

## EXHIBIT H

### Project Summary

Illinois Environmental Protection Agency  
Bureau of Air, Permit Section  
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Project Summary for an Application for  
Revised Construction Permit/PSD Approval from  
Vulcan Construction Materials for its  
Lime Plant in Manteno, Illinois

Site Identification No.: 091806AAB  
Application No.: 96020014

Schedule

Public Comment Period Begins: April 17, 2009  
Public Hearing: June 4, 2009  
Public Comment Period Closes: July 6, 2009

Illinois EPA Contacts

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## I. INTRODUCTION

Vulcan Construction Materials, LP (Vulcan) has applied for a revised air pollution control construction permit for its lime plant at its existing limestone quarry located south of Manteno. Vulcan proposes to enhance the emission control system for the lime kiln at this plant, which is currently idle, by installing a dry scrubber system to control of emissions of sulfur dioxide ( $\text{SO}_2$ ). Vulcan has also requested other revisions to the original construction permit for the plant to increase the permitted emissions of particulate matter (PM) from material handling operations, as further discussed below.

The Illinois EPA has reviewed Vulcan's application for a revised permit and made a preliminary determination that the application meets applicable requirements. Accordingly, the Illinois EPA has prepared a draft of the construction permit that it would propose to issue for the proposed construction and modifications. However, before issuing the permit, the Illinois EPA is holding a public comment period and a public hearing to receive comments on the proposed issuance of a revised permit and the terms and conditions of the draft of the revised permit.

## II. BACKGROUND

Lime is manufactured in kilns by high-temperature roasting or "calcination" of limestone or other material rich in calcium carbonate to convert calcium carbonate ( $\text{CaCO}_3$ ) into lime or calcium oxide ( $\text{CaO}$ ). Vulcan's Manteno lime plant has one rotary kiln, which began operation in 1998. The kiln has the capacity to produce about 600 tons of lime per day and is designed to burn solid fuel, i.e., coal and petroleum coke. As the limestone reserves at the adjacent quarry are Dolomitic limestone, which contains a significant percentage of magnesium carbonate as well as calcium carbonate, the plant produces Dolomitic lime, which is a mix of calcium oxide and magnesium oxide. Dolomitic lime has different properties than so-called "high calcium lime" and is typically used as a fluxing agent in the manufacture of steel.

The principal source of emissions at a lime plant is the kiln. The kiln emits dust or particulate matter (PM), which is generated from the limestone as it moves through the kiln and is calcined and from ash and particulate released by combustion of fuel. The kiln at Vulcan's Manteno lime plant is equipped with a fabric filter, also known as "baghouse," which is very effective in control of filterable particulate.

Lime kilns also emit sulfur dioxide ( $\text{SO}_2$ ) due to the sulfur contained in the fuel burned in the kiln and in the limestone feedstock. The Manteno kiln's emissions of  $\text{SO}_2$  are currently controlled using only the natural ability of the lime being produced in the kiln to absorb  $\text{SO}_2$ , which is able to capture much of the sulfur introduced into the kiln.

Lime kilns also emit nitrogen oxide ( $\text{NO}_x$ ), which is formed in a kiln when nitrogen and oxygen in the combustion air combine during combustion of fuel. As is common practice for control of  $\text{NO}_x$  emissions, the  $\text{NO}_x$  emissions of the Manteno kiln are minimized by the design of the burner and combustion system of the kiln. Finally, lime kilns emit carbon monoxide (CO) and volatile organic material (VOM), which are products of incomplete combustion of fuel and the organic matter present in the limestone. As is also common for kilns, the emissions of CO and VOM from the Manteno plant are controlled by good combustion practices.

