217/782-2113

CONSTRUCTION PERMIT/PSD APPROVAL -- REVISED
NSPS SOURCE

PERMITTEE

Vulcan Construction Materials, LP
Attn: Lamar Forsyth
1000 Warrenville Road, Suite 100
Naperville, Illinois 60563

Application No.: 96020014
Applicant's Designation: MANTENO-01
Subject: Manteno Lime Plant
Date Issued: April 9, 2010
Location: 6141 North Route 50, Manteno

I.D. No.: 091806AAB
Date Received: October 27, 2003

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of one 600 tons/day rotary lime kiln preheater tower controlled by a spray dryer absorber and fabric filter, limestone storage and handling, coal and petroleum coke storage and handling, fabric filter dust handling, and lime storage, handling and loadout, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s).

In conjunction with this permit, approval is given with respect to the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD) for the above referenced project, as described in the application, in that the Illinois Environmental Protection Agency (Illinois EPA) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the federal Clean Air Act, as amended, 42 U.S.C. 7401 et. seq., the Federal regulations promulgated thereunder at 40 CFR 52.21 for Prevention of Significant Deterioration of Air Quality (PSD), and a Delegation of Authority agreement between the United States Environmental Protection Agency and the Illinois EPA for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with the provisions of 40 CFR 124.19. This approval is also based upon and subject to the findings and conditions which follow. Any significant departure from terms expressed in the application would need to receive prior written authorization of the Illinois EPA.

If you have any questions on this permit, please contact Minesh Patel at 217/782-2113.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Issued: _____

ECB:MVP/CPR:psj

cc: Region 1

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**FINDINGS FOR REVISED PERMIT**

1a. Vulcan Construction Materials, LP (Vulcan) has requested a revision to the construction permit for its lime manufacturing plant in Kankakee County. The plant includes one rotary lime kiln with the capacity to produce 600 tons of lime per day. The kiln is currently equipped with a fabric filter (sometimes termed "baghouse") for control of emissions of filterable particulate matter (PM). Vulcan's current request addresses the construction and operation of a spray dryer absorber system for control of emissions of sulfur dioxide ($SO_2$) from the kiln. Vulcan had previously planned to install a wet scrubber but Vulcan has now determined that a spray dryer absorber is a preferable add-on control technology for $SO_2$ emissions from the kiln. In addition, Vulcan is proposing to add a preheater tower to the kiln, which will improve the energy efficiency of the kiln and reduce greenhouse gas emissions. It is also proposing to make changes to the facilities for handling and shipping the lime produced by the plant.

b. Vulcan has not operated this kiln since May 2003. While the kiln has not been operating, Vulcan has been working to obtain a revised permit. Vulcan would not resume operation of the kiln until construction of the proposed changes to the plant, including the addition of a preheater tower and spray dryer absorber to the kiln, are complete.

2. This lime plant is located in Kankakee County, an area that is currently designated attainment for all criteria pollutants. The lime plant is located at an existing limestone quarry operated by Vulcan.

3a. i. This lime plant has the potential to emit more than 100 tons per year of $SO_2$, nitrogen oxides ($NO_x$) and carbon monoxide (CO), as further described in Attachment I. The proposed construction of the lime plant was originally subject to PSD review as a major source of $SO_2$, $NO_x$ and CO emissions.

ii. The plant also has the potential to emit significant amounts of particulate matter and the plant was also subject to PSD review for particulate. Requirements related to particulate matter emissions were established in the permit for material handling operations and roadways, as well as the kiln.

iii. The potential emissions of the lime plant for other PSD pollutants would not be significant.

b. The installation of a spray dryer absorber on the kiln requires a revised PSD review, including a revised BACT determination for emissions of $SO_2$ and a new air quality analysis for the emissions of the plant.

c. The resumption of operation of the kiln and other proposed changes to the plant also require a revised PSD review, including a new BACT determination and air quality analysis, for other PSD pollutants.

4. After reviewing the application submitted by Vulcan, the Illinois EPA has determined that the application for a revised permit for the plant

shows that the plant: (i) will comply with all applicable Board emission standards, (ii) will comply with all applicable federal New Source Performance Standards (NSPS), and (iii) will utilize Best Available Control Technology (BACT) on emissions of $SO_2$, $NO_x$, CO and PM. (See the Control Technology Determinations in Section 2 of this permit for the determinations of BACT for different emission units.)

5. The air quality analyses submitted by Vulcan and reviewed by the Illinois EPA shows that the plant, as now proposed, will not cause violations of the ambient air quality standards for $PM_{10}$, $SO_2$, $NO_2$, and CO. The air quality analysis also shows compliance with the allowable $PM_{10}$, $SO_2$, and $NO_2$ increment.

6. The Illinois EPA has determined that the application for a revised permit for the plant would comply with standards for permit issuance under applicable Illinois Pollution Control Board Regulations and the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21.

7. A copy of the application, the Illinois EPA’s project summary, the application and a draft of this permit were placed in a location in the vicinity of the project, and the public was given notice and opportunity to examine this material, submit comments and to request a public hearing on this matter.

## SECTION 1: PLANT-WIDE CONDITIONS FOR THE LIME PLANT

### 1.1 Effect of Permit

a. This permit does not relieve the Permittee of the responsibility to comply with all local, state and federal regulations that are part of the applicable Illinois' State Implementation Plan, as well as all other applicable federal, state and local requirements.

b. In particular this permit does not excuse the Permittee from the obligation to undertake further actions at the plant as may be needed to eliminate air pollution, including nuisance due to dust or odors, such as altering process operating conditions for the kiln, using supplemental reagent materials in the spray dryer absorber, or raising the height of the kiln stack.

### 1.2 Validity of Permit and Commencement of Construction

a. As provided by 40 CFR 52.21(r)(2), this permit shall become invalid if construction of the project is not commenced within 18 months of this permit becoming effective, if construction is discontinued for a period of 18 months or more, or if construction is not completed and the kiln does not resume operation within a reasonable period of time. The Illinois EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This condition supersedes Standard Condition 1. (See Attachment 2)

b. For purposes of the above provisions, the definitions of "construction" and "commence" at 40 CFR 52.21(b) (8) and (9) shall apply, which requires that a source must enter into a binding agreement for on-site construction or begin actual on-site construction. (See also the definition of "begin actual construction," 40 CFR 52.21(b)(11)).

### 1.3 Annual Emission Limitations

a. Emissions from the plant shall not exceed the limitations in Attachment I. For purpose of determining compliance with these limitations, the procedures in the unit-specific conditions of this permit shall be followed unless other credible evidence provides a more accurate estimate of emissions.

b. Unless otherwise specified in a particular provision, compliance with annual limitations established by this permit shall be determined from a running total of 12 months of data, i.e., from the sum of the data for a particular month plus the preceding 11 months (12 month total).

### 1.4 Status of the Plant for Emissions of Hazardous Air Pollutants (HAPs)

a. This permit is issued based on the source not being a major source for emissions of hazardous air pollutants (HAP) so that

the lime plant is not subject to the National Emission Standards For Hazardous Air Pollutants (NESHAP) For Lime Manufacturing Plants, 40 CFR 63, Subpart AAAAA. For this purpose, emissions of HAPs from the source shall not exceed 8 tons per year of any individual HAP and 20 tons per year of total HAPs.

Note: This permit limits HAP emissions from the plant to less than the thresholds for a major source of HAPs, i.e., annual emissions of 10 tons or more of any individual HAP and 25 tons or more of total HAPs, with a substantial margin to assure that the actual emissions of this source are both enforceably and practically constrained to levels at which the plant would be a major source of HAPs.

b. At least once every 12 months, the Permittee shall predict future annual HAP emissions of the source based on forecasted production and the nature of operations at the source that would accompany such production. The projection of HAP emissions shall be based on past experience, adjusted for planned changes in the production. The projections of HAP emissions shall also consider emissions from secondary operations and support activities at the source.

c. i. If the above prediction of HAP emissions show levels of emissions that are more than 90 percent of a limit in Condition 1.4(a), the Permittee shall also identify measures that could reasonably be taken to maintain HAP emissions within the limits of Condition 1.4(a) and trigger levels of production or emissions at which it would begin to implement such measures.

ii. If the trigger levels of operation or emissions identified in Condition 1.4(c)(i) are reached, the Permittee shall expeditiously implement measures to assure that operation and HAP emissions do not exceed the limits in Conditions 1.4(a).

1.5 State Emission Standards of General Applicability

a. In addition to other applicable requirements, each emission unit at the lime plant shall comply with 35 IAC 212.123(a), which provides that no person shall cause or allow emissions of smoke or other particulate matter with an opacity greater than 30 percent, except as allowed by 35 IAC 212.123(b) and 212.124. Compliance with this limit shall be determined in accordance with by 35 IAC 212.109, i.e., by 6-minute averages of opacity measurements in accordance with USEPA Reference Method 9.

b. In addition to other applicable requirements, each emission unit at the plant shall comply with 35 IAC 212.301, which provides that no person shall cause or allow emissions of fugitive particulate matter to be visible from any process, including any material handling or storage activity, when

looking generally toward the zenith at a point beyond the property line of the source, except when the wind speed exceeds 25 miles per hour, as provided by 35 IAC 212.314.

1.6 Good Air Pollution Control Practices

The Permittee shall operate and maintain the emission units at the lime plant, including associated air pollution control measures and equipment, in a manner consistent with good air pollution control practice, as follows:

a. At all times, including periods of startup, shutdown, malfunction or breakdown, operate as practicable to minimize emissions.

b. Conduct routine inspections and perform appropriate maintenance and repairs to facilitate proper functioning of equipment and minimize or prevent malfunctions and breakdowns.

c. Install, calibrate and maintain required monitoring devices and instrumentation in accordance with good monitoring practices, following the manufacturer’s recommended operating and maintenance procedures or such other procedures as otherwise necessary to assure reliable operation of such devices.

