



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor  
Toni Hardesty, Director

February 2, 2012

John McKee, Mill Manager  
Clearwater Paper Corporation, Lewiston Facility  
Idaho Pulp and Paperboard Division  
803 Mill Road  
Lewiston, ID 83501

RE: Facility ID No. 069-00001, Clearwater Paper Corporation, Lewiston Facility, Idaho Pulp and Paperboard Division, Lewiston  
Final Permit Letter

Dear Mr. McKee:

The Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-2011.0101 Project 60865 to Clearwater Paper Corporation, Lewiston Facility, Idaho Pulp and Paperboard Division located at Lewiston for revising monitoring, recordkeeping, and reporting requirements for No.3 and No.4 lime kilns. This PTC is issued in accordance with IDAPA 58.01.01.200 through 228 (Rules for the Control of Air Pollution in Idaho) and is based on the certified information provided in your PTC application received on May 6, 2011, the comments on the draft permit received on July 29, 2011 and October 20, 2011, and all relevant comments received on DEQ's proposed permit during the public comment period.

This permit is effective immediately and replaces PTC No. P-020205, issued on February 27, 2003. This permit does not release Clearwater Paper Corporation, Lewiston Facility, Idaho Pulp and Paperboard Division from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

This PTC was processed in accordance with IDAPA 58.01.01.209.05.c. In accordance with IDAPA 58.01.01.381.03.b, so long as the change does not violate any terms or conditions of the existing Tier I permit, you may operate the source described in the PTC immediately upon submittal of your request for a Tier I administrative amendment.

In order to fully understand the compliance requirements of this permit, DEQ highly recommends that you schedule a meeting with Amber Rand, Regional Air Quality Manager, at (208) 799-4370 to review and discuss the terms and conditions of this permit. Should you choose to schedule this meeting, DEQ recommends that the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any other staff responsible for day-to-day compliance with permit conditions.

Clearwater Paper Corporation, Lewiston Facility  
Idaho Pulp and Paperboard Division  
Lewiston, Idaho  
Page 2 of 2

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to contact Shawnee Chen at (208) 373-0502 or [Shawnee.chen@deq.idaho.gov](mailto:Shawnee.chen@deq.idaho.gov) to address any questions or concerns you may have with the enclosed permit.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Simon". The signature is fluid and cursive, with a large initial "M" and a long, sweeping tail.

Mike Simon  
Stationary Source Program Manager  
Air Quality Division

MS\SYC

Permit No. P P-2011.0101 PROJ 60865

Enclosures

<b>Air Quality</b> <b>PERMIT TO CONSTRUCT</b> <b>State of Idaho</b> <b>Department of Environmental Quality</b>	<b>PERMIT NUMBER</b>	<b>CLASS</b>	<b>SIC</b>
	P-2011.0101	A	2611 & 2631
	<b>FACILITY ID</b>	<b>AQCR</b>	<b>NAICS</b>
	069-00001	62	322110 & 322130
	<b>UTM ZONE</b>	<b>UTM COORDINATES (km)</b>	
11	501.9 Easting	5141.3 Northing	

**PERMITTEE**

Clearwater Paper Corporation, Idaho Pulp and Paperboard Division, Lewiston

**PROJECT**

PROJECT No. 60865 and Revising Monitoring, Recordkeeping, and Reporting Requirements (PTC Revision)

<b>MAILING ADDRESS</b>	<b>CITY</b>	<b>STATE</b>	<b>ZIP</b>
P.O. Box 1126	Lewiston	ID	83501-1126

<b>FACILITY CONTACT</b>	<b>TITLE</b>	<b>TELEPHONE</b>
Susan Somers	Environmental Engineering Manager	(208) 799-4104

<b>RESPONSIBLE OFFICIAL</b>	<b>TITLE</b>	<b>TELEPHONE</b>
John McKee	Mill Manager	(208) 799-1561

<b>EXACT PLANT LOCATION</b>	<b>COUNTY</b>
803 Mill Road, Lewiston, Idaho	Nez Perce

**GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**

Pulp and paperboard manufacturing

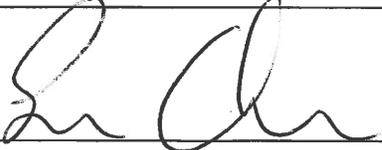
**PERMIT AUTHORITY**

This permit is issued according to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200 through 228, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes in design, equipment or operations may be considered a modification. Modifications are subject to DEQ review in accordance with IDAPA 58.01.01.200 through 228 of the Rules for the Control of Air Pollution in Idaho.