The emission units at this plant other than the kiln involve (1) the handling of and preparation of the raw limestone to be fed to the kiln by crushing and sizing (also known as "processed stone handling"), (2) the handling of fuel for the kiln, (3) the processing, handling and load-out of the lime output from the kiln, and (4) plant roadways, with vehicle traffic. These units emit PM, which is controlled by measures to reduce the generation of PM emissions and measure to control emissions that are released. As a general matter, PM emissions associated with handling raw limestone are minimized as they are located on a shelf in the quarry about 50 feet below grade, which shields them from the wind. PM emissions from handling of lime and lime storage bins are controlled by enclosure and aspiration to baghouses. Emissions of fugitive dust from vehicle traffic on plant roadways is controlled by a dust control program for plant roads and a truck wheel wash station.

### III. PROJECT

Vulcan has applied for a revised construction permit for the Manteno lime plant that addresses the installation and use of a spray dryer absorber on the lime kiln for control emissions of SO<sub>2</sub>. Vulcan has also proposed to shorten the length of the kiln and install a pre-heater tower to improve the energy efficiency of the kiln. For handling of lime product, Vulcan has proposed to install several new smaller baghouses that would replace a central baghouse, to provide improved control of PM emissions. Other changes proposed in the revised permit include reconfiguring of certain fugitive dust units and the roadways at the plant to reduce fugitive dust emissions.

From an air pollution control perspective, the significant change to the kiln is installation of a spray dryer absorber system, also known as dry scrubber. The construction permit originally issued for the plant does not require the use of a scrubber on the kiln. Instead, that permit (Construction Permit-PSD Approval 96020014, issued May 16, 1996), relies upon the "natural" scrubbing effect of lime for control emissions of SO<sub>2</sub>. However, when the kiln began operation it was found that the natural scrubbing effect was not sufficient in actual practice to comply with established limits. A key factor in the SO<sub>2</sub> emissions from a lime kiln is the type of lime that is being produced. If a kiln is producing "high calcium" lime from high calcium limestone, with low levels of magnesium carbonate, the limestone/lime dust is generally very effective in controlling SO<sub>2</sub> emissions. However, the effectiveness of Dolomitic limestone/lime dust is significantly lower and more variable. In addition, more heat or fuel is needed to convert Dolomitic limestone into lime. Accordingly, even after improvements were made to the ductwork from the kiln to better cool the flue gas to improve performance of the baghouse, which also increased the residence time for natural scrubbing to take place, the tested SO<sub>2</sub> emissions of the kiln were still in the range of 5.5 to 7.0 lbs per ton of stone feed, more than the 4.672 lb SO<sub>2</sub> per ton allowed by the original construction permit for the plant.<sup>1</sup>

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1. As the SO<sub>2</sub> emissions of the kiln violated limits in the original construction permit for the plant, Vulcan was the subject of an enforcement action by the Illinois EPA and the Office of the Attorney General. The enforcement action was resolved by the entry of a Consent Order on December 27, 2006, *People of the State of Illinois v. Vulcan Construction Materials*, Circuit Court for the Twenty-First Judicial Circuit, Kankakee County, Illinois, No. 06-L169. The Consent Order recognizes that the lime plant ceased operation in May 2003 and requires that Vulcan obtain all necessary permits from the Illinois EPA, Bureau of Air, before engaging in any construction activity for the lime plant.

To address the emissions of SO<sub>2</sub> of the kiln, Vulcan is proposing to install a spray dryer absorber for the kiln before restarting operation of the plant. The proposed absorber would be a "dry scrubbing system" with a reaction chamber inserted into the ductwork between the kiln and the existing baghouse.<sup>2</sup> The spray dryer absorber would introduce water and lime slurry into the flue gases to absorb SO<sub>2</sub>. The water in the slurry would be evaporated in the ductwork so that the spent slurry would be collected as a dry powder by the baghouse. The proposed system would enable the kiln to comply with 2.2 lbs SO<sub>2</sub>/ton of stone feed limit which is lower than are currently permitted 2.76 lbs SO<sub>2</sub>/ton of stone feed.

Vulcan has requested an increase in the permitted PM emissions to better account for PM emissions from material handling operation at the plant.