1.7 Records for Required Monitoring Systems and Instrumentation

a. The Permittee shall keep records of the data measured by required monitoring systems and instrumentation. Unless otherwise provided in a particular condition of this permit, the following requirements shall apply to such recordkeeping:

i. For required monitoring systems, data shall be automatically recorded by a central data system, dedicated data logging system, chart recorder or other data recording device. If an electronic data logging system is used, the recorded data shall be the hourly average value of the particular parameter for each hour. During periods when the automatic recording device is out of service, data shall be recorded at least once per shift for periods when the associated emission unit(s) are in service.

ii. For required instrumentation, the measured data shall be recorded manually at least once per day, unless otherwise specified, with data and time both recorded, for periods when the associated emission unit(s) are in service, provided however that if data from an instrument is recorded automatically, the above provisions for recording of data from monitoring systems shall apply.

b. The Permittee shall keep records for the operation, calibration maintenance and repair of required monitoring systems and instrumentation.

1.8 General Recordkeeping Requirements

a. The Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9 for emission units at the lime plant that it conducts or that are conducted on its behest by individuals who are qualified to make such observations. For each occasion on which such measurements are made, these records shall include the formal report for the measurements if conducted pursuant to this permit or a request from the Illinois EPA, or otherwise the identity of the observer, a description of the measurements that were made, the operating condition of the relevant emission units or operations, the observed opacity, and copies of the raw data sheets for the measurements.

b. The Permittee shall keep records for all observations for visible opacity measurements made in accordance with USEPA Method 22 for emission units at the plant that it conducts or that are conducted on its behest. For each occasion on which such observations are made, these records shall include the written report for the observations if conducted pursuant to this permit or otherwise the identity of the observer, a description of the observations that were made, the operating condition of the relevant emission units or operations, and whether visible emissions were observed.

c. The Permittee shall maintain a log or other records that summarize public inquiries or complaints related to emissions, including nuisance dust or odors, and specific actions taken by the Permittee in response to such inquiries or complaints.

1.9 Retention and Availability of Required Records

a. The Permittee shall retain all records and logs required by this permit for at least five years from the date of entry (unless a longer retention period is specified by a particular provision, keep the records at a location at the plant that is readily accessible to the Illinois EPA and USEPA, and make records available for inspection and copying by the Illinois EPA or USEPA upon request.

b. The Permittee shall retrieve and print on paper during normal plant office hours any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a plant inspection.

1.10 Illinois EPA Addresses

a. Any required reports and notifications shall be sent to the Illinois EPA at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Enforcement Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

Telephone: 217/782-5811 Fax: 217/524-4710

b. A copy of all required reports and notifications, except the Annual Emission Report required by 35 IAC Part 254, shall also be sent to the Illinois EPA at the following address:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison Street
Des Plaines, Illinois 60016

Telephone: 847/294-4010

c. A copy of required reports and notifications concerning emission testing and initial installation and certification of continuous emission monitoring systems shall also be sent directly to the Illinois EPA's Source Monitoring Unit at the following address:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Source Monitoring Unit
9511 West Harrison
Des Plaines, Illinois 60016

1.11 The Illinois EPA may revise the requirements for recordkeeping and reporting established in this permit through action in a CAAPP permit for the source.

1.12 Authorization to Operate

a. The lime plant may be operated pursuant to this revised construction permit for a period of one year from initial resumption of operation to allow for equipment shakedown and required emission testing. If this period is insufficient time for equipment shakedown and emissions testing, the Illinois EPA may extend this initial operating period for up to 12 months pursuant to a written request from the Permittee.

b. Upon successful completion of the initial emissions testing required for the lime plant required by Conditions 2.1.7(a)(i), the Permittee may continue to operate the plant pursuant to this construction permit until the Illinois EPA takes final action on the Permittee's request for an operating permit, provided that the Permittee has submitted a timely and complete CAAPP permit application for the plant within 12 months of initial resumption of operation of the plant, as provided by Section 39.5(5)(x) of the Environmental Protection Act, which

application includes a complete Compliance Assurance Monitoring (CAM) plan for the kiln, in accordance with 40 CFR Part 64.

c. These conditions supersede Standard Condition 6.

## SECTION 2.0: UNIT-SPECIFIC CONDITIONS

### 2.1 Unit-Specific Conditions for the Lime Kiln

#### 2.1.1 Description

The lime kiln will produce lime by “calcination” or high-temperature roasting of crushed limestone. The kiln has a nominal capacity to produce 600 tons of lime per day. As the reserves of limestone at the existing quarry are dolomitic in nature, the kiln would make dolomitic lime. Dolomitic limestone contains a significant level of magnesium carbonate, as well as calcium carbonate, yielding a lime that contains a significant level of magnesium oxide. Dolomitic lime is typically used as a flux to remove impurities during the manufacture of steel.

The kiln is a long, cylindrical, slightly inclined, refractory-lined rotary furnace, through which the limestone and combustion gases pass in opposite directions, in counter-current flow. As part of the current project, Vulcan would shorten the kiln and install a preheater tower at the exhaust end of the kiln, before the add-on air pollution control. The preheater tower would heat the stone feed that will go into the kiln using the thermal energy contained in the warm flue gas from the kiln. The installation of the preheater tower will lower the amount of fuel to make lime (expressed as Btus per ton of lime) increasing the energy efficiency of the kiln.

The emissions of the kiln are controlled by a combination of design, work practices and add-on emission control equipment. $NO_x$, CO and VOM are controlled by the design of the kiln and low excess air and good combustion practices. $SO_2$ emissions are controlled by a spray dryer absorber. The spray dryer absorber is followed by a fabric filter for control of filterable particulate matter.

#### 2.1.2 List of Emission Units

| Emission Unit | Description | Control Equipment |
|---|---|---|
| Lime Kiln | Rotary lime kiln and preheater tower | Spray dryer absorber & Fabric Filter |

#### 2.1.3-1 Applicability Provisions

a. The “affected kiln” for the purpose of these unit-specific conditions is the kiln described in Conditions 2.1.1 and 2.1.2.

#### 2.1.3-2 Control Technology Determination

a. i. The emissions of the affected kiln shall be minimized and controlled by the following:

A. Use of a preheater tower or other similar heat recovery device for improved fuel efficiency.

B. Low excess air to minimize formation of $NO_x$.

C. Good combustion practices to minimize formation of CO.

D. The natural absorptive capacity of lime dust for $SO_2$.

E. A spray dryer absorber system to control $SO_2$.

F. Fabric filter (baghouse) to control particulate matter.

ii. The filter material in the fabric filter shall be a "PTFE" membrane material or equivalent fabric material, subject to approval by the Illinois EPA, that has enhanced performance for collection of fine particulate matter (PM) as compared to conventional woven or felt filter material.

b. i. The emissions from the kiln, expressed in terms of pounds per ton of stone feed material to the kiln other than fuel, shall not exceed the following limits:

A. PM (filterable): 0.10 lbs/ton of stone feed, 3-hour average.

B. $PM_{10}$ (total, filterable and condensable): 0.246 lbs/ton of stone feed, 3-hour average.

C. $SO_2$: 2.2 lbs/ton of stone feed, 3-hour average, and 2.0 lbs/ton of stone feed, 30-day rolling average, or such lower limits (as low as 1.8 and 1.5 lbs/ton of stone feed, respectively), as may be set pursuant to Condition 2.1.11, which requires further evaluation of the above limits based upon actual $SO_2$ emissions of the affected kiln.

D. $NO_x$: 4.5 lbs/ton of stone feed, daily (24-hour) average and 4.0 lbs/tons of stone feed, 30-day rolling average,* or such lower limits (as low as 3.5 and 3.0 lbs/ton, respectively), as may be set pursuant to Condition 2.1.11, which requires further evaluation of the above limits based upon actual $NO_x$ emissions of the affected kiln.

E. CO: 11.48 lbs/ton, daily (24-hour) average.*

* If continuous emissions monitoring is not conducted, as addressed by Condition 2.1.8-1(a)(v), compliance shall be determined based on a 3-hour average.

ii. As an alternative to Condition 2.1.3-2(b)(i)(D), the $NO_x$ emissions of the affected kiln shall be minimized by maintaining the oxygen level in the flue gases leaving the kiln at no more than 1.25 percent by volume, hourly average.

iii. The limits in Condition 2.1.3-2(b)(i) shall not apply for periods when the affected kiln is on hot standby with no stone feed to the kiln or the affected kiln is operating at less than 10 percent of capacity, provided, however, that the emission limits in Condition 2.1.6(a) shall continue to apply during these periods and serve as BACT for such period.

c. i. The kiln and associated emission control systems shall be operated in conformance with good air pollution control practices to minimize emissions, as further addressed by Condition 2.1.5(b).

ii. During startup of the kiln, natural gas or liquefied petroleum gas (LPG) shall be fired to bring the kiln and its associated control equipment up to the operating temperature before beginning firing of solid fuel.

iii. Upon occurrence of a malfunction or breakdown that will result in an exceedance of an applicable limit or requirement in Condition 2.1.3-2(b), the Permittee shall, as soon as practicable, reduce the operating rate of the kiln, switch to firing of natural gas or LPG, begin the shutdown of the kiln or take other corrective action to end the exceedance. Consistent with the above, if the Permittee has maintained and operated the kiln and air pollution control equipment so that malfunctions and breakdowns causing exceedances are infrequent, sudden, not caused by poor maintenance or careless operation, and in general are not reasonably preventable, the Permittee shall begin corrective actions within 2 hours of a malfunction that will result in an exceedance.

2.1.3-3 Applicability of Federal Emission Standards

a. The affected kiln is subject to the federal New Source Performance Standards (NSPS) for Lime Manufacturing

Plants, 40 CFR 60, Subpart HH, and related provisions in 40 CFR 60, Subpart A, General Provisions. The Illinois EPA administers NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

b. Pursuant to this NSPS, the particulate matter emissions of the affected kiln, which are controlled by a fabric filter, shall not exceed 15 percent opacity and 0.30 kilogram per megagram (0.60 lb/ton) of stone feed, as would be measured by USEPA Method 5, except during startup, shutdown and malfunction, as defined by 40 CFR 60.2, as provided by 40 CFR 60.8(c) and 60.342.

c. At all times, the Permittee shall also maintain and operate the affected kiln, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, as required by the NSPS, 40 CFR 60.11(d).