	<b>DATE ISSUED</b>	February 2, 2012
<b>SHAWNEE CHEN, P.E., PERMIT WRITER</b>		
		
<b>MIKE SIMON, STATIONARY SOURCE MANAGER</b>		

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## PERMIT TO CONSTRUCT SCOPE

### *Purpose*

1. This permitting action is for the following changes:
  - Revise monitoring, recordkeeping, and reporting requirements for No.3 and No.4 lime kilns.
  - Remove No. 2 lime kiln permit section because No.2 lime kiln has been removed from the facility.
  - Remove particulate matter (PM) emissions limit taken from IDAPA 58.01.01.822.
2. Those permit conditions that have been modified or revised by this permitting action are identified by a date citation located directly under the permit condition and on the right hand margin.
3. This PTC replaces Permit to Construct No. P-020205, issued on February 27, 2003.
4. The emission sources regulated by this permit are listed in the following table.

**Table 1 REGULATED SOURCES**

<b>Source Descriptions</b>	<b>Emission Controls</b>
No. 3 lime kiln, natural gas, oil, and coke-fired	Electrostatic precipitator
No. 4 lime kiln, natural gas, oil, and coke-fired	Electrostatic precipitator and a packed-bed scrubber

## NO.3 LIME KILN

### Process Description

#### Process Description

The No. 3 lime kiln is used to calcine kraft-process lime mud into lime. The lime mud is concentrated on the pre-coat filters, and makeup lime rock may be added. The mud is put into the back end of the lime kiln, and fuel is fired into the front end. The calcium carbonate of the mud is converted to calcium oxide. The lime is removed from the front end of the kiln and transported to storage, prior to use in the slaker. Lime is then mixed with the green liquor from the smelt dissolving tanks to regenerate sodium hydroxide and form the white liquor (pulping liquor).

The No. 3 lime kiln is used as a backup unit to the noncondensable gases (NCG) incinerator and No.4 lime kiln to control NCGs generated from the pulping digesters and black liquor evaporators. The No. 3 lime kiln was constructed in 1952 and modified in 1964.

#### Emission Controls Description

Particulate emissions from the No. 3 lime kiln are controlled by an ESP.

Table 2 EMISSIONS UNIT DESCRIPTION

Emissions Units / Processes	Emission Control Devices	Emission Points
No. 3 lime kiln, natural gas, oil, and coke-fired	Electrostatic precipitator	No.3 lime kiln stack

### Emission Limits

#### 1.1 Emission Limits

The emissions from the Allis (Svedala) No. 3 lime kiln stack shall not exceed any corresponding emission rate limits listed in the following table.

Table 3 EMISSION LIMITS<sup>a</sup> - HOURLY (lb/hr) AND ANNUAL<sup>b</sup> (T/yr)

Source Description	PM		PM <sub>10</sub>		SO <sub>2</sub>		NO <sub>x</sub>		CO		TRS
	lb/hr	T/yr	lb/hr	T/yr	lb/3-hr <sup>c</sup>	T/yr	lb/day	T/yr	lb/12-hr	T/yr	T/yr
No. 3 lime kiln <sup>d</sup>	5.2	27 <sup>c</sup>	5.2	17.3 <sup>c</sup>	153	21	766	113 <sup>c</sup>	80.4	44 <sup>c</sup>	12.6 <sup>c</sup>

<sup>a</sup> As determined by a pollutant-specific EPA reference method, or DEQ-approved alternative, or as determined by the DEQ's emission estimation methods used in this permit analysis.

<sup>b</sup> As determined by multiplying the actual or allowable (if actual is not available) lb/hr emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

<sup>c</sup> T/yr limit is for combined emissions from the No. 3 and No. 4 lime kilns

<sup>d</sup> In absence of any other credible evidence, compliance is assured by complying with permit operating, monitoring, and record keeping requirements.

<sup>e</sup> 3-hour block

#### 1.2 Total Reduced Sulfur Limits

The concentration of TRS compounds in the effluent from the No. 3 lime kiln shall not exceed 40 ppmv on a dry basis corrected to 10% O<sub>2</sub>, as a monthly average. Emissions of TRS shall not exceed any corresponding emission rate limit listed in Table 3 of this permit.

1.3 Opacity Limit

Emissions from the No. 3 lime kiln stack shall not exceed 25% opacity for a period or periods aggregating more than three minutes in any 60-minute period. Opacity shall be determined by a COMS as specified in Permit Condition 3.6 and by the procedures contained in IDAPA 58.01.01.625.04.

1.4 Reserved

[2/02/2012]

**OPERATING REQUIREMENTS**

2.1 Hourly Throughput Limits

The maximum hourly throughput of CaO to the No. 3 lime kiln shall not exceed 10.5 T/hr, based on a 12-hour average.

