normal	33,785 Nm ³ /hr	-

Emission from Raymond Mill 5 on 20/07/05

Parameter	Concentration mg/Nm ³ As Emitted	Emission Limits mg/m ³
Particulates - Test 1	4	50
Particulates - Test 2	0	50
Nitrogen Oxides (as NO ₂)	6	130-200
Oxygen %	20.4	
Temperature °C	67	-
Flow Rate m/s	17.6	
Gas Flow – Actual	31,884 m ³ /hr	-
Gas Flow – Normal	25,781 Nm ³ /hr	-

Emissions of Particulate and NOx are all low from the new emission points, Kettle 6 & Raymond Mill 5.

A breakdown of results is presented.

Stack Sampling Results - Particulates

Company	Gypsum Industries Ltd
Address	Kingscourt, Co. Cavan
Plant:	New Stack, Kettle 6
Date	20-Jul-05
Test No.	1

IPC Reg. No.	688
Ref. No	
Time:	11.25-11.55
Filter No	46

1. Test Conditions	
1.1 Stack Diameter	
1.2 Stack Cross Sectional Area	
1.3 Depth of Probe into Stack	
1.4 Gas Velocity (Average)	
1.5 Actual Gas Volume	
1.6 Gas Volume	
1.7 Gas Temperature	
1.8 Duration of Test	

m	1.25	
m ²	1.2272	
m	0.2, 1	
m/s	11.5	
m ³ /hr	50805.44	
Nm ³ /hr	33005.51	
OC	152	
mins	30	

2. Readings	
2.1 Mass Collected	
2.2 Sample Volume	

	As Measured	Corrected STP
mg	0	
Nm ³	0.3	

3. Results	
3.1 Concentration (dry gas)	
3.2 Mass Emission Rate	

mg/Nm ³	0.00	0
kg/hr	0.0000	

Kettle 6 = Non combustion gas, therefore mg/m³ corrected to STP as follows;
 Temperature 273K, Pressure 101.3kPA

Stack Sampling Results - Particulates

Company	Gypsum Industries Ltd		
Address	Kingscourt, Co. Cavan	IPC Reg. No.	688
Plant:	New Stack, Kettle 6	Ref. No	
Date	20-Jul-05	Time:	12.10-12.40
Test No.	2	Filter No	48

1. Test Conditions
1.1 Stack Diameter
1.2 Stack Cross Sectional Area
1.3 Depth of Probe into Stack
1.4 Gas Velocity (Average)
1.5 Actual Gas Volume
1.6 Gas Volume
1.7 Gas Temperature
1.8 Duration of Test

m	1.25	
m ²	1.2272	
m	0.2, 1	
m/s	11.95	
m ³ /hr	52793.48	
Nm ³ /hr	34565.42	
OC	152	
mins	30	

2. Readings
2.1 Mass Collected
2.2 Sample Volume

	As Measured	Corrected STP
mg	0.1	
Nm ³	0.312	

3. Results
3.1 Concentration (dry gas)
3.2 Mass Emission Rate

mg/Nm ³	0.32	0.5
kg/hr	0.0111	

Kettle 6 = Non combustion gas, therefore mg/m³ corrected to STP as follows;
 Temperature 273K, Pressure 101.3kPA

Stack Sampling Results - Flue Gases

Site Location	Gypsum
Date	20-Jul-05
Sampling	New Stack
Ref. No.	Kettle 6
Start Time	10.47
Stop Time	10.59

Time	Temp Flue Gas	Amb Temp	% O ₂	% CO ₂	NOX mg/m ³	NOX mg/Nm ³	NOX kg/hr
10.47	153.6	20.6	14.4	5.7	68	105.14	2.30
10.49	153.7	20.8	14.5	5.6	70	108.26	2.36
10.51	153.6	21.1	14.6	5.5	68	105.14	2.30
10.53	153.7	21.4	14.7	5.4	66	102.07	2.23
10.55	153.6	21.7	14.8	5.3	66	102.05	2.23
10.57	153.6	22.1	14.9	5.3	66	102.05	2.23
10.59	153.6	22.4	15.0	5.2	66	102.05	2.23
	153.6	21.4	14.7	5.4	67.1	103.8	2.3

Kettle 6 = Non-combustion gas, therefore mg/m³ corrected to STP as follows;
 Temperature 273K, Pressure 101.3KPA

For inspection purposes only
 Consent of copyright owner required for reproduction

Stack Sampling Results - Particulates

Company	Gypsum Industries Ltd		
Address	Kingscourt, Co. Cavan	IPC Reg. No.	688
Plant:	Raymond Mill 5	Ref. No	
Date	20-Jul-05	Time:	14.34-15.04
Test No.	1	Filter No	49