2.1.3-4 Applicable State Emission Standards

a. The PM emissions of the affected kiln shall comply with 35 IAC 212.321. (See also Condition 3.1(a).)

b. The opacity of PM emissions from the kiln shall comply with 35 IAC 212.123(a). (See also Condition 1.5(a).)

c. The $SO_2$ emissions of the kiln shall comply with 35 IAC 214.301, which provides that no person shall cause or allow emissions of $SO_2$ from a process emission unit to exceed 2000 ppm.

Note: Notwithstanding Condition 2.1.3-4(a),(b) or (c), in the CAAPP Permit for the source, the Permittee may be authorized, subject to appropriate restrictions, to startup the affected kiln or continue operation of the kiln in violation of state emission standard(s) pursuant to 35 IAC 201.262 if the Permittee demonstrates that such emissions during startup have and will be minimized and that such continued operation during malfunction or breakdown is necessary to prevent injury to persons or severe damage to equipment.

2.1.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on the affected kiln not being subject to the National Emission Standards For Hazardous Air Pollutants (NESHAP) For Lime Manufacturing Plants, 40 CFR 63, Subpart AAAAA, because the source is not a major source for emissions of HAPs.

2.1.5 Operational Requirements and Limits

a. The stone feed input to the affected kiln shall not exceed 1,296 tons/day, monthly average, and 473,040 tons per year.

b. The Permittee shall operate the affected kiln and associated emission control equipment in accordance with good air pollution control practices to minimize emissions, including the following:

i. Operation in accordance with detailed written operating procedures, as it is safe to do so, that at a minimum address startup (including so called “cold startups” and “hot startups” when the operation of the kiln is only temporarily interrupted), normal operation, and shutdown and malfunction events, establish target ranges for relevant operating parameters, and provide for review of these parameters during startup, shutdown and malfunction or breakdown as necessary to make adjustments to reduce or eliminate any excess emissions.

ii. With respect to startup, performance of an appropriate operating review of the operational condition of the kiln prior to initiating startup of the kiln and firing of natural gas or LPG to “preheat” the kiln to the operating temperature of the control equipment prior to initiating firing of solid fuel, maintaining opacity of the kiln during this preheat period at a level that is indicative of good combustion for gas, except for the initial 12 minute period following ignition of natural gas.

iii. With respect to malfunction and breakdown, include planning for likely events with specific programs of corrective actions; provide that, upon occurrence of a malfunction that will result in an exceedance of a limit or requirement in Conditions 2.1.3-2, 2.1.3-3 or 2.1.6, appropriate corrective actions are implemented as soon as practicable (e.g., repair of the affected equipment, a reduction in the operating rate of the kiln, or removal of the kiln from service) so that excess emissions are minimized and the exceedance expeditiously end; and provide for timely shutdown and overhaul of the kiln upon occurrence of chronic malfunctions that result in excess emissions.

c. The Permittee shall take corrective actions for the affected kiln as specified by relevant provisions of 40 CFR 63, Subpart AAAAA, Table 5, Item 2, with respect to

any alarms from the bag leak detection system required by Condition 2.1.8-2(c)(ii).

d. The Permittee shall maintain the affected kiln and associated air pollution control systems in accordance with good air pollution control practice to assure proper functioning of equipment and minimize malfunctions, including performing maintenance in accordance with written procedures developed for this purpose. The procedures may rely upon the manufacturer's instructions for maintenance of equipment, provided that a copy of those instructions is attached to the procedures. These procedures may also be combined with the required operating procedures for the kiln.

e. The Permittee shall review its operating and maintenance procedures as required above on a regular basis and revise them as needed consistent with good air pollution control practice based on actual operating experience and equipment performance.

i. This review shall occur at least annually if not otherwise initiated by occurrence of a startup, shakedown, or malfunction event that is not adequately addressed by the existing plans.

ii. This review shall also be performed if, following the shakedown period allowed by Condition 1.12, the kiln experiences chronic malfunctions that result in excess emissions or a specific request by the Illinois EPA for such review.

f. The Illinois EPA may enhance these requirements through action in a CAAPP permit for the source based on the actual operating experience with the affected kiln.

2.1.6 Emission Limitations

a. The emissions of the affected kiln shall not exceed the following limits.

| Pollutant | Short-Term Limits (Lbs/Hr) | | Annual Limits (Tons/Yr) |
|---|---|---|---|
| | Limit | Average | |
| PM | 5.4 | 3-hour | 23.7 |
| PM (total, filterable & condensable) | 13.3 | 3-hour | 58.3 |
| $SO_2$ | 119.0 | 3-hour | 473.0* |
| | 119.0 | daily, 24-hour | |
| $NO_x$ | 243.0 | 3-hour | 946.0* |
| CO | 620.0 | daily, 24-hour | 2,716.0 |
| VOM | 7.9 | 3-hour | 34.6 |

| | | | |
|---|---|---|---|
| Sulfuric Acid Mist | 1.0 | 3-hour | 4.4 |
| Lead | 0.055 | 3-hour | 0.24 |

* See also Condition 2.1.11(a)(iv).

b. The emissions of Hazardous Air Pollutants (HAPs) from the affected kiln, as listed in Section 112(b) of the Clean Air Act, shall not equal or exceed 1.8 pounds/hour and 8.0 tons/year of any single HAP, e.g., hydrogen chloride (HCl), and 4.6 pounds/hour and 20 tons/year of any combination of HAPs.

2.1.7 Emissions Testing Requirements

The Permittee shall have testing of the emissions of the affected kiln conducted as follows:

a. The timing and scope of these tests shall be as follows:

i. Within 180 days of resumption of operation of the kiln, the Permittee shall have testing conducted for the affected kiln for emissions of PM, $PM_{10}$, VOM, sulfuric acid mist, hydrogen chloride, and lead and other metals (e.g., including arsenic, beryllium, cadmium, total chromium, copper, magnesium, manganese, mercury, nickel, potassium, selenium and zinc).

ii. Additional testing of emissions shall be conducted within 90 days of a written request from the Illinois EPA for pollutants as specified by the request, including emissions of CO if continuous emissions monitoring is not required for CO.

b. Testing shall generally be conducted in accordance with the procedures and method specified in Condition 3.2 using USEPA test methods and procedures unless another method is approved by the Illinois EPA. In addition:

i. Testing for emissions of PM shall be conducted in accordance with the NSPS, 40 CFR 60.344(b).

ii. Testing for emissions of HCl shall be conducted in accordance with the NESHAP, 40 CFR 63.7142.

c. The Permittee shall submit a test plan to the Illinois EPA for this testing in accordance with Condition 3.2(c) and notify the Illinois EPA of the date of emissions testing in accordance with Condition 3.2(d).

d. The Permittee shall submit final reports for this testing to the Illinois EPA in accordance with Condition 3.2(e). In addition to other required information, these reports shall also include:

i. The following information for the operating conditions during testing:

A. Ash, sulfur, chlorine and heat content of the solid fuel being fired, based on representative sampling of fuel during the period of testing.

B. The amounts of stone and solid fuel fed to the kiln, in tons/hour.

C. Kiln operating parameters, i.e., operating temperature and oxygen content in the flue gas leaving the kiln.

D. Spray dryer absorber operating parameters, i.e., inlet temperature, slurry feed rate, and other operating parameters of the spray dryer absorber.

E. Fabric filter operating parameters, i.e., pressure drop and operating temperature, and operating information, i.e., output from the bag leak detection system and frequency of bag cleaning with trigger for cleaning.

ii. Emission factors for the kiln, calculated using the average test results in terms of pounds per ton of stone feed.

iii. Opacity of the emissions from the kiln stack, as determined by Method 9, if the nature of the emissions is such that observations can be properly conducted.

2.1.8-1 Emissions and Opacity Monitoring Requirements

a. i. The Permittee shall install, calibrate, maintain and operate continuous emissions monitoring systems (CEMS) on the affected kiln for $SO_2$, $NO_x$ and CO emissions in accordance with 40 CFR 60, Appendix B, Performance Specification 2 and 4, respectively and Appendix F. These systems shall be operated during all periods of operation of the lime kiln except for continuous monitoring system breakdowns and repairs. Data is to be recorded during calibration checks, and zero and span adjustments.

ii. The Permittee shall maintain records for these CEMS, including recorded emission concentrations, records of maintenance, calibration, and operational activity associated with the systems, and the following information:

A. Records of measured $SO_2$, $NO_x$ and CO emissions, in pounds/hour and pounds/hour, daily average;

B. Records identifying periods when the pollutant concentration exceeded the full span of the CEMS;

C. Records describing any modifications to these CEMS that could affect the ability of the CEMS to comply with Performance Specification 2, 3, and 4; and

D. Records for the results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of 40 CFR 60.

iii. During extended outages of the $SO_2$ CEMS, the Permittee shall measure and record the exhaust concentration of $SO_2$, as measured by gas tube measurements or equivalent techniques, at least twice per shift.

iv. The Permittee shall submit reports to the Illinois EPA of monitoring of $SO_2$, $NO_x$ and CO emissions, including data for exceedances of applicable short-term limits, in accordance with 35 IAC 201.405. (See also Condition 2.1.10(d)(iv).)

v. The Illinois EPA may revise or terminate requirements for monitoring of CO emissions or allow operational monitoring of oxygen as an alternative to monitoring of CO, through action on the CAAPP permit for the source based on a showing from the Permittee that monitoring for CO does not facilitate practices to minimize CO emissions or is not appropriate given actual levels of CO emissions from the kiln, or that monitoring of oxygen is adequate to address emissions of CO.

b. i. The Permittee shall install, calibrate, maintain and operate a continuous opacity monitoring system to measure the opacity of the exhaust from the affected kiln in accordance with 40 CFR 60.11 and 60.343(a).

ii. The Permittee shall submit reports of excess opacity measured by this system to the Illinois EPA quarterly in accordance with 40 CFR 60.7(c) and 40 CFR 60.343(e).