2.2 Combined Annual Throughput Limits

The maximum annual combined throughput of CaO to the No. 3 lime kiln and the No. 4 lime kiln shall not exceed 175,200 tons per any consecutive 12-month period (T/yr).

2.3 Treatment of NCGs

Noncondensable gases shall be treated in the following manner:

2.3.1 Prioritization of NCG Treatment Technology

Noncondensable gases shall not be routed through or processed by the No. 3 lime kiln, except during periods when both the NCG incinerator and the No. 4 lime kiln are not operational due to maintenance, repair, upset, or breakdown.

2.3.2 Effectiveness of NCG Treatment

When NCGs are routed to the No. 3 lime kiln, such routing and treatment of NCGs, including transition operations, shall be conducted in an effective and efficient manner for the control of pollutants contained in NCGs or generated by the treatment of NCGs and in compliance with applicable provisions of 40 CFR 60, Subpart BB and 40 CFR 63, Subpart S.

[2/02/2012]

2.4 Control Equipment

The permittee shall operate an ESP on the No. 3 lime kiln stack to control emissions of PM from the No. 3 lime kiln. The permittee shall install and maintain the ESP in accordance with manufacturer specifications.

[2/02/2012]

2.5 Reserved

[2/02/2012]

2.6 Fuel Oil Sulfur Content

The sulfur content in the residual fuel oil supplied to the No. 3 Lime kiln shall not exceed 1.75% sulfur by weight as required in IDAPA 58.01.01.725.02.

2.7 Reserved

[2/02/2012]

2.8 Reserved

[2/02/2012]

## **MONITORING AND RECORDKEEPING REQUIREMENTS**

### **3.1 Periodic Performance Testing for PM and PM<sub>10</sub>**

Periodic performance testing for PM and PM<sub>10</sub> emissions from the No. 3 lime kiln stack shall be conducted by the permittee as follows. Emissions of PM and PM<sub>10</sub> from the No. 3 lime kiln stack shall be measured using EPA Test Methods 5, 201a, and 202 contained in 40 CFR Part 60, Appendix A, or comparable and equivalent methods approved in accordance with IDAPA 58.01.01.157. If the PM or PM<sub>10</sub> measured in the most recent performance test is less than or equal to 75% of any respective particulate standard listed in Permit Condition 1.1, the permittee shall conduct periodic performance tests every three calendar years beginning within three calendar years from the most recent test date. If the PM or PM<sub>10</sub> measured in the most recent performance test is greater than 75% of any respective particulate standard listed in Permit Condition 1.1, the permittee shall conduct periodic performance tests annually beginning within 12 months from the most recent test date. Annual performance tests shall be separated by a minimum of six months.

[2/02/2012]

### **3.2 Reserved**

[2/02/2012]

### **3.3 Throughput Monitoring**

The permittee shall monitor and record the hourly throughput of CaO to the No. 3 lime kiln on a 3-hour average, 12-hour average, 24-hour (daily) average, and the annual throughput based on a 12-month rolling average basis. The throughput data shall be used in the exhaust gas flow-rate calculation required in Permit Condition 3.11.

### **3.4 Fuel Usage Monitoring**

The permittee shall monitor and record the fuel-use rate of the No. 3 lime kiln based on a 3-hour average. The fuel usage data shall be used in the exhaust gas flow-rate calculation required in Permit Condition 3.11.

### **3.5 Treatment of NCGs**

When NCGs are treated by the No. 3 lime kiln, the permittee shall monitor and record the date, time, and duration of treatment. The records shall also include an explanation why both the NCG incinerator and the No. 4 lime kiln were not used to treat NCGs.

### **3.6 Continuous Opacity Monitoring System**

The permittee shall install, calibrate, maintain, and operate COMS on the No. 3 Lime Kiln stack. Except for COMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the COMS shall be in continuous operation whenever the No. 3 Lime Kiln is in operation. The installation and performance evaluation of the COMS shall be conducted in accordance with the applicable performance specification in 40 CFR 60, Appendix B.

### **3.7 Oxides of Nitrogen CEMS**

The permittee shall install, calibrate, maintain, and operate a NO<sub>x</sub> CEMS on the No. 3 lime kiln stack. The CEMS shall provide NO<sub>x</sub> measurements on a dry parts per million basis. Except for NO<sub>x</sub> CEMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation whenever the No. 3 lime kiln is in operation. The installation and performance evaluation of the CEMS shall be conducted in accordance with Performance Specification 2 (PS2), as applicable, in 40 CFR 60, Appendix B, and shall be operated in accordance with the requirements in 40 CFR 60, Appendix F. The CEMS, in combination with the exhaust gas flow-rate and emission-rate calculations required by Permit Conditions 3.11 and 3.12, shall be capable of determining compliance with the NO<sub>x</sub> limit of Permit Condition 1.1 and shall be able to achieve relative accuracy (RA) requirements as specified under Performance Specification 6 (PS6). The exhaust flow-rate

equation shall be reviewed and updated if the permittee fails to achieve the minimum PS6 RA.