1. Test Conditions
1.1 Stack Diameter
1.2 Stack Cross Sectional Area
1.3 Depth of Probe into Stack
1.4 Gas Velocity (Average)
1.5 Actual Gas Volume
1.6 Gas Volume
1.7 Gas Temperature
1.8 Duration of Test

m	0.8	
m ²	0.5027	
m	0.12, 0.7	
m/s	17.71	
m ³ /hr	32047.26	
Nm ³ /hr	25942.82	
OC	67-68	
mins	30	

2. Readings
2.1 Mass Collected
2.2 Sample Volume

	As Measured	Corrected STP
mg	0.9	
Nm ³	0.277	

3. Results
3.1 Concentration (dry gas)
3.2 Mass Emission Rate

mg/Nm ³	3.25	4
kg/hr	0.0843	

Raymond Mill 5 = Non combustion gas, therefore mg/m³ corrected to STP as follows;
 Temperature 273K, Pressure 101.3kPA

Stack Sampling Results - Particulates

Company	Gypsum Industries Ltd		
Address	Kingscourt, Co. Cavan	IPC Reg. No.	688
Plant:	Raymond Mill 5	Ref. No	
Date	20-Jul-05	Time:	15.13-15.43
Test No.	2	Filter No	51

1. Test Conditions
1.1 Stack Diameter
1.2 Stack Cross Sectional Area
1.3 Depth of Probe into Stack
1.4 Gas Velocity (Average)
1.5 Actual Gas Volume
1.6 Gas Volume
1.7 Gas Temperature
1.8 Duration of Test

m	0.8	
m ²	0.5027	
m	0.12, 0.7	
m/s	17.53	
m ³ /hr	31721.54	
Nm ³ /hr	25619.01	
°C	67-68	
mins	30	

2. Readings
2.1 Mass Collected
2.2 Sample Volume

	As Measured	Corrected STP
mg	0	
Nm ³	0.303	

3. Results
3.1 Concentration (dry gas)
3.2 Mass Emission Rate

mg/Nm ³	0.00	0
kg/hr	0.0000	

Raymond Mill 5 = Non combustion gas, therefore mg/m³ corrected to STP as follows;
 Temperature 273K, Pressure 101.3kPa

Stack Sampling Results - Flue Gases

Location	Gypsum
Date	20-Jul-05
Sampling	Raymond Mill 5
Ref. No.	
Start	14.30
Stop	14.46

Time	Temp 0c	Amb Temp 0C	% O ₂	% CO ₂	NOX mg/m ³	NOX mg/Nm3	NOX kg/hr
14.30	67.9	34.1	20.4	0.4	4	4.94	0.10
14.32	68.0	34.3	20.4	0.4	4	4.94	0.10
14.34	33.5	34.5	20.4	0.4	6	6.67	0.15
14.36	68.2	34.8	20.4	0.4	6	7.42	0.15
14.38	68.0	35.0	20.4	0.4	4	4.94	0.10
14.40	68.1	35.2	20.4	0.4	4	4.95	0.10
14.42	68.0	35.4	20.4	0.4	6	7.42	0.15
14.44	68.1	35.6	20.4	0.4	6	7.42	0.15
14.46	68.2	35.8	20.4	0.4	6	7.42	0.15
	64.2	35.0	20.4	0.4	5.1	6.2	0.1

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



Office of
Environmental
Enforcement

Mr Aidan Gormley
Quality/Environmental Manager
Kingscourt
Co. Carra

Environmental Enforcement Unit
Regional Office, Room 112, Bldg 100
100
100
Cigireacht Keigúnach, Teach Rinn Chumadóigh
Dee-Radharc, Bóthar Chumadóigh
Kingscourt, Carra

Tel: 432 1250 0100
E: info@epa.ie
W: www.epa.ie
LoCall: 1890 35 55 55

18/11/2011

Our Ref: P0519-02/p019NH

Dear Mr Gormley

I refer to your correspondence on the 21st November 2011 regarding a proposal to route emissions from Raymons Mill 5 and Kettle 6 away from the main dust collector emission point AEL and through their original stacks

I am to advise you that your proposal as submitted cannot be accommodated under Condition 1.2 of the current IPPC licence for the facility. Consideration of this proposal would be required either by way of a technical amendment or review application of the existing IPPC licence.

I therefore advise you to write to the EPA's Office of Climate Change, Licensing & Resource Use at PO Box 3000, Johnstown Castle Estate, Co. Wexford to request a decision as to whether the proposal can be considered under a technical amendment or if a review of the licence is required.

Please provide the following in your letter to the Office of Climate Change, Licensing & Resource Use:

- Details of the requested change(s).
- Reasons for the change(s) requested.
- Details of any increase or changes in emissions resulting from the change(s).
- An assessment of the likely impacts of any increase/changes in emissions.
- Please also enclose a copy of this letter for their reference.

Please quote the above reference in any future correspondence to the OEE in relation to this matter. If you have any further queries please contact Mr Niall Horgan at 01-2680100.

Yours sincerely

Mr Niall Horgan
Inspector
Office of Environmental Enforcement