



January 28, 2016

Ms. Beverly McKeone
West Virginia Department of Environmental Protection
Division of Air Quality – Permitting Section
601 57th Street, SE
Charleston, West Virginia 25304

Re: *The National Lime & Stone Company – Williamstown Dock Facility*
Application for General Permit Registration; G40 – Nonmetallic Minerals Processing Plant

Dear Ms. McKeone,

Please accept this letter and corresponding application as The National Lime & Stone Company's (NLS) general permit registration request for our Williamstown Dock facility located at 5067 Williams Highway, Williamstown, West Virginia, 26187 (Wood County). The purpose of this request is to obtain permit coverage under *General Permit Registration #G40-C – Nonmetallic Minerals Processing Plant (G40C)* for our construction aggregate distribution facility which will consist of operating unpaved roadways and storage piles.

Recently, NLS reached a lease agreement with the property owner on a portion of the property to stockpile aggregate materials for distribution into the local construction market. This activity will also consist of unloading aggregate materials from barge or truck. However, any material handling equipment that may be associated with either unloading process will not be owned or operated by NLS at this time. In the event ownership/operation of material handling equipment does change in the future, NLS understands it may be required to seek a permit modification. Therefore, given these circumstances, NLS is only applying for permit coverage for operating unpaved roadways and storage piles.

Following a recent conversation with a member of your permitting staff, it does not appear that a general permit registration is currently available from the West Virginia Department of Environmental Protection, Division of Air Quality (DAQ), which is strictly limited to roadways and/or storage piles. Instead, it was advised that NLS could still submit an application for G40C and receive permit coverage with the understanding that this facility is not a '*nonmetallic mineral processing plant*', as defined in the *Application Instructions and Forms for General Permit G40-C*, and the entire G40C permit would not be misconstrued to apply to the facility, but only those permit terms which are directly related to unpaved roadways and storage piles. If for some reason this is not indeed the case, or if NLS has misunderstood any previous conversation with DAQ, please contact me immediately to discuss permit applicability.

There are also a couple specific areas of the corresponding G40C permit application that should be noted. Firstly, NLS used the calculation spreadsheet that is available on the DAQ website for G40C to determine potential emissions; and it is evident that this spreadsheet incorporates emission factors from the *United States Environmental Protection Agency's AP-42 – Compilation of Air Pollutant Emission Factors (AP-42)* to determine emissions from unpaved roadways. However, it did not appear that the calculation spreadsheet took into account natural mitigation due to rainfall or other precipitation as explained in AP-42, Chapter 13.2.2, Equation 2 (11/06). Therefore, NLS provided the unpaved roadway calculation results utilizing the DAQ calculation spreadsheet, but also included calculations using an extrapolated equation for AP-42 which has been used and widely accepted with other permitting agencies. Secondly, it does not appear the DAQ calculation spreadsheet accounts for emissions from load-in and load-out of storage piles. NLS included potential emissions from these activities in the supporting documentation as well. Lastly, please note the potential emissions for roadways and storage piles were based on a realistic maximum annual material throughput and not an assumed operation of 24 hours per day, 365 days per year. For conservative purposes, NLS assumed a maximum annual throughput or 1,000,000 tons.

Similar to above, NLS was instructed during the conversation with your office that the requirement to publicize a Class I legal advertisement applies for coverage under G40C. NLS has contacted the Marietta Times and requested that the legal advertisement appear for one day during the week of February 8th, 2016. Once received, the original affidavit of publication will be sent to your attention.

In addition to the corresponding hard copy application, two electronic versions of the application are included with this package. Also, a check is enclosed for payment of the appropriate application fee.

Of high importance, NLS would like to request that processing of this application be expedited to the quickest extent possible to avoid any suspension of distribution activities or potential loss of market opportunities. Therefore, your attention to this application and immediate notification to NLS of any deficiencies is appreciated.

NLS understands the importance of complying with all environmental rules and regulations to ensure a clean environment for all to enjoy. With that, NLS looks forward to working with your office to ensure we receive a permit which meets our needs and sufficiently protects the environment without any unnecessary requirements or burden on the company. If you have any questions or further information is necessary to assist your office in processing of this application, please let me know at your earliest convenience, (419) 722-0562. Thanks in advance for your understanding and cooperation.

Sincerely,



Brian Riedmaier

Environmental Compliance Officer



WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • www.dep.wv.gov/daq

**APPLICATION FOR GENERAL
PERMIT REGISTRATION**
*CONSTRUCT, MODIFY, RELOCATE OR
ADMINISTRATIVELY UPDATE
A STATIONARY SOURCE OF AIR POLLUTANTS*

X CONSTRUCTION MODIFICATION RELOCATION CLASS I ADMINISTRATIVE UPDATE
CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

G10-D – Coal Preparation and Handling G20-B – Hot Mix Asphalt G30-D – Natural Gas Compressor Stations G33-A – Spark Ignition Internal Combustion Engines G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit)	<input checked="" type="checkbox"/> G40-C – Nonmetallic Minerals Processing G50-B – Concrete Batch G60-C – Class II Emergency Generator G65-C – Class I Emergency Generator G70-A – Class II Oil and Natural Gas Production Facility
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SECTION I. GENERAL INFORMATION

1. Name of applicant (as registered with the WV Secretary of State's Office): The National Lime & Stone Company	2. Federal Employer ID No. (FEIN): 34-4312430
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3. Applicant's mailing address: P.O. Box 120, Findlay, Ohio 45839-0120	4. Applicant's physical address: 551 Lake Cascades Parkway, Findlay, Ohio 45839-0120
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5. If applicant is a subsidiary corporation, please provide the name of parent corporation: n/a

6. **WV BUSINESS REGISTRATION.** Is the applicant a resident of the State of West Virginia? YES ☒ NO

– IF YES, provide a copy of the Certificate of **Incorporation / Organization / Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A**.

– IF NO, provide a copy of the **Certificate of Authority / Authority of LLC / Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A**.

SECTION II. FACILITY INFORMATION

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Construction aggregate storage and distribution facility	8a. Standard Industrial Classification Classification (SIC) code: 5032 AND 8b. North American Industry System (NAICS) code: 423320
9. DAQ Plant ID No. (for existing facilities only): n/a	10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): n/a

A: PRIMARY OPERATING SITE INFORMATION

11A. Facility name of primary operating site: The National Lime & Stone Company – Williamstown Dock		12A. Address of primary operating site: Mailing: P.O. Box 120, Findlay, Ohio 45839-0120 Physical: 5067 Williams Highway, Williamstown, West Virginia 26187	
13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? X YES NO – IF YES , please explain: The site is being leased. – IF NO , YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.			
14A. – For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; – For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . The site is located on State Highway 14, approximately 1 – 2 miles west of Highland Avenue, Williamstown, WV.			
15A. Nearest city or town: Williamstown		16A. County: Wood	
		17A. UTM Coordinates: Northing (KM): 4361012mN Easting (KM): 459662mE Zone: 17S	
18A. Briefly describe the proposed new operation or change (s) to the facility: Installation of unpaved roadways and storage piles for distribution of construction aggregates.		19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: 39.395813 Longitude: -81.471042	

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

11B. Name of 1 st alternate operating site: n/a		12B. Address of 1 st alternate operating site: Mailing: _____ Physical: _____ _____ _____	
13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? 9 YES 9 NO – IF YES , please explain: _____ _____ – IF NO , YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.			
14B. – For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road; – For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F . _____ _____ _____			

15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2 nd alternate operating site: n/a	12C. Address of 2 nd alternate operating site: Mailing: _____ Physical: _____
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13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site?	9 YES 9 NO
- IF YES, please explain: _____ _____	
- IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.	

14C. - For Modifications or Administrative Updates at an existing facility, please provide directions to the present location of the facility from the nearest state road;
- For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a MAP as Attachment F .

15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): _____ Easting (KM): _____ Zone: _____
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: _____ Longitude: _____

20. Provide the date of anticipated installation or change: n/a <input type="checkbox"/> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: : 01/01/2016	21. Date of anticipated Start-up if registration is granted: 03/01/2016
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22. Provide maximum projected Operating Schedule of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation). Hours per day 24 Days per week 7 Weeks per year 52 Percentage of operation
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SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

23. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

24. Include a **Table of Contents** as the first page of your application package.

All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.

25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.

- X ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- X ATTACHMENT B: PROCESS DESCRIPTION
- X ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- X ATTACHMENT D: PROCESS FLOW DIAGRAM
- X ATTACHMENT E: PLOT PLAN
- X ATTACHMENT F: AREA MAP
- X ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM
- ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS
- X ATTACHMENT I: EMISSIONS CALCULATIONS
- X ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT
- X ATTACHMENT K: ELECTRONIC SUBMITTAL
- X ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE
- ATTACHMENT M: SITING CRITERIA WAIVER
- ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS)
- X ATTACHMENT O: EMISSIONS SUMMARY SHEETS
- OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.)

Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please **DO NOT** fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

☒ I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

I certify that I am the Owner and Proprietor

I hereby certify that (please print or type) _____
is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature _____

(please use blue ink)

Responsible Official

01/28/2016

Date

Name & Title _____

(please print or type)

Chris Beeman, Chief Financial Officer/Vice President

Signature _____