### 3.8 Sulfur Dioxide CEMS

The permittee shall install, calibrate, maintain, and operate an SO<sub>2</sub> CEMS on the No. 3 lime kiln stack. The CEMS shall provide SO<sub>2</sub> measurements on a dry ppm basis. Except for SO<sub>2</sub> CEMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation whenever the No. 3 lime kiln is in operation. The installation and performance evaluation of the CEMS shall be conducted in accordance with PS 2, as applicable, in 40 CFR 60, Appendix B, and shall be operated in accordance with the requirements in 40 CFR 60, Appendix F. The CEMS, in combination with the exhaust gas flow-rate and emission-rate calculations required by Permit Conditions 3.11 and 3.12, shall be capable of determining compliance with the SO<sub>2</sub> limit of Permit Condition 1.1 and shall be able to achieve RA requirements as specified under PS6. The exhaust flow-rate equation shall be reviewed and updated if the permittee fails to achieve the minimum PS6 RA.

### 3.9 Total Reduced Sulfur CEMS

The permittee shall install, calibrate, maintain, and operate a TRS CEMS on the No. 3 lime kiln stack. The CEMS shall provide TRS measurements on a dry ppm basis. Except for TRS CEMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the TRS CEMS shall be in continuous operation whenever the No. 3 lime kiln is in operation. The installation and performance evaluation of the CEMS shall be conducted in accordance with Performance Specification 5 in 40 CFR 60 Appendix B. The CEMS shall be capable of determining compliance with the TRS limit of Permit Condition 1.2 and shall be operated in accordance with the requirements in 40 CFR 60 Appendix F for quality assurance. A Cylinder Gas Audit (CGA) may be substituted for the annual RATA requirement.

### 3.10 Monitoring of Stack Parameters

The permittee shall continuously monitor and record the O<sub>2</sub> concentration of the exhaust gases from the No. 3 lime kiln emission stack. The CEMS shall provide O<sub>2</sub> concentrations on a dry basis.

[2/02/2012]

### 3.11 Exhaust Gas Flow Rate Determination

The permittee shall calculate the 3-hour and daily (24-hour) average exhaust-gas volumetric flow rates from the No. 3 lime kiln stack, using the following equation:

$$Q_s = (F_d a + 13750b)(20.9/(20.9 - c))$$

Where:

- $Q_s$  = No. 3 Lime kiln exhaust gas volumetric flow rate (dscf)
- $F_d$  = F factor (dry basis) for fuel combusted as calculated using procedures in 40 CFR 60, Appendix A, Method 19 or as provide in Method 19, Table 19-2.
- $a$  = No. 3 Lime kiln fuel heat input (MMBtu/averaging period) calculated from fuel use rate ( $R_f$ ) and fuel higher heating value (HHV) as follows:

$$a = R_f (\text{units/hr}) \times \text{HHV (MMBtu/unit)}$$

Fuel HHVs will be obtained from the fuel suppliers or determined through ultimate analysis. Fuel HHVs will be reviewed and updated (if necessary) at least annually.

- $b$  = No. 3 lime kiln production rate (tons CaO/averaging period)
- $c$  = oxygen percent (dry basis) in No. 3 lime kiln exhaust gas

The accuracy of the calculation method shall be verified during CEM initial performance evaluations and at least

annually during the CEMS performance evaluations required in Permit Conditions 3.7 and 3.8.

### 3.12 NO<sub>x</sub>, SO<sub>2</sub> and TRS Emission Rate Calculations

The permittee shall calculate the 3-hour average and 12-month rolling actual SO<sub>2</sub> emission rates, the daily average and 12-month rolling actual NO<sub>x</sub> emission rates, and the 12-month rolling actual TRS emission rate from the No. 3 lime kiln. The permittee shall use the average concentrations obtained from the CEMS required in Permit Conditions 3.7, 3.8, and 3.9 and the calculated exhaust gas flow rate required in Permit Condition 3.11 as follows:

$$E_{hr} = C_s Q_s \text{ and } E_{yr} = \sum E_{hrt}$$

Where:

- $E_{hr}$  = lb/hr mass emission rate for specified time averaging period.
- $E_{yr}$  = T/yr mass emission rate (12-month rolling)
- $Q_s$  = dscf/hr flow rate as calculated under Permit Condition 3.11 for the specified time averaging period.
- $C_s$  = lb/dscf stack gas concentration for specified time averaging period determined as follows:
  - $C_{SO_2} = (\text{ppm}_d \text{ SO}_2)(1.660 \times 10^{-7})$
  - $C_{NO_x} = (\text{ppm}_d \text{ NO}_x)(1.194 \times 10^{-7})$
  - $C_{TRS} = (\text{ppm}_d \text{ TRS})(8.806 \times 10^{-8})$

t = applicable pollutant time averaging period (SO<sub>2</sub> = 3-hour, NO<sub>x</sub> = 24 hour)

## **REPORTING REQUIREMENTS**

### 4.1 Performance Test Protocol

The permittee shall submit test protocols for the performance tests required in Permit Condition 3.1 to the Department for approval at least 30 days prior to the test date(s).

### 4.2 Reserved

[2/02/2012]

### 4.3 Semiannual CEMS Report

The permittee shall submit a semiannual CEMS report to the Department that contains, but is not limited to, the calculated or measured emissions rates for all applicable averaging periods for NO<sub>x</sub>, SO<sub>2</sub>, and TRS. Emissions rates shall be calculated using CEMS data and calculated stack flow measurements as required in Permit Conditions 3.11 and 3.12. These records may be provided in electronic format.

[2/02/2012]

### 4.4 Treatment of NCGs

The permittee shall submit to the Department a semiannual report providing the results from monitoring required by Permit Condition 3.5. The report may be in electronic format and shall include a summary that contains, but is not limited to, the total time and percent of time when NCGs were routed to and treated by the No. 3 Lime kiln.

### 4.5 Reserved

[2/02/2012]

### 4.6 Reserved

[2/02/2012]

## **REGULATORY COMPLIANCE**

### 5.1 Reserved.

[2/02/2012]

## NO.4 LIME KILN

### Process Description

#### Process Description

The No. 4 lime kiln is used to calcine kraft-process lime mud into lime. The lime mud is concentrated on the pre-coat filters, and makeup lime rock may be added. The mud is put into the back end of the lime kiln and fuel is fired into the front end. The calcium carbonate of the mud is converted to calcium oxide. The lime is removed from the front end of the kiln and transported to storage, prior to use in the slaker. Lime is then mixed with the green liquor from the smelt dissolving tanks to regenerate sodium hydroxide and form the white liquor (pulping liquor).

The No. 4 lime kiln is used as a backup unit to the NCG incinerator to control NCGs generated from the pulping digesters and black liquor evaporators. The No. 4 lime kiln was constructed in 1975.

#### Emission Controls Description

Particulate emissions from the No. 4 lime kilns are controlled by ESP. This facility also operates a caustic SO<sub>2</sub> scrubber on the effluent from the No. 4 lime kiln downstream of the ESP and only operates the scrubber when NCGs are routed through the No. 4 lime kiln.

**Table 4 EMISSIONS UNIT DESCRIPTION**

Emissions Units / Processes	Emission Control Devices	Emission Points
No. 4 lime kiln, natural gas, oil, and coke-fired	Electrostatic precipitator and packed-bed scrubber	No.4 lime kiln stack

### Emission Limits

#### 6.1 Emission Limits

The emissions from the No. 4 lime kiln stack shall not exceed any corresponding emission rate limits listed in the following table.

**Table 5 EMISSION LIMITS<sup>a</sup> - HOURLY (lb/hr) AND ANNUAL<sup>b</sup> (T/yr)**

Source Description	PM		PM <sub>10</sub>		SO <sub>2</sub>		NO <sub>x</sub>		CO		TRS
	lb/hr	T/yr	lb/hr	T/yr	lb/3-hr <sup>c</sup>		T/yr	lb/day	T/yr	lb/12-hr	T/yr
No. 4 lime kiln <sup>d</sup>	5.2	27 <sup>c</sup>	5.2	17.3 <sup>c</sup>	10.4	15	766	113 <sup>c</sup>	80.4	44 <sup>c</sup>	12.6 <sup>c</sup>

<sup>a</sup> As determined by a pollutant-specific EPA reference method, or DEQ-approved alternative, or as determined by the DEQ's emission estimation methods used in this permit analysis.

<sup>b</sup> As determined by multiplying the actual or allowable (if actual is not available) lb/hr emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

<sup>c</sup> T/yr limit is for combined emissions from the No. 3 and No. 4 lime kilns

<sup>d</sup> In absence of any other credible evidence, compliance is assured by complying with permit operating, monitoring, and record keeping requirements.

<sup>e</sup> 3-hour block

#### 6.2 Total Reduced Sulfur Limits

The concentration of TRS compounds in the effluent from the No. 4 lime kiln shall not exceed 50 ppmv on a dry basis corrected to 10% O<sub>2</sub>, as a monthly average. Emissions of TRS shall not exceed any corresponding emission rate limit listed in Table 5 of this permit.