2.1.8-2 Operational Monitoring Requirements

a. The Permittee shall install, calibrate, maintain, and operate the following monitoring devices for the affected kiln:

   i. A device for measuring the mass rate of stone feed to the kiln, which must be accurate to within plus or minus 5 percent of the mass rate over its operating range. The device is required to be operated during emission testing pursuant to 40 CFR 60.343(d).

   ii. A device for monitoring the oxygen concentration in the flue gas exiting the kiln, percent by volume, which device shall be installed in the kiln hood or in the ductwork between the end of the kiln and the preheater tower so as to minimize the effect of infiltration of air on the measured oxygen concentration.

b. The Permittee shall install, calibrate, maintain, and operate monitoring devices for the following operating parameters of the spray dryer absorber on the affected kiln:

   i. The feed rate and density of the lime slurry feed to the spray dryer absorber. This monitoring device must be accurate within ± 20 percent.

   ii. The outlet gas temperature from the absorber vessel. This monitoring device must be accurate within ±5 °F.

   Note: This permit is issued based on the Permittee monitoring the opacity of the kiln pursuant to the NSPS so that monitoring of pressure drop across the spray dryer absorber and the slurry liquid supply pressure is not required pursuant to 40 CFR 60.343(c).

c. The Permittee shall install, calibrate, maintain, and operate the following monitoring devices on the fabric filter for the affected kiln:

   i. A device to measure the static pressure drop across the fabric filter.

   ii. A device to measure the outlet gas temperature from the fabric filter.

   iii. A bag leak detection system, which shall be installed, operated and maintained in accordance with relevant requirements of 40 CFR 63.7121. The Permittee shall keep records for alarms from this

system and the actions that it takes in response to such alarms.

2.1.8-3 Fuel Sampling and Analysis

a. The Permittee shall perform quarterly sampling for the solid fuel used in the affected kiln using the procedures in ASTM D2234, which result in data at least as reliable as Classification II - D-2, defined in ASTM D2234, Section 6, as “Manual Sampling - Stationary Coal/Coke Sampling - Random Spacing” and analyze these samples for ash, sulfur, chlorine and heat content using appropriate ASTM Methods.

b. The Permittee shall keep records for this activity and the results of the analysis.

2.1.9 Recordkeeping Requirements

a. For the affected kiln, the Permittee shall fulfill applicable recordkeeping requirements of the NSPS, 40 CFR 60.7.

b. The Permittee shall maintain a file that contains the following information for the fabric filter on the affected kiln, which information shall be kept current:

i. The design specifications for the fabric filter (design exhaust flow (acfm or scfm), filter area, type of cleaning, performance guarantee for particulate exhaust loading in gr/scf, etc.) and the design specification for the filter material in the fabric filter (type of material, surface treatment(s) applied to material, weight, performance guarantee and warranty provisions).

ii. The manufacturer’s recommended operating and maintenance procedures for the fabric filter.

iii. The normal range of static pressure drop across the fabric filter and the maximum safe static pressure drop for the fabric filter, with supporting documentation.

c. The Permittee shall maintain the following logs or other records for the affected kiln:

i. Operating log(s) or other records in accordance with Condition 3.4(a), which shall also include the following information:

A. The operating status and stone feed rate to the kiln on an hour-by-hour basis (tons).

B. Operating parameters of the kiln that are relevant to emissions as measured by process instrumentation, recorded at least once per shift.

C. Each startup of the kiln, the nature of the startup, sequence and timing of major steps in the startup, any unusual occurrences during the startup, and any deviations from the established startup procedures, with explanation.

D. Each shutdown of the kiln including the nature and reason for the shutdown, sequence and timing of major steps in the shutdown, any unusual occurrences during the shutdown, and any deviations from the established shutdown procedures, with explanation.

E. Each malfunction or breakdown that significantly impairs emission performance, including the nature and duration of the event, type of malfunction, i.e., minor or major, sequence and timing of significant steps in the malfunction, corrective actions taken, any deviations from the established procedures for such a malfunction, estimated emissions, probable cause, and preventative actions taken to address similar events.

ii. Inspection, maintenance and repair log(s) or other records in accordance with Condition 3.4(b).

d. The Permittee shall keep the following operating records for the lime plant and affected kiln:

i. The amounts of limestone, coal, coke and other raw materials received by the lime plant and the amount of lime shipped from the plant (tons/month).

ii. Stone feed to the kiln (tons/month and tons/year).

iii. Fuel usage by the kiln, by type (tons, gallons or scf/month) and average sulfur content of solid-fuel (percent by weight and pounds/million Btu).

iv. Lime production by the kiln (tons/month).

v. Consumption of lime and other reagents, if any, by the spray dryer absorber (tons/month, by type of material).

e. The Permittee shall maintain records of the following items related to malfunction and breakdown of the affected kiln:

   i. Date and duration of the malfunction or breakdown, i.e., start time and time normal operation was achieved or time furnace was shutdown.

   ii. Description of the event, impact on emissions, probable cause, and corrective actions.

   iii. Verification that the malfunction and breakdown procedures were performed and met the requirements of Condition 2.1.3-4(d).

   iv. If normal operation or shutdown was not achieved, an explanation of why normal operation or shutdown could not be achieved with the date and time the Illinois EPA's regional office was contacted, the person spoken to, items discussed, and follow-up instructions.

f. The Permittee shall maintain records of the following items for each exceedance of the limits in Conditions 2.1.3, 2.1.5, or 2.1.6, which records shall include:

   i. Identification of the limit that may have been exceeded.

   ii. Duration of the possible exceedance.

   iii. An estimate of the amount of emissions in excess of the applicable standard.

   iv. A description of the cause of the possible exceedance.

   v. When compliance was reestablished.

g. The Permittee shall maintain records of the following items related to emissions of the affected kiln:

   i. The standard emission factors used by the Permittee for estimating controlled emissions from the kiln, which information shall be based on site-specific test data, representative test data or emission determination methodology published by USEPA, with supporting explanation and calculations.

   ii. Emissions of PM, $PM_{10}$, $SO_2$, $NO_x$, VOM, CO, and individual and total HAPs (tons/month and tons/year), with supporting calculations.

2.1.10 Notification and Reporting Requirements

a. The Permittee shall fulfill applicable notification and reporting requirements of the NSPS for the affected kiln and associated control systems, as required by 40 CFR 60.7 and 60.343(c).

b. i. Pursuant to 35 IAC 201.263, the Permittee shall immediately notify the Illinois EPA Regional Office by telephone of malfunction or breakdown involving the spray dryer absorber that has resulted in excess emissions for more than 3 hours (180 minutes).

ii. The Permittee shall notify the Illinois EPA Regional Office as soon as possible during normal office hours after it has determined that the duration of exceedance may exceed 12 hours. This notification shall include the estimated amount of emissions during the continued malfunction or breakdown considering any reductions in the operating rate of the kiln.

iii. The Permittee shall submit a written follow-up report to the Illinois EPA within 7 working days following an occurrence for which notification is required pursuant to Condition 2.1.10(b)(i) or (ii). This report shall:

A. Identify the date, time and personnel involved in the notification; and

B. Provide summary of the records required by Condition 2.1.9(e).

c. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for the affected kiln as follows. These notifications shall include the information specified by Condition 3.5.

i. If there is an exceedance of a state emission or opacity standard due to a malfunction or breakdown event, the Permittee shall notify the Illinois EPA in accordance with Condition 2.1.10(b).

ii. If there is a deviation from other applicable requirements for PM emissions, opacity or visible emissions that is not repaired or otherwise corrected within 4 hours, the Permittee shall notify the Illinois EPA within 30 days.

iii. The deviations addressed above and all other deviations shall be reported in the periodic

compliance reports required by Conditions 2.1.10(a) and (d).

d. The Permittee shall submit semi-annual compliance reports to the Illinois EPA within 30 days following the end of each reporting period. These reports shall include the following information:

   i. The quantity of each fuel burned, in tons, gallons, or scf, and the sulfur content of the solid fuel, lb/mmBtu, weighted average, on a monthly basis.

   ii. A listing of each startup of the kiln, with brief description of the type of startup, e.g., routine startup following scheduled maintenance outage or hot startup following unplanned power outage;

   iii. Information for deviations during the reporting period, including detailed information as required by Condition 3.5 for deviations that have not been previously reported pursuant to Condition 2.1.10(c)(i) or (ii) and a listing of deviations that have been so reported. If there have been no deviations during the reporting period, the report shall state that no deviations occurred during the reporting period;

   iv. An availability and incident report for the $SO_2$, $NO_x$ and CO CEMS and instrumentation required by Conditions 2.1.8-1 and 2.1.8-2.

   v. Emissions of PM, $SO_2$, $NO_x$, CO, VOM and individual HAPs, with supporting data and calculation (tons/month and tons/year).

e. The Permittee shall report as follows to the Illinois EPA for the affected kiln and $SO_2$ spray dryer absorber. These reports should be submitted within 15 days after the end of the reporting period.

   i. Notice of commencing construction of the spray dryer absorber, which shall be provided within 15 days of this date.

   ii. While the spray dryer absorber is under construction, progress reports which shall be provided every six months.

   iii. Notice of the actual date of resumption of operation of the kiln, which shall be provided within 15 days of this date.

   iv. During the shakedown period following resumption of operation of the kiln, a quarterly operating report

summarizing operation of the kiln during the reporting period and describing any operational problems that were encountered.

2.1.11 Evaluation of BACT Limits for $SO_2$ and $NO_x$ Emissions

a. i. The Permittee shall evaluate emissions from the kiln to determine whether lower BACT limits for $SO_2$ and $NO_x$ may be reliably achieved without unacceptable consequences, i.e., inability to reliably comply with other applicable emission limits and requirements or significant risk to equipment or personnel, and without unreasonable consequences, i.e., a significant reduction in the operating capacity of the kiln, a significant increase in fuel consumption, or a significant increase in needed maintenance and repair.

ii. A. If the Permittee fails to complete the evaluation of $SO_2$ emissions or submit the required report for $SO_2$ in a timely manner, the $SO_2$ emission limits in Condition 2.1.3-2(b)(i)(C) shall automatically become 1.8 and 1.5 lbs/ton of stone feed on a 3-hour and 30-day rolling average, respectively.

B. If the Permittee fails to complete the evaluation of $NO_x$ emissions or submit the required report for $NO_x$ in a timely manner, the $NO_x$ emission limits in Condition 2.1.3-2(b)(i)(D) shall automatically become 3.0 and 2.5 lbs/ton of stone feed on a 24-hour and 30-day rolling average respectively.

iii. This permit will be revised to set lower limit(s) for $SO_2$ or $NO_x$ emissions (but no lower than the above default limit), if the Illinois EPA, after considering the result of any evaluation performed by the Permittee, finds that the kiln can consistently comply with such limit(s) without unacceptable or unreasonable consequences. Additional factors, e.g., the magnesium content of the limestone, may be included with such limits to address specific modes of operation during which particular limits may or may not be achievable.

iv. If the emission limit for $SO_2$ or $NO_x$ in Condition 2.1.3-2(b)(i)(C) or (D) that applies on a 30-day rolling average is lowered, the annual limit for that pollutant in Condition 2.1.6(a) (as also reflected in Attachment A) shall also be lowered by the same proportion.

b. The Permittee shall perform this evaluation in accordance with a plan submitted to the Illinois EPA for review and comment. The initial plan shall be submitted to the Illinois EPA no later than 180 days after initial start-up of the kiln. The plan shall provide for systematic evaluation of change or variation, within the normal or feasible range of operation, in the following elements as related to the SO2 and NOx emissions:

   i. Kiln load, in terms of feed rate and moisture content of stone feed.

   ii. Kiln firing rate, combustion chamber temperature and combustion settings, including excess oxygen.

c. The Permittee shall promptly begin this evaluation after the kiln demonstrates compliance with applicable short-term emission limits in its permit, as shown by emission testing and monitoring. At such time, the Permittee shall submit an update to the plan that describes its findings with respect to control of $SO_2$ and $NO_x$ emissions during the shakedown of the kiln, which highlights possible areas of concern for this evaluation.

d. i. This evaluation shall be completed and a detailed written report submitted to the Illinois EPA within 24 months after the resumption of operation of the kiln. This report shall include proposed alternative limit(s) for $SO_2$ and $NO_x$ emissions and be accompanied by an application for revision of this permit.

   ii. This deadline may be extended by the Illinois EPA for an additional 6 months if the Permittee submits an interim report demonstrating the need for additional time to effectively evaluate $SO_2$ or $NO_x$ emissions.

## 2.2 Unit-Specific Conditions for the Limestone Crushing Plant and Material Conveyor Systems, Screening Operation, Roll Crusher, and Storage Piles

### 2.2.1 Description

Limestone for the lime plant will be supplied by the existing crushing plant at the quarry. The limestone for the lime kiln will be transferred to the lime plant by a conveyor system and stockpiled in a storage pile before being transferred to the kiln by another conveyor system. Limestone that is too small or large for the preheater and kiln will be screened and returned to the stone crushing plant. Solid fuel for the kiln will also be stockpiled in a storage pile at the lime plant and transferred to the fuel feed bin for the kiln by a conveyor system. A final conveyor system will be used to transfer the dust collected by the fabric filter on the kiln to a storage silo. The fabric filter dust will be transported off-site. Lime product from the cooler will pass through a set of two crushers to ensure that oversize material is reduced to a size appropriate for product storage and loadout.

The emissions of particulate matter (PM) from these operations are minimized by the moisture content of material, enclosure and other work practices.

### 2.2.2 List of Emission Units

| Emission Units | Description | Emission Control |
|---|---|---|
| Handling of Processed Limestone | Conveying and storage of processed limestone that has been prepared for use at the lime plant | Work Practices |
| Handling of Over/Undersize Limestone | Conveying and stockpiling of limestone that does not meet size specifications for the lime plant | Work Practices |
| Handling of Fuel | Conveying and storage of solid fuel for the kiln | Work Practices |
| Handling of Lime | Conveying of lime from the kiln to the processing facility (addressed in Condition 2.3) | Work Practices |
| Handling of Kiln Fabric Filter Dust | Conveying of dust collected by the kiln fabric filter to silos for shipment to an off-site disposal area | Work Practices |
| Lime Screening | Screening of lime product into four size categories | Work Practices |
| Limestone Screening | Screening to remove oversized and undersized limestone in kiln feed | Work Practices |
| Lime Crushing | Crushing of 1¾′ X ¼ and ¼ minus lime product streams prior to entry to the kiln run silo | Work Practices |

2.2.3-1 Applicability Provisions

a. The “affected units” for the purpose of these unit-specific conditions are the emission units in the operations described in Conditions 2.2.1 and 2.2.2.

b. The “new affected units” for the purpose of these unit-specific conditions are the affected units that were newly constructed or installed as part of the construction of the lime plant.

2.2.3-2 Control Technology Determination

a. The PM emissions from new affected units that are subject to the NSPS, 40 CFR 60, Subpart OOO (see Condition 2.2.3-3), shall comply with the applicable limits specified by the NSPS.

b. There shall be no visible emissions of particulate from the transfer of kiln dust, as determined by Method 22.

c. The PM emissions from other new affected units, which are not subject to the NSPS, shall comply with the following limits:

i. Opacity of fugitive emissions, as defined by 40 CFR 60.671, shall not exceed 10 percent, as determined by Method 22, with observations conducted in accordance with 40 CFR 63.7112(l).

ii. Stack emissions, shall not exceed 0.01 gr/dscf as would be measured by Method 5 and 7 percent opacity.

iii. If the unit is enclosed in a building, emissions shall either not exceed the relevant limits in Conditions 2.2.3-2(c)(i) and (ii) or there shall be no visible fugitive emissions from the building except emissions from a vent, as defined in 40 CFR 60.671, and emissions from each vent from the building shall not exceed the limits for stack emissions in Condition 2.2.3-2(c)(ii).

2.2.3-3 Applicable Federal Emission Standards

a. Certain affected units engaged in handling limestone (i.e., crushers, grinding mills, screening operations, bucket or belt conveyors, conveyor transfer points, storage bins, and enclosed truck loading stations constructed, modified or reconstructed after August 31, 1983) shall comply with applicable requirements of the NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO, and related provisions of 40 CFR 60, Subpart A, General Provisions.

b. The affected units that are subject to this NSPS, other than truck dumping into any screening operation, feed hopper, or crusher, which is exempt from any limits under this NSPS, shall comply with the following limits for PM emissions:

i. Limits for fugitive emissions from such units:

A. The opacity of emissions from each crusher at which a capture system is used and from each other such unit shall not exceed 10 percent. [40 CFR 60.672(b) and (d)]

B. The opacity of emissions from each crusher at which a capture system is not used shall not exceed 15 percent. [40 CFR 60.672(c) and (d)]

ii. Limits for stack emissions, if any, from such units:

A. Emissions, as would be measured by Method 5, shall not exceed 0.05 gram/dscm (0.022 gr/dscf). [40 CFR 60.672(a)(1) and 60.675]

B. The opacity of emissions shall not exceed 7 percent, unless a wet scrubber is used. [40 CFR 60.672(a)(2)]

iii. Limits for any such units enclosed in a building:

A. Emissions shall not exceed the relevant limits in Conditions 2.2.3-3(b)(i) and (ii) [40 CFR 60.672(e)]; or

B. There shall be no visible fugitive emissions from the building except emissions from a vent, as defined in 40 CFR 60.671, and emissions from each vent from the building shall not exceed the limits for stack emissions in Condition 2.2.3-2(b)(ii). [40 CFR 60.672(e)(1) and (2)]

c. At all times, the Permittee shall maintain and operate affected units that are subject to this NSPS, including associated emission control equipment, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11(d).

2.2.3-4 Applicable State Emission Standards

a. The emissions of particulate from the affected units shall comply with 35 IAC 212.123 and 301. (Refer to Conditions 1.5(a) and (b).)

b. The emissions of particulate, as would be measured by Method 5, from affected units that are equipped with vents shall comply with 35 IAC 212.321. (Refer to Condition 3.1(a).)

2.2.4 Non-Applicability of Regulations of Concern

a. This permit is issued based on affected units at the plant that handle coal not being subject to the NSPS for Coal Preparation Plants, 40 CFR 60, Subpart Y, because such units at this plant do not prepare more than 200 tons of coal per day by breaking or crushing of the coal. [See 40 CFR 60.250]

b. Affected units that are not equipped with vents, such as storage piles and the conveyor belt system for transfer of limestone to the plant, are not subject to the limits of 35 IAC 212.321 (“the process weight rate” rule) because of the disperse nature of the units, as provided by 35 IAC 212.323.

2.2.5 Operational and Production Limits and Work Practices

a. Deliveries to fuel storage piles, tote filling, and oversize/undersize limestone transport shall be only conducted during the period from 7 am to 7 pm, Monday through Saturday.

b. The transfer and loadout and unloading of dust collected by the fabric filter on the kiln shall be enclosed or shall be controlled be water spraying, pelletizing, or other equivalent control methods to prevent visible emissions of particulate.