#### IV. EMISSIONS

A summary of the permitted or potential emissions of Vulcan's Manteno lime plant at present and as would be limited by the proposed revised permit are provided below.

Summary of Permitted Emissions of the Lime Plant (Tons/Year)

Pollutant	Current Limit <sup>a</sup>	Proposed Limit	Change
SO <sub>2</sub>	515	515	---
PM/PM <sub>10</sub>	41.4	78.5	+ 37.1
CO	9,456	2,716	- 6,740
NO <sub>x</sub>	1,062	1,062	---
VOM	34.6	34.6	---

a. Limits from revised Construction Permit-PSD Approval 96020014, issued October 28, 2002, which addresses this plant with a single kiln. (See also Footnote 2.)

The draft of the revised permit would allow higher PM emissions to account for Vulcan's further assessment of the PM emissions from the material handling at the plant. It would set lower limits for emissions of CO to account for the significantly lower CO emissions rate demonstrated by the

2. In October 2002, before the lime plant was taken out of service in May 2003, Vulcan obtained a revised construction permit to install a wet "dual alkali" scrubber system on the lime kiln (Construction Permit-PSD Approval 96020014, issued October 28, 2002). This revised permit set lower limits on the permitted SO<sub>2</sub> emissions of the kiln based on an SO<sub>2</sub> emission rate of 2.76 lb per ton of stone feed, to reflect the level of SO<sub>2</sub> emissions achievable with the proposed wet scrubber system. However, Vulcan did not install this scrubber and subsequently decided that a dry scrubber system was preferable, as addressed by the current application for a revised permit.

This previous revised permit also addressed other matters besides the installation of a scrubber on the kiln and the related establishment of lower limits set for emissions of SO<sub>2</sub>. This permit also revised the limits for permitted emissions of NO<sub>x</sub> and CO, setting higher limits that were consistent with the demonstrated performance of the kiln with the Dolomitic limestone at Vulcan's Manteno quarry. This permit also included alternative provisions for control of PM during startup and malfunction of the kiln, as needed to protect the baghouse from damage. This permit also addressed a plant with only one kiln, as Vulcan did not construct two kilns as was authorized by the original construction permit for the lime plant.

kiln for CO emissions. In practice, the actual emissions from the plant should be less than the permitted emissions as units operate at less than their maximum capacity and emission rates are normally lower than the applicable standards and limitations.

#### V. APPLICABLE EMISSION STANDARDS

All emission units in Illinois are subject to state emission standards adopted by the Illinois Pollution Control Board. These standards specify the maximum rate or concentration of a pollutant that may be emitted from a unit or certain minimum control requirements must be achieved. The state standards represent the minimum requirement for emission units in Illinois. 35 IAC 212.321 addresses PM emissions from process emission units, including lime kilns and other operations at lime plants, setting limits on hourly emissions based on the amount of material processed by a unit. These standards are less stringent than applicable federal emission standards adopted by USEPA and the emission limitations set by the current permit for the plant.

USEPA has adopted emission standards called New Source Performance Standards (NSPS) for various categories of emission units. The lime kiln is subject to the NSPS, 40 CFR 60, Subpart HH, for lime manufacturing plants. This NSPS sets standards for PM emissions, i.e., 0.60 pound per ton of limestone feed and 15 percent opacity (40 CFR 60.342). Testing of PM emissions and observations of opacity for the kiln when it was operating demonstrated that the existing baghouse enables the kiln to comply with these standards.

The lime plant is not subject to the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) for Lime Manufacturing Plants, 40 CFR 63, Subpart AAAAA. This is because the source, i.e., the combination of the quarry and the lime plant, is not a major source for emissions of hazardous air pollutants.

#### VI. APPLICABILITY OF REQUIREMENTS FOR MAJOR PROJECTS

Construction of a project that results in a significant increase in emissions at an existing major source or that would by itself be a major source is subject to additional requirements pursuant to the "New Source Review (NSR)." In an area that is attainment for a criteria air pollutant (i.e., meeting the ambient air quality standards), the federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21, apply. Manteno is in Kankakee County, an area that is classified as attainment for all criteria pollutants.

The PSD rules were established to preserve clean air. The PSD rules require: 1) an "emission limit" on new or modified equipment which represents Best Available Control Technology (BACT), 2) an air quality assessment of the impact of new emissions, and 3) an analysis of impacts on soils, vegetation, and visibility. The Illinois EPA has been delegated authority by USEPA to administer the PSD permit program in Illinois.

Vulcan's Manteno lime plant was originally subject to PSD for emissions of SO<sub>2</sub>, NO<sub>x</sub> and CO because the potential emissions of the plant were more than 100 tons/year. The plant was also subject to PSD for PM emission because its potential emissions of PM were more than the significant emission rates set

for PM emissions by the PSD rules.<sup>3</sup> The potential emissions of the lime plant for other PSD pollutant would not be significant. As Vulcan has requested significant changes in the permit for the plant, including installation of a spray dryer absorber on the kiln, the requested revisions to the permit must be appropriately reviewed under the PSD rules.

#### VII. BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

The Clean Air Act defines BACT as: "... an emission limitation based on the maximum degree of reduction ... which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable ...."

Vulcan submitted an updated BACT demonstration in its application reflecting its judgment as to the emission control technology and associated emission limits that should be considered BACT under the PSD rules for various units at the plant. This demonstration does not address existing units at the quarry, which were not modified when the lime plant was constructed. This is because the BACT requirement of the PSD rules does not apply to existing units that are not being modified.

The Illinois EPA has reviewed the material submitted by Vulcan and made its independent determination of BACT. In addition to the material submitted by Vulcan, the Illinois EPA's determination of BACT relies upon its general knowledge of the types of operations at the plant. As explained below, the Illinois EPA concurred with Vulcan's selection of control technologies as it reflected technologies that are common use at the lime manufacturing plants and effectively control emissions. However, the Illinois EPA's determination of BACT for the proposed plant, as set forth in the draft permit, would establish performance requirements for the control technology on lime kiln that are more stringent than those proposed by Vulcan in its application.

#### Lime Kiln

The Illinois EPA has determined that BACT for SO<sub>2</sub> emissions from the kiln as it processes Dolomitic limestone to be a spray dryer absorber. Natural scrubbing, as achieved simply with the lime kiln, is not adequate and must be supplemented with an add-on scrubber system. An appropriate SO<sub>2</sub> BACT emission limit with the scrubber is 2.20 lbs SO<sub>2</sub> per ton of stone feed to the kiln, 3-hour average, subject to downward adjustment (as low as 1.8 lbs/ton of stone feed) based on evaluation of the actual operation and SO<sub>2</sub> emissions of the kiln with planned improvement. The BACT limit must include this provision for further assessment of the SO<sub>2</sub> emission limit because of the interaction or overlap between natural scrubbing and add-on scrubbing for SO<sub>2</sub> emissions. This makes the full extent of the further reduction in SO<sub>2</sub> emissions that will be reliably achieved with the add-on scrubber uncertain.

The issuance of a revised permit for the plant that addresses the use of a spray dryer absorber for control of the SO<sub>2</sub> emissions of the kiln does trigger a need for a detailed reevaluation of the BACT determination previously made for the PM, NO<sub>x</sub>, and CO. The BACT control technology for PM emissions from the kiln continues to be a fabric filter baghouse. Baghouses are still

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3. Under the PSD rules, 40 CFR 52.21(b)(23), the PM emissions of a proposed construction project are considered significant if the increase or net increase in annual emissions are equal to or greater than 15 or 25 tons per year for PM<sub>10</sub> or filterable PM, respectively.

generally considered the most effective control technology for the PM emissions of lime kilns. The appropriate BACT limits for PM<sub>10</sub> (total filterable and condensable) is 0.246 lb/ton of stone feed, 3-hour average. This limit is proposed to be supplemented with a BACT limit addressing filterable particulate, i.e., 0.10 lb/ton of stone feed. This is the PM limit for new kiln in the federal NESHAP, 40 CFR 63, Subpart AAAAA.

For NO<sub>x</sub> emissions, BACT for the kiln continues to be combustion controls with conventional burner technology. Selective catalyst reduction (SCR) technology is not feasible for lime production given the operating temperatures at the locations at which reagent could be injected. In particular, the outlet temperature of fabric filter would be lower than the minimum operating temperature of an SCR system. The appropriate BACT limit continues to be 4.5 lb NO<sub>x</sub>/ton of stone feed to the kiln, 24-hour average, accompanied with an alternative requirement addressing control of excess air to minimize NO<sub>x</sub> emissions, expressed as a limit for the concentration of oxygen in the exhaust from the kiln. The revised permit would revise this alternative provision for the maximum level of oxygen in the exhaust of the kiln from 1.0 to 1.25 percent, hourly average. This change would be made to ensure that this alternative provision would not restrict the level of oxygen to such a degree that it interferes with good combustion practices and contributes to incomplete combustion of fuel. The revised BACT determination would also provide that the numerical BACT limit may be subject to downward adjustment (as low as 3.5 lb NO<sub>x</sub>/ton of stone feed) based on evaluation of actual operation and NO<sub>x</sub> emissions of the kiln with improvement. This is necessary because the full extent of the further reduction in NO<sub>x</sub> emissions that will be reliably achieved with the pre-heater tower and improved energy efficiency of the kiln is uncertain, given measures that are being allowed to improve combustion efficiency.

BACT for CO emissions from the kiln continues to be good combustion practice. While CO emissions could potentially be reduced with introduction of additional excess air, this would be counter-productive, as it would act to increase NO<sub>x</sub> emissions and reduce thermal efficiency of the kiln. Vulcan has proposed to upgrade the lime kiln combustion control by the equipment for blending the coal and coke fuel, fuel pulverizer and alteration to the kiln burner. For this kiln producing Dolomitic lime, an appropriate BACT limit would now be 11.48 lb CO per ton of stone feed to the kiln, 24-hour average.

#### Limestone Handling

BACT for PM for the affected units is determined to be opacity of fugitive emissions to be less than 10 percent, stack emissions of 0.01 gr/dscf with less than 7 percent opacity, and no visible emissions from the enclosed units. These limits would provide effective control of PM emissions.

#### Fuel and Lime Handling Operations

The Illinois EPA previously determined that BACT for particulate emissions from the coal and petroleum coke storage piles and the limestone storage pile to be enclosure within the pit on a shelf 50 feet below grade for wind blockage and use of dust suppressant spray if needed. BACT for PM<sub>10</sub> emissions from product conveying and lime storage bins is enclosure and filtration. BACT for fugitive PM<sub>10</sub> emissions from product loadout is partial enclosure and loadout practices to minimize loss of material.

#### Roadways



BACT for fugitive dust or particulate matter emissions generated by vehicle traffic and wind erosion on roadways, parking areas and other access area at the plant to be an opacity less than 10 percent from these units and fugitive dust control program that requires water spraying or application of dust suppressant for roads that are not paved and vacuum sweeping or water flushing for area that are paved.

#### VIII. AIR QUALITY ANALYSIS

Vulcan has submitted updated air quality analyses that assess the potential effect on ambient air quality of the Manteno lime plant with the requested permit revision. The analysis for CO, NO<sub>x</sub>, and SO<sub>2</sub> was originally conducted by URS; the analysis for PM was conducted by a different consulting firm, ACT. The analyses used reference dispersion models and other approved methodology. The results of these analyses follow.