6.3 Opacity Limit

Emissions from the No. 4 lime kiln stack shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period. Opacity shall be determined by a COMS as specified in Permit Condition 8.7 and the procedures in IDAPA 58.01.01.625.04.

6.4 Sulfur Dioxide Concentration

Sulfur Dioxide concentrations in the effluent of the No. 4 lime kiln stack shall not exceed 20 ppmv at any time, per the applicant's submittal.

6.5 Reserved

[02/02/2012]

**OPERATING REQUIREMENTS**

7.1 Hourly Throughput Limits

The maximum hourly throughput of CaO to the No. 4 lime kiln shall not exceed 10.5 T/hr, based on a 12-hour average.

7.2 Combined Annual Throughput Limits

The maximum annual combined throughput of CaO to the No. 3 lime kiln and the No. 4 lime kiln shall not exceed 175,200 tons per any consecutive 12-month period.

7.3 Treatment of NCGs

Noncondensable gases shall be treated in the following manner:

7.3.1 Prioritization of NCG Treatment Technology

Noncondensable gases shall not be routed through or processed by the No. 4 lime kiln, except during periods when the NCG incinerator is not operational because of maintenance, repair, upset, or breakdown.

7.3.2 Effectiveness of NCG Treatment

When NCGs are routed to the No. 4 lime kiln, such routing and treatment of NCGs, including transition operations, shall be conducted in an effective and efficient manner for the control of pollutants contained in NCGs or generated by the treatment of NCGs and in compliance with applicable provisions of 40 CFR 60, Subpart BB and 40 CFR 63, Subpart S.

[2/02/2012]

7.4 Control Equipment

The permittee shall operate the following control equipment. The permittee shall install and maintain the control equipment in accordance with manufacturer specifications.

[2/02/2012]

7.4.1 Electrostatic Precipitator

An ESP on the No. 4 lime kiln stack to control PM emissions.

7.4.2 Caustic Scrubber

A scrubber on the No. 4 lime kiln stack to control SO<sub>2</sub> emissions. The scrubber shall be installed downstream of

the ESP and shall be operated whenever NCGs are routed to the No. 4 lime kiln.

7.5 Reserved

[2/02/2012]

7.6 Fuel Oil Sulfur Content

The sulfur content in fuel oil supplied to the No. 4 lime kiln shall not exceed 1.75% sulfur by weight as required in IDAPA 58.01.01.725.02.

7.7 Reserved

[2/02/2012]

7.8 Reserved

[2/02/2012]

7.9 Reserved

[2/02/2012]

## **MONITORING AND RECORDKEEPING REQUIREMENTS**

8.1 Periodic Emission Testing for PM and PM<sub>10</sub>

Periodic performance testing for PM and PM<sub>10</sub> emissions from the No. 4 lime kiln stack shall be conducted by the permittee as follows. Emissions of PM and PM<sub>10</sub> from the No. 4 lime kiln stack shall be measured using EPA Test Methods 5, 201a, and 202 contained in 40 CFR Part 60, Appendix A, or comparable and equivalent methods approved in accordance with IDAPA 58.01.01.157. If the PM or PM<sub>10</sub> measured in the most recent performance test is less than or equal to 75% of any respective particulate standard listed in Permit Condition 6.1, the permittee shall conduct periodic performance tests every three calendar years beginning within three calendar years from the most recent test date. If the PM or PM<sub>10</sub> measured in the most recent performance test is greater than 75% of any respective particulate standard listed in Permit Condition 6.1, the permittee shall conduct periodic performance tests annually beginning within 12 months from the most recent test date. Annual performance tests shall be separated by a minimum of six months.

[2/02/2012]

8.2 Reserved

[2/02/2012]

8.3 Reserved

[2/02/2012]

8.4 Throughput Monitoring

The permittee shall monitor and record the hourly throughput of CaO to the No. 4 Lime kiln on a 3-hour average, 12-hour average, 24-hour (daily) average, and the annual throughput based on a 12-month rolling average basis. The throughput monitoring data shall be used in the exhaust gas flow-rate calculation required in Permit Condition 8.12.

8.5 Fuel Usage Monitoring

The permittee shall monitor and record the fuel use-rate of the No. 4 Lime kiln based on a 3-hour average. The fuel usage data shall be used in the exhaust gas flow-rate calculation required in Permit Condition 8.12.

8.6 Treatment of NCGs

When NCGs are treated by the No. 4 Lime kiln, the permittee shall monitor and record the date, time, and duration of treatment. The records shall also include an explanation why the NCG incinerator was not used to treat NCGs.