2.2.6 Emission Limitations

a. Emissions of PM and $PM_{10}$ from the affected units shall not exceed the following limits. Compliance with these limits shall be determined using established USEPA methodology for calculation of particulate emissions from handling and processing of limestone and other bulk commodities.

| Emission Units | Limit, (Tons/Year) | |
|---|---|---|
| | PM | $PM_{10}$ |
| Limestone Stockpile, Load-in | 1.238 | 0.495 |
| Limestone Oversize and Undersize Load-out | 0.398 | 0.159 |
| Coal and Coke Unloading to Storage Pile | 0.010 | 0.004 |
| Wind Erosion, Storage Piles | 0.443 | 0.177 |
| Wind Erosion, Coal and Coke Storage Piles | 0.088 | 0.035 |
| Conveyor Transfer Points | 0.343 | 0.137 |
| Coal and Coke Conveyor Transfer Points | 0.028 | 0.011 |
| Limestone Screening Operation | 0.548 | 0.219 |
| Lime Screening Operation | 2.383 | 0.953 |

| Emission Units | Limit, (Tons/Year) | |
|---|---|---|
| | PM | $PM_{10}$ |
| Roll Crushers | 0.220 | 0.088 |
| Total | 5.710 | 2.280 |

2.2.7-1 Opacity Observations

a. The Permittee shall conduct opacity observations for the affected units in accordance with Condition 3.3:

i. No later than 45 days after the date initial emission testing of the affected kiln is performed, as required by Condition 2.1.7(a)(i).

ii. Upon written request by the Illinois EPA, in which case observations shall be conducted within 45 days or such later date specified by the Illinois EPA.

2.2.8 Inspections

a. The Permittee shall conduct inspections of the affected units on at least a monthly basis with management or supervisory personnel for the specific purpose of verifying that the measures required to control PM emissions are being properly implemented.

b. On at least a semi-annual basis, these inspections shall be conducted by individual who are certified observers for opacity pursuant to USEPA Method 9.

c. The Permittee shall keep records documenting the performance of these inspections and their findings.

2.2.9 Recordkeeping Requirements

a. For affected units that are subject to NSPS, 40 CFR 60, Subpart OOO, the Permittee shall fulfill applicable recordkeeping requirements of the NSPS, 40 CFR 60.7 and 60.676.

b. The Permittee shall maintain records of the throughput of each group of affected units, tons/month, by type of material, e.g., limestone, coal, petroleum coke, oversize and undersize material, and kiln dust.

c. The Permittee shall maintain the following logs or other similar records for the affected units:

i. Operating log(s), in accordance with Condition 3.4(a).

ii. Inspection, maintenance and repair log(s) in accordance with Condition 3.4(b).

d. The Permittee shall maintain the following records related to the emissions of each affected unit

i. A file containing the $PM/PM_{10}$ emission factors used by the Permittee to determine emissions from the affected units, with supporting documentation.

ii. Records of $PM/PM_{10}$ emissions, tons/month and tons/year, with supporting calculations.

2.2.10 Notification and Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for an affected unit as follows. These notifications shall include the information specified by Condition 3.5.

i. If the affected unit is damaged so there is a deviation from applicable requirements for visible emissions that is not repaired or otherwise corrected within 3 hours (180 minutes), the Permittee shall notify the Illinois EPA within 30 days.

ii. The deviations addressed above and all other deviations shall be reported with the periodic compliance reports required by Condition 2.1.10(c).

## 2.3 Unit-Specific Conditions for Material Handling Equipment

### 2.3.1 Description

The lime plant will have equipment for processing the lime produced by the kiln, including a lime cooler, briquetter, and equipment for handling and storage of lime prior to loadout. Solid fuel for the kiln will be held in a feed bin prior to being ground and fed to the kiln. Lime slurry will be prepared for use in the spray dryer absorber on the kiln. Dust collected by the fabric filter on the kiln will be transferred to the conveyor system for this dust.

The emissions of particulate matter (PM) from this equipment are minimized by enclosure and control with fabric filters.

### 2.3.2 List of Emission Units

| Emission Units | Description | Emission Control |
|---|---|---|
| Lime Loadout | Customer truck loadout | Fabric Filters (4 units) |
| Lime Cooler, Feeder, and Bucket Elevator and Briquetter | Cooling of hot lime from the kiln, handling of lime product | Fabric Filter |
| Fuel Silo | Fuel Storage Silo | Fabric Filter |
| Fabric Filter Dust Conveyors | Conveyor transfer points (4) | Fabric Filter |
| Fabric Filter Dust Loading Chute | Loading chutes (2) | Fabric Filters (2 units) |
| Product Handling, Feeders, Conveyors, and Bucket Elevators | Material handling operations | Fabric Filters (2 units) |

### 2.3.3-1 Applicability Provisions

a. The “affected units” for the purpose of these unit-specific conditions are the activities described in Conditions 2.3.1 and 2.3.2.

### 2.3.3-2 Control Technology Determination

a. Emissions of PM from the affected units shall be controlled by enclosure and filter systems.

b. i. There shall be no visible emissions of fugitive PM, as determined by USEPA Method 22, from the affected units.

ii. The PM emissions from each stack or control device for affected units shall not exceed 0.005 gr/scf, as measured by Method 5, and shall not exhibit more than 7 percent opacity as measured by Method 9, with observations conducted in accordance with 40 CFR 63.7112(k) or (l).

c. Emissions of fugitive PM from product loadout shall be controlled by vented telescoping loading chute, a set of fabric filters to treat displaced air during loadout, and loadout practices to minimize breakage.

2.3.3-3 State Emission Standards

a. The emissions of particulate from the affected units shall comply with 35 IAC 212.123 and 301. (Refer to Conditions 1.5(a) and (b).)

b. The emissions of particulate, as would be measured by Method 5, from affected units shall comply with 35 IAC 212.321. (Refer to Condition 3.1(a).)

2.3.4 Non-Applicability of Regulations of Concern

None

2.3.5 Operational and Production Limits and Work Practices

a. Any spills of material from the affected units shall be immediately collected in a manner that prevents lime from being dispersed or becoming air borne. (See also Condition 2.3.3-3(c).)

2.3.6 Emission Limitations

a. The stack emissions of PM from the affected units shall not exceed the following limits:

| Emission Unit | Limit | |
|---|---|---|
| | Pounds/Hour | Tons/Year |
| Lime Product Cooler, Briquetter, Bucket Elevator, and Feeder Fabric Filter | 0.154 | 0.676 |
| Lime Loadout Fabric Filters (total emissions for 4 units) | 0.164 | 0.667 |
| Solid Fuel Feed Tank Fabric Filter | 0.017 | 0.075 |
| Spray Dryer Absorber Slurry System Fabric Filter | 0.043 | 0.188 |
| Kiln Dust handling Fabric Filters (total emissions for 2 units) | 0.069 | 0.300 |
| Product Handling, Feeders, Conveyors, and Bucket Elevator | 0.171 | 0.751 |
| Kiln Fabric Filter Dust Loadout | 0.063 | 0.276 |
| **Total** | 0.681 | 2.933 |

b. The fugitive emissions of PM from the loadout of lime shall not exceed 0.006 pounds/ton and 0.63 tons/year.

2.3.7 Testing Requirements

a. The Permittee shall conduct opacity observations for the affected units in accordance with Condition 3.3:

i. No later than 45 days after the date initial emission testing of the affected kiln is performed, as required by Condition 2.1.7(a)(i), if visible emissions are normally observed from the exhaust from the fabric filters.

ii. Upon written request by the Illinois EPA, in which case observations shall be conducted within 45 days or such later date specified by the Illinois EPA.

b. i. Within 90 days of a written request from the Illinois EPA, the Permittee shall have the PM emissions at the stacks or vents of the affected units, as specified in such request, measured during representative operating conditions, as set forth below.

ii. Testing shall be conducted in accordance with the procedures and method specified in Condition 3.2 using USEPA test methods and procedures.

2.3.8 Inspection Requirements

a. The Permittee shall conduct inspections of the affected units on at least a weekly basis with supervisory personnel or other personnel who are not engaged in running the affected units on a day-to-day basis for the specific purpose of verifying that measures required to control emissions are being properly implemented.

b. The Permittee shall keep records documenting the performance of these inspections and their findings.

2.3.9 Recordkeeping Requirements

a. The Permittee shall maintain files, which shall be kept current, that contain:

i. For each fabric filter or other filter devices associated with the affected units, design specifications for each device (type of unit, maximum design exhaust flow (acfm or scfm), filter area, type of filter cleaning, performance guarantee for particulate exhaust loading in gr/scf, etc.), the manufacturer’s recommended operating and maintenance procedures for the device, and design specification for the filter material in each device (type of material, surface

treatment(s) applied to material, weight, performance guarantee, warranty provisions, etc.).

ii. For each fabric filter, the normal range of static pressure drop across the device and the minimum and maximum safe static pressure drop for the device, with supporting documentation.

b. The Permittee shall maintain written work procedures for the affected units.

c. The Permittee shall maintain the following logs or other similar records for the affected units:

i. Operating log(s), in accordance with Condition 3.4(a), which records shall include information addressing any incidents when lime was spilled.

ii. Inspection, maintenance and repair log(s) in accordance with Condition 3.4(b).

d. The Permittee shall maintain records of the following items related to emissions of the affected unit:

i. A file containing the $PM/PM_{10}$ emission factors used by the Permittee to determine emissions from the affected units, with supporting documentation.

ii. Records of emissions of $PM/PM_{10}$, tons/month and tons/year, with supporting calculations.

2.3.10 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for the affected unit as follows. These notifications shall include the information specified by Condition 3.5.

i. If the affected unit is damaged so there is a deviation from applicable requirements for visible emissions that is not repaired or otherwise corrected within 1 hour (60 minutes), the Permittee shall notify the Illinois EPA within 30 days.

ii. The deviations addressed above and all other deviations shall be reported with the periodic compliance reports required by Condition 2.1.10(c).

## 2.4 Unit-Specific Conditions for the Roadways

### 2.4.1 Description

Fugitive dust or particulate matter emissions will be generated by vehicle traffic and wind erosion on roadways, parking areas and access areas at the plant. These emissions are controlled implementation of a dust control program to minimize the generation of emissions and by a wheel wash system for truck traffic from the plant to minimize carryout of dust.

### 2.4.2 List of Emission Units and Pollution Control Equipment

| Emission Unit | Description | Emission Control |
|---|---|---|
| Roadways and Parking Areas | PM emissions from vehicle traffic and wind erosion on roadways and parking areas | Fugitive Dust Control Program |

### 2.4.3-1 Applicability Provisions

a. The affected units for the purpose of these unit-specific conditions are the units described in Conditions 2.4.1 and 2.4.2.

b. The “new affected units” for the purpose of these unit-specific conditions are the affected units that were newly constructed as part of the construction of the lime plant.

### 2.4.3-2 Control Technology Determination

a. Emissions of PM from new affected units shall be controlled by implementation of a fugitive dust control program that provides for water spraying or application of dust suppressant for units that are not paved and vacuum sweeping or water flushing for units that are paved, which activities shall be performed on an appropriate schedule when a roadway or area is in use unless significant precipitation has occurred during the previous 24 hours or there is snow or ice buildup on the roadway or area.

b. The opacity of PM emissions from new affected units shall not exceed 10 percent. For this purpose, opacity shall be determined in accordance with 35 IAC 212.109.

### 2.4.3-3 Applicable State Regulations

a. The particulate emission from the affected units shall comply with the standards in 35 IAC 212.123 and 212.301. (Refer to Condition 1.5.)

### 2.4.4 Non-Applicability of Regulations of Concern

a. The affected units are not subject to the requirements of 35 IAC 212.321 (“the process weight rate” rule) because of

the disperse nature of these units pursuant to 35 IAC 212.323.

2.4.5 Work Practices

a. The Permittee shall follow good air pollution control practices to minimize PM emissions from affected units. These practices shall provide for paved run out areas for all regularly traveled entrances and exits from the source, a wheel wash system for transport trucks leaving the source, and treatment (e.g., watering, dust suppressant application, vacuum sweeping, and/or flushing) of all affected units on which routine truck traffic is occurring for very effective and effective control of dust, respectively (nominal 90 percent for paved roads, unpaved roads, and unpaved parking areas).

b. The Permittee shall carry out control measures for PM emissions from affected units in accordance with a written control program maintained by the Permittee, which shall set forth the measures being implemented to demonstrate compliance with Conditions 2.4.3-2 and 2.4.5(a). This program shall include: (1) a description of the emissions control technique(s) (e.g., vacuuming or sweeping) that will routinely be implemented; (2) triggers for implementation of additional control, e.g., observation of extended dust plumes following passage of vehicles; and (3) the estimated effectiveness of the various control techniques in reducing PM emissions from the different classes of units, with supporting documentation.

2.4.6 Emission Limitations

a. Emissions of PM and $PM_{10}$ from the affected units shall not exceed 5.80 and 1.64 tons per year, respectively. Compliance with these limits shall be determined from the amount and type of vehicle traffic for the affected plant, appropriate emission factors and engineering calculations with appropriate USEPA methodology for estimating emissions of fugitive dust from roads and open areas.

2.4.7 Opacity Observations

a. The Permittee shall conduct opacity observations for the affected units in accordance with Condition 3.3:

i. No later than 45 days after the date initial emission testing of the affected kiln is performed, as required by Condition 2.1.7.

ii. Upon written request by the Illinois EPA, in which case observations shall be conducted within 45 days or such later date specified by the Illinois EPA.

2.4.8-1 Inspections

a. The Permittee shall conduct inspections of the affected units on a monthly basis with personnel who do not implement the control program on a day-to-day basis for the specific purpose of verifying that the measures identified in the program and other measures required to control emissions from affected units are being properly implemented.

b. On at least a quarterly basis, these inspections shall include observations of the opacity of PM emissions from affected units by individual who are certified observers for Method 9.

c. The Permittee shall keep records documenting the performance of these inspections and their findings.

2.4.8-2 Measurements of Silt Loading

The Permittee shall conduct measurements of the silt loading on affected units, as follows:

a. Sampling and analysis of the silt loading on representative road segments shall be conducted using the appropriate provisions in the “Procedures for Sampling Surface/Bulk Dust Loading,” Appendix C.1 in Compilation of Air Pollutant Emission Factors, USEPA, AP-42. A series of samples shall be taken to determine the average silt loading and address the change in silt loadings as related to the amount and nature of vehicle traffic.

b. Measurements shall be performed by the following dates:

i. Measurements shall first be completed in conjunction with emission testing for the lime kiln no later than 45 days after conducting emissions testing of the kiln pursuant to Condition 2.1.7-1(a)(i).

ii. Measurements shall be repeated within 30 days in the event of changes involving affected units that would act to increase the silt loading (so that data that is representative of the current circumstances of the affected units has not been collected), including changes in the amount or type of traffic on affected units, changes in standard operating practices for affected units, such as application of traction material during cold weather, and changes in the operating program for affected units.

iii. Upon written request by the Illinois EPA, the Permittee shall conduct measurements, as specified

in the request, which shall be completed within 75 days of the Illinois EPA's request.

c. The Permittee shall submit test plans, test notifications and test reports for these measurements as specified by Condition 3.2(c), (d) and (e) provided, however, that once a test plan has been accepted by the Illinois EPA, a new test plan need not be submitted if the accepted plan will be followed or a new test plan is requested by the Illinois EPA.

2.4.9 Recordkeeping Requirements

a. The Permittee shall maintain a file containing:

i. The Permittee's assumptions, with supporting explanation, for the typical and maximum quantity and nature of vehicle traffic for the affected units, including truck traffic related to the receipt of fuel and shipment of lime from the plant.

ii. The maximum PM emissions from the affected units (tons/year), with supporting calculations, based on the maximum vehicle traffic at the plant (as recorded above), the silt loading on the different classes of affected units (as measured pursuant to Condition 2.4.8-2), and the effectiveness of the current fugitive dust control program (as addressed in Condition 2.4.5(a)).

b. i. The Permittee shall maintain a written fugitive dust control program describing the measures that are being implemented pursuant to Conditions 2.4.3-2 and 2.4.5 to control PM emissions from affected units. This program shall identify established control measures (e.g., water spray, surfactant spray, vacuum sweeping or water flushing); details of standard treatments (speed of treatment vehicle, flow of water, width of application, and additive concentration); normal frequency with which measures would be implemented; circumstances, e.g., recent precipitation, in which the measure would not be implemented; triggers for additional control, e.g., observation of 8 percent opacity; and calculated control efficiency, with supporting calculations.

ii. The program shall be accompanied by maps or diagrams indicating the location of affected units with the potential to generate for PM emissions, with description (length, width, surface material, etc.) and volume and nature of expected traffic or other activity.

iii. The Permittee shall submit a copy of a revised fugitive dust control program to the Illinois EPA for review and approval within 90 days of a request from the Illinois EPA for a revision to the program to address observed deficiencies in the control program.

c. The Permittee shall maintain records of the amount of bulk materials received and shipped from the plant by truck (tons, by type of material).

d. The Permittee shall maintain documentation concerning the implementation of the dust control program for the affected units including:

i. Records for treatment of affected units, including the date and time; the reason for treatment, if not routine; the type of treatment; the identity of the treatment vehicle or equipment; and a description of any unusual observations or events related to control of dust that occurring during treatment; and

ii. Detailed records for incidents when control measures were not carried out as scheduled or were not fully implemented and incidents when additional control measures were carried out, with a description of each such incident and explanation, including the information specified in Condition 3.5(a), and an estimate of the additional PM emissions that resulted, if any, with supporting calculations. These records shall also address any adjustments to the scheduling of control measures made by the Permittee due to weather conditions that either acted to reduce or increase the level of potential dust, such as extended periods of dry weather.

e. The Permittee shall maintain records for the operation of the wheel wash system, including:

i. Record confirming operation of the system.

ii. Records for each period when truck traffic from the source was not serviced by the system or the system was not functioning properly, with a description of each such incident and explanation and the information specified in Condition 3.5(a).

f. The Permittee shall maintain records for the PM emissions of the affected units on at least an annual basis to verify compliance with the limit in Condition 2.4.6, based on operating data for the source, the above records for

the affected units including data for implementation of the operating program, and appropriate USEPA emission estimation methodology and emission factors, with supporting calculations.

2.4.10 Notification and Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of any deviations from the requirements of this permit for the affected units as follows. These notifications shall include the information specified by Condition 3.5.

i. If the availability of treatment for the affected units is interrupted for 5 or more days and there is a deviation from applicable requirements for the affected units, the Permittee shall notify the Illinois EPA within 30 days.

ii. The deviations addressed above and all other deviations shall be reported with the periodic compliance reports required by Condition 2.1.10(c)(i).

## SECTION 3: GENERAL CONDITIONS

### 3.1 State Emission Standard for PM Emissions

a. Emissions of PM from process emission units at the plant that are subject to 35 IAC 212.321 shall not exceed the applicable emission rate specified by 35 IAC 212.321(a) and (c).

Note: 35 IAC 212.123 provides that no person shall cause or allow the emission of PM into the atmosphere in any one hour period from a new process emission unit which, either alone or in combination with the emission of PM from all other similar new process emission at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c).

### 3.2 Emission Testing Requirements

a. Emissions testing shall be conducted by an approved testing service at the expense of the Permittee. Unless otherwise specified by this permit or a request from the Illinois EPA for the performance of emission testing, emission testing shall be conducted while affected unit(s) are operating at maximum rate(s) and during other representative operating conditions of the unit(s) and associated control system(s).

b. i. USEPA test methods and procedures shall be used for measurement of emissions, including the following methods, unless other established methods are specified in unit-specific condition of this permit or are approved by the Illinois EPA as part of the approval of a test plan or any other methods approved by USEPA. Refer to 40 CFR 51, Appendix M, 40 CFR 60, Appendix A and 40 CFR 63, Appendix A for USEPA test methods.

| | |
|---|---|
| $NO_x$ | Method 7E[a] |
| CO | Method 10[a] |
| VOM | Method 25A[b] |
| PM | Method 5[c] |
| $PM_{10}$ (filterable) | Method 201A or OTM027 |
| $PM_{10}$ (condensable) | Method 202 or Conditional Method 039 |
| Sulfuric Acid Mist | Method NCASI 8a (Controlled condensation) |
| Lead and Other Metals | Method 29 |

Notes:

a. Test method provided if testing of the kiln is required and continuous emissions monitoring is not required.

b. Methane, ethane and other exempt compounds may be excluded from the results of VOM emission testing for emission unit(s) provided that Method 18, or

other appropriate test procedure identified in the test plan approved by the Illinois EPA, is used to quantify and adjust for the presence of such compounds in the exhaust from the unit(s).

c. During measurements of emissions, observations of opacity shall also be conducted in accordance with USEPA Method 9 if the opacity of the exhaust is not monitoring during testing.

ii. $PM_{10}$ tests shall include measurements of condensable particulate, as collected in the back half of the Method 5 sampling train or by separate measurements using USEPA Method OTM028. For units for which the average stack gas temperature is less than 250 °F, such as the lime handling systems, testing may be conducted at actual stack gas temperature without heating of the probe or filter holders.

c. The Permittee shall submit a written test plan to the Illinois EPA for review and approval for initial testing of an emission unit and if a significant change in the procedures for testing is planned from the procedures followed in the previous testing of an emission unit. This plan shall be submitted at least 60 days prior to the actual date of testing and include the following information as a minimum:

i. A description of the planned emission test.

ii. The person(s) who will be performing sampling and analysis and their experience with similar tests.

ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, the levels of operating parameters at or within which compliance is intended to be shown, if parameters for the process and any control equipment will be determined.

iii. The specific determination of emissions and operations intended to be made, including sampling and monitoring locations.

iv. The test methods that will be used, with the specific analysis method.

v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

vi. A statement that the testing will be performed by a qualified independent testing service.

d. i. Prior to carrying out emission tests, the Permittee shall notify the Illinois EPA a minimum of 30 days prior to the scheduled date of these tests with the exact date, time and place of these tests, to enable the Illinois EPA to witness these tests.

ii. If the scheduled date for the test is changed, the Permittee shall inform the Illinois EPA within 5 working days of the scheduled test date and must specify the date and time of the rescheduled test.

iii. Notwithstanding the above, the Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

e. The Permittee shall submit three copies of the Final Report(s) for emissions tests to the Illinois EPA no later than 60 days after completion of sampling. The Final Report shall include as a minimum:

i. General information, i.e., date of test, names of testing personnel, and names of Illinois EPA observers.

ii. A summary of the measured emissions of different pollutants in pounds per hour and other appropriate terms, e.g., lbs/ton, lbs/ton, gr/dscf or ppmv.

iii. A statement whether compliance was demonstrated

iv. A detailed description of operating conditions of the emission unit(s) during testing, including:

A. Process information, e.g., type or product and operating rate.

B. Control system operating parameters during testing.

v. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.

vi. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

vii. Conclusions.

viii. A summary of $SO_2$, $NO_x$ and CO emissions during each run, as measured by the emissions monitoring systems required by Condition 2.1.8-1.

f. The Permittee shall retain copies of emission test reports for at least five years beyond the date that an emission test is superseded by a more recent test.

3.3 Opacity Observations

a. Upon written request by the Illinois EPA, the Permittee shall conduct opacity observations for specific affected unit(s) or unit(s) within 45 calendar days of the request or on the date agreed upon by the Illinois EPA, whichever is later.

b. Opacity of emissions shall be determined during representative weather and operating conditions by a qualified observer in accordance with USEPA Test Method 9 and in a manner consistent with 40 CFR 60.675 and 63.7121, as further specified below.

c. The duration of opacity observations for each test shall, unless directed otherwise by applicable underlying state rule be at least 30 minutes (five 6-minute averages) unless the average opacities for the first 12 minutes of observations (two six-minute averages) are both no more than half of the most stringent requirement applying to opacity.

d. i. The Permittee shall notify the Illinois EPA at least 7 days in advance of the date and time of these tests, in order to allow the Illinois EPA to witness testing. This notification shall include the name and employer of the qualified observer(s).

ii. The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for testing.

e. The Permittee shall provide a copy of its observer’s readings to the Illinois EPA at the time of testing, if Illinois EPA personnel are present.

f. The Permittee shall submit a written report for this testing within 15 days of the date of testing. This report shall include:

i. Date and time of testing.

ii. Name and employer of qualified observer, with a copy of his or her current certification.

iii. Description of observation condition, including recent weather.

iv. Description of the operating conditions of the affected unit.

v. Opacity determinations, accompanied by raw data.

vi. Conclusions.

g. The Permittee shall retain copies of test reports for at least three years after the date that a test is superseded by a more recent test.

3.4 General Requirements for “Logs” Or Similar Records

a. Operating logs or other similar records required by this permit shall, at a minimum, include the following information related to the emission units and associated control system:

i. Information identifying periods when an emission unit or group of related emission units was not in service.

ii. For periods when a unit or group of related units is in service and operating normally, relevant process and control system information to generally confirm normal operation.

iii. For periods when a unit or group of related units is in service and is not operating normally, identification of each such period, with detailed information describing the operation of the unit(s), the potential consequences for additional emissions from the unit(s), the potential of any excess emissions from the affected unit(s), the actions taken to restore normal operation, and any actions taken to prevent similar events in the future.

iv. Other information as may be appropriate to show that the emission unit or group of related emission units is operated in accordance with good air pollution control practices.

b. Inspection, maintenance and repair logs or other similar information required by this permit shall, at a minimum, include the following information related to the emission units and associated control system:

i. Identification of equipment, with date, time, responsible employee and type of activity.

ii. For inspections, a description of the inspection, findings, and any recommended actions, with reason.

iii. For maintenance and repair activity, a description of actions taken, reason for action, e.g., preventative measure or corrective action as a result of inspection, probable cause for requiring maintenance or repair if not routine or preventative, and the condition of equipment following completion of the activity.

iv. Other information as may be appropriate to show that the emission unit or group of related emission units is maintained in accordance with good air pollution control

practices, including prompt repair of defects that interfere with effective control of emissions.

c. The logs required by this permit may be kept in manual or electronic form, and may be part of a larger information database maintained by the Permittee provided that the information required to be kept in a log is readily accessible.

3.5 Reporting of Deviations

a. The Permittee shall include the following information in records and reports for deviations:

i. Identity of the deviation, with date, time, duration and description.

ii. Describe the effect of the deviation on compliance, with an estimate of the excess emissions that accompanied the deviation, if any.

iii. Describe the probable cause of the deviation and any corrective actions or preventive measures taken.

b. i. Unless otherwise specified in a particular condition of this permit, if deviation(s) from requirements of this permit occurs during a reporting period, compliance report shall be submitted no later than 30 days after the end of the reporting period. This report shall also provide a listing of all deviations for which immediate or 30-day reporting was required, but need not include copies of the previously submitted information.

ii. If there are no deviations during a reporting period, the Permittee shall still submit a compliance report, which report shall state that no deviations occurred during the reporting period.

c. i. For the purpose of determining whether a deviation must be reported prior to a periodic compliance report, a deviation shall be considered to continue even if operation an emission unit is interrupted if the deviation is still present when operation of the unit is resumed.

ii. When this permit requires immediate notification, such notification shall be provided by telephone and followed by facsimile or e-mail transmittal of a narrative report.

d. Notwithstanding the above provisions or provisions in the Unit Specific Conditions of this permit for reporting deviations, if deviation will occur from required maintenance, repair or other activity that can be scheduled in advance, the Permittee shall also notify the Illinois EPA prior to undertaking such activity, if it is feasible to do so. Such notification shall be submitted at least 5 days in advance unless the activity is

scheduled less than 5 days in advance. Such notification shall be followed by such other notification or reporting as required for the deviations.

e. Upon issuance of a CAAPP permit for the plant, the provisions of the CAAPP permit with respect to reporting of deviations will supersede the requirements of this permit.

Attachment 1

Permitted Annual Emission of the Lime Plant (Tons/Year)

| Operation | $SO_2$ | $NO_x$ | CO | PM | $PM_{10}$[1] | VOM | Lead |
|---|---|---|---|---|---|---|---|
| Kiln | 473 | 946 | 2,716 | 23.70 | 58.30 | 34.6 | 0.24 |
| Conveyor Systems & Storage Piles Wet Suppression and Work Practice Controlled Conveyors, Storage Piles, and Other Handling Equipment | -- | -- | -- | 5.71 | 2.838 | -- | -- |
| Fabric Filter Controlled Processing Equipment | -- | -- | -- | 7.33 | 2.93 | -- | -- |
| Roadways | -- | -- | -- | 5.80 | 1.64 | -- | -- |
| Total | 473 | 946 | 2,716 | 42.54 | 65.71 | 34.6 | 0.24 |

**Notes**

1. Emissions of total $PM_{10}$, including both filterable and condensable particulate.

ATTACHMENT 2 – STANDARD PERMIT CONDITIONS

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Illinois EPA and a supplemental written permit issued.

4. The Permittee shall allow any duly authorized agent of the Illinois EPA upon the presentation of credentials, at reasonable times:

   a. To enter the Permittee’s property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,

   b. To have access to and to copy any records required to be kept under the terms and conditions of this permit,

   c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,

   d. To obtain and remove samples of any discharge or emissions of pollutants, and

   e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;

   b. Does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;

   c. Does not release the Permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;

   d. Does not take into consideration or attest to the structural stability of any units or parts of the project; and

   e. In no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Illinois EPA before the equipment covered by this permit is placed into operation.

b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.

7. The Illinois EPA may file a complaint with the Board for modification, suspension or revocation of a permit.

   a. Upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed, or

   b. Upon finding that any standard or special conditions have been violated, or

   c. Upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.