The first step in these analyses was to determine the maximum impacts of the lime plant by itself (See Table 1). Because the predicted maximum impacts are considered significant under the PSD rules, rather than de minimis or insignificant, further analyses were performed that also addressed the emissions of other sources.

Table 1: Lime Plant Maximum Impacts (micrograms/cubic meter or ug/m<sup>3</sup>)

Pollutant	Averaging Period	Maximum Predicted Impact	Updated Maximum Predicted Impact	PSD Significant Impact Level
NO <sub>x</sub>	Annual	16.22	3.1	1
PM <sub>10</sub>	24-hour	27.73	21.93	5
	Annual	4.99	3.44	1
SO <sub>2</sub>	3-hour	374.29	54.2	25
	24-hour	96.41	26.6	5
	Annual	10.50	1.5	1
CO	1-hour	7,633	328.3	2,000
	8-hour	3,070	190.6	500

Note: Maximum predicted Impact values are based on the information provided in previous submittal by URS (2002) and ACT (2006).

The further analyses that were performed compared predicted ambient impacts to the applicable PSD increments<sup>4</sup> and to the National Ambient Air Quality Standards (NAAQS). The analysis for consumption of PSD increment addressed the impact of the proposed plant and other new and modified emission units

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4. The PSD rules set limits on the maximum increases in concentration of PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub> in the ambient air that can occur in an area as a result of the construction of new and modified emission units. These limits are called "PSD increments". Vulcan' Manteno lime plant is in an area that is designated a Class II area, for which the applicable PSD increments accommodate moderate growth in emissions. The consumption of increment is evaluated from a "baseline date" set as the date that a complete PSD application is first submitted for an area for a pollutant, so as to reflect the existing air quality for the pollutant in the area prior to proposal of a major project that is subject to the PSD rules. The increase in ambient concentration of pollutants due to a major project is also limited by the National Ambient Air Quality Standards (NAAQS). In no case can a PSD permit be issued that would cause or significantly contribute to a violation of the NAAQS.

since the baseline was set in Kankakee County. The results of these analyses are shown in Table 2 and show compliance with the applicable PSD Increments.

Table 2: Results of Analysis of PSD Increment Consumption (ug/m<sup>3</sup>)

Pollutant	Averaging Period	Maximum Impact Concentration <sup>1</sup>	PSD Increment
NO <sub>x</sub>	Annual	16.4	25
PM <sub>10</sub>	24-Hour	27.5	30
	Annual	5.70	17
SO <sub>2</sub>	3-Hour	303	512
	24-Hour	77.2	91
	Annual	10.5	20

<sup>1</sup> For the purposes of this modeling, the "maximum" impacts are the relevant value based on the form of the applicable standard. For example, for the short-term SO<sub>2</sub> standard, the maximum impact is the highest second high result since the short-term standards set a concentration that shall not be exceeded more than once per year.

The further air quality analyses to evaluate the impacts of the lime plant on compliance with the NAAQS accounted for the emissions of both existing and new sources. The contribution of existing and new sources is addressed both by modeling of units at larger sources and by use of a monitored background concentration to account for units that are not modeled. The maximum air quality impacts predicted by these analyses are shown in Table 3A. While the results show modeled exceedances for certain NAAQS standards (3-hour and 24-hour SO<sub>2</sub> and 24-hour and annual PM<sub>10</sub>), URS and ACT demonstrated that Vulcan Manteno lime plant did not cause or significantly contribute to any exceedances of the NAAQS. The Illinois EPA conducted a detailed review of URS's and ACT's results, which confirmed that the lime plant does not cause or contribute to any exceedances. The modeled exceedances also appear to result from deficiencies in the emission inventories for existing sources, such as lack of unit-specific stack parameters, which require assumptions that overstate impacts of existing sources. It was not feasible to attempt to correct these deficiencies for this analysis, given the number and location of the existing units. In particular, the emission inventory for modeling the lime plant extended out for a number of miles around the plant. These deficiencies in the inventory data are more effectively corrected as part of routine processing of the permits for the existing sources or future air quality analysis for projects at those sources.

Table 3A: Results of Analysis of Maximum Ambient Concentrations (ug/m<sup>3</sup>)

Pollutant	Averaging Period	Maximum Modeled Impact	Background Concentration	Projected Overall Concentration	NAAQS
NO <sub>x</sub>	Annual	81.0	17	98.0	100
PM <sub>10</sub>	24-Hour	96.8	52	148.8	150
	Annual	14.9	23	37.9	50
SO <sub>2</sub>	3-Hour	2,188	150	2,338	1,300
	24-Hour	566	57	623	365
	Annual	66.2	11	77.2	80
CO	1-Hour	5,093	1,489	6,582	40,000
	8-Hour	2,566	985	3,551	10,000

Notes:

1. Maximum modeled impacts of all sources.
2. Data fro background ambient air quality from the ambient monitoring stations in Braidwood (NO<sub>x</sub> and CO), Midlothian (PM<sub>10</sub>) and Joliet (SO<sub>2</sub>).

A more realistic evaluation of the impact of Vulcan's Manteno lime plant on air quality in the vicinity of Manteno is provided in Table 3B. This alternative evaluation uses the maximum modeled impacts of the lime plant and other new sources in the area. However, these analyses assumes that other existing sources contribute to ambient air quality in an amount equal to the monitored background concentration.

Table 3B: Results of Further Analysis of Ambient Concentrations (ug/m<sup>3</sup>)

Pollutant	Averaging Period	Maximum Modeled Impact	Background Concentration	Projected Overall Concentration	NAAQS
NO <sub>x</sub>	Annual	16.4	34	50.4	100
PM <sub>10</sub>	24-Hour	7.1	114	122.0	150
	Annual	2.4	46	48.4	50
SO <sub>2</sub>	3-Hour	303	300	603	1,300
	24-Hour	77.2	114	191.2	365
	Annual	10.5	22	32.5	80
CO	1-Hour	7,633	2,978	10,611	40,000
	8-Hour	3,070	1,970	5,040	10,000

Notes:

1. Maximum modeled impact of Vulcan and/or new sources from Table 1 or 2.
2. Twice the monitored background concentration so as to account for other sources in the immediate vicinity of Vulcan, as well as provide a background level of ambient air quality for the Manteno area.

IX. IMPACTS ON SOIL, VEGETATION AND VISIBILITY

At these levels, emissions of the lime plant will have no significant impact on soils, vegetation, and visibility in the area.

X. PERMIT CONDITIONS

The conditions of the revised permit set forth the air pollution control requirements that the project must meet. These requirements include the applicable emission standards that apply to the project. They also include the measures that must be used and the emission limits that must be met as BACT for emissions of PM, CO, SO<sub>2</sub>, and NO<sub>x</sub> from the plant.

The revised permit also establishes enforceable limitations on the amount of emissions for which the project is permitted. Limitations are set both for PM, CO, SO<sub>2</sub>, and NO<sub>x</sub>, for which the project is major, and for pollutants for which the project is not major. In addition to annual limitations on emissions, the permit includes short-term limitations and operational limitation, as needed to provide practical enforceability of the annual emission limitations. As previously noted, actual emissions associated with the project would be less than the permitted emissions to the extent that the facility operates at less than capacity and control equipment normally

operates to achieve emission rates that are lower than the applicable standards and limitation.

The permit also establishes appropriate compliance procedures for the ongoing operation of the plant, including requirements for emissions testing, required work practices, operational monitoring, recordkeeping, and reporting. These measures are imposed to assure that the operation and emissions of the facility are appropriately tracked to confirm compliance with the various limitations and requirements established for individual emission units.

XI. REQUEST FOR COMMENT

It is the Illinois EPA's preliminary determination that the application for a revised permit meets all applicable state and federal air pollution control requirements. The Illinois EPA is requesting public comments before taking action to issue a revised permit.

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