8.7 Continuous Opacity Monitoring System

The permittee shall install, calibrate, maintain, and operate COMS on the No. 4 lime kiln stack. Except for COMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the COMS shall be in continuous operation whenever the No. 4 lime kiln is in operation. The installation and performance evaluation of the COMS shall be conducted in accordance with the applicable performance specification in 40 CFR 60 Appendix B.

8.8 Oxides of Nitrogen CEMS

The permittee shall install, calibrate, maintain, and operate a NO<sub>x</sub> CEMS on the No. 4 Lime Kiln stack. The CEMS shall provide NO<sub>x</sub> measurements on a dry parts per million basis. Except for NO<sub>x</sub> CEMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation whenever the No. 4 Lime Kiln is in operation. The installation and performance evaluation of the CEMS shall be conducted in accordance with PS2, as applicable, in 40 CFR 60, Appendix B, and shall be operated in accordance with the requirements in 40 CFR 60, Appendix F. The CEMS, in combination with the exhaust gas flow-rate and emission-rate calculations required by Permit Conditions 8.12 and 8.13, shall be capable of determining compliance with NO<sub>x</sub> limit in Permit Condition 6.1 and shall be able to achieve relative accuracy requirements as specified under PS6. The exhaust flow-rate equation shall be reviewed and updated if the permittee fails to achieve the minimum PS6 relative accuracy.

8.9 Sulfur Dioxide CEMS

The permittee shall install, calibrate, maintain, and operate an SO<sub>2</sub> CEMS on the No. 4 Lime Kiln stack. The CEMS shall provide SO<sub>2</sub> measurements on a dry parts per million basis. Except for SO<sub>2</sub> CEMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation whenever the No. 4 Lime Kiln is in operation. The installation and performance evaluation of the CEMS shall be conducted in accordance with PS2, as applicable, in 40 CFR 60, Appendix B, and shall be operated in accordance with the requirements in 40 CFR 60, Appendix F. The CEMS, in combination with the exhaust gas flow-rate and emission-rate calculations required by Permit Conditions 8.12 and 8.13, shall be capable of determining compliance with the SO<sub>2</sub> limit in Permit Condition 6.1 and shall be able to achieve relative accuracy requirements as specified under Performance Specification 6 (PS6). The exhaust flow-rate equation shall be reviewed and updated if the permittee fails to achieve the minimum PS6 relative accuracy.

The permittee shall meet the monitoring requirements in 40 CFR 60.13 and 40 CFR 60 Appendix B for SO<sub>2</sub> CEMS.

[2/02/2012]

8.10 Total Reduced Sulfur CEMS

The permittee shall install, calibrate, maintain, and operate a TRS CEMS on the No. 4 Lime kiln stack. The CEMS shall provide TRS measurements on a dry parts per million basis. Except for TRS CEMS breakdowns, repairs, maintenance, calibration checks, and zero and span adjustments, the CEMS shall be in continuous operation whenever the No. 4 lime kiln is in operation. The installation and performance evaluation of the CEMS shall be conducted in accordance with PS5 in 40 CFR 60 Appendix B. The CEMS shall be capable of determining compliance with the TRS limit in Permit Condition 6.2 and shall be operated in accordance with the requirements in 40 CFR 60 Appendix F and 40 CFR 60.13. A CGA may be substituted for the annual RATA requirement.

The permittee shall meet the monitoring requirements in 40 CFR 60.13 and 40 CFR 60 Appendix B for TRS CEMS.

[2/02/2012]

8.11 Monitoring of Stack Parameters

The permittee shall continuously monitor and record the O<sub>2</sub> concentration of the exhaust gases from the No. 4

Lime kiln stack. The CEMS shall provide O<sub>2</sub> concentrations on a dry basis.

[2/02/2012]

#### 8.12 Exhaust Gas Flow Rate Determination

The permittee shall calculate the 3-hour and daily (24 hour) average exhaust gas volumetric flow rate from the No. 4 Lime Kiln stack, using the following equations:

$$Q_s = (F_d a + 13750b)(20.9/(20.9 - c))$$

- Where:
- $Q_s$  = No. 4 Lime Kiln exhaust gas volumetric flow rate (dscf)
  - $F_d$  = F factor (dry basis) for fuel combusted as calculated using procedures in 40 CFR 60, Appendix A, Method 19 or as provide in Method 19, Table 19-2.
  - $a$  = No. 4 Lime Kiln fuel heat input (MMBtu/averaging period) calculated from fuel use rate ( $R_f$ ) and fuel higher heating value (HHV) as follows:  
 $a = R_f (\text{units/hr}) \times \text{HHV (MMBtu/unit)}$   
Fuel HHVs will be obtained from the fuel suppliers or determined through ultimate analysis. Fuel HHVs will be reviewed and updated (if necessary) at least annually.
  - $b$  = No. 4 Lime Kiln production rate (tons CaO/averaging period)
  - $c$  = oxygen percent (dry basis) in No. 4 Lime Kiln exhaust gas

The accuracy of the calculation method shall be verified during CEM initial performance evaluations and at least annually during the CEMS performance evaluations required in Permit Conditions 8.8 and 8.9.

#### 8.13 NO<sub>x</sub>, SO<sub>2</sub> and TRS Emission Rate Calculations

The permittee shall calculate the 3-hour average and 12-month rolling actual SO<sub>2</sub> emission rates, the daily average and 12-month rolling actual NO<sub>x</sub> emission rates, and the 12-month rolling actual TRS emission rate from the No. 4 Lime Kiln using the average concentrations obtained from the CEMS required in Permit Conditions 8.8, 8.9, and 8.10 and the calculated exhaust gas flow rate required in Permit Condition 8.12 as follows:

$$E_{hr} = C_s Q_s \text{ and } E_{yr} = \sum E_{hr} t$$

- Where:
- $E_{hr}$  = lb/hr mass emission rate for specified time averaging period.
  - $E_{yr}$  = T/yr mass emission rate (12-month rolling)
  - $Q_s$  = dscf/hr flow rate as calculated under Permit Condition 3.13 for the specified time averaging period.
  - $C_s$  = lb/dscf stack gas concentration for specified time averaging period determined as follows:  
 $C_{SO_2} = (\text{ppm}_d \text{ SO}_2)(1.660 \times 10^{-7})$   
 $C_{NO_x} = (\text{ppm}_d \text{ NO}_x)(1.194 \times 10^{-7})$   
 $C_{TRS} = (\text{ppm}_d \text{ TRS})(8.806 \times 10^{-8})$
- $t$  = applicable pollutant time averaging period (SO<sub>2</sub> = 3=hr, NO<sub>x</sub> = 24 hour)

## **REPORTING REQUIREMENTS**

### 9.1 Performance Test Protocol

The permittee shall submit test protocols for the performance tests required in Permit Condition 8.1 to the Department for approval at least 30 days prior to the test date(s).

9.2 Reserved

[2/02/2012]

9.3 Semiannual CEMS Report

The permittee shall submit a semiannual CEMS report to the Department that contains, but is not limited to, the calculated or measured emissions rates for all applicable averaging periods for NO<sub>x</sub>, SO<sub>2</sub>, and TRS. Emissions rates shall be calculated using CEMS data and calculated stack flow measurements as required in Permit Conditions 8.14 and 8.15. These records may be provided in electronic format.

[2/02/2012]

9.4 Treatment of NCGs

The permittee shall submit to the Department a semiannual report providing the monitoring results from monitoring required by Permit Condition 8.6. The report may be in electronic format and shall include a summary that contains, but is not limited to, the total time and percent of time when NCGs were routed to and treated by the No. 4 lime kiln.

9.5 Reserved

[2/02/2012]

9.6 Reserved

[2/02/2012]

## **REGULATORY COMPLIANCE**

10.1 Reserved

[2/02/2012]

## PERMIT TO CONSTRUCT GENERAL PROVISIONS

### **General Compliance**

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.  

**[Idaho Code §39-101, et seq.]**
2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.  

**[IDAPA 58.01.01.211, 5/1/94]**
3. Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.  

**[IDAPA 58.01.01.212.01, 5/1/94]**

### **Inspection and Entry**

4. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
  - Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
  - Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
  - Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

**[Idaho Code §39-108]**

### **Construction and Operation Notification**

5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211:
  - A notification of the date of initiation of construction, within five working days after occurrence; except in the case where pre-permit construction approval has been granted then notification shall be made within five working days after occurrence or within five working days after permit issuance whichever is later;
  - A notification of the date of any suspension of construction, if such suspension lasts for one year or more;
  - A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date; and

- A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date.

[IDAPA 58.01.01.211, 5/1/94]

### ***Performance Testing***

6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ, at its option, may have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.
7. All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.
8. Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

### ***Monitoring and Recordkeeping***

9. The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

### ***Excess Emissions***

10. The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

### ***Certification***

11. All documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

**False Statements**

12. No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.  
[IDAPA 58.01.01.125, 3/23/98]

**Tampering**

13. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.  
[IDAPA 58.01.01.126, 3/23/98]

**Transferability**

14. This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.  
[IDAPA 58.01.01.209.06, 4/11/06]

**Severability**

15. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.  
[IDAPA 58.01.01.211, 5/1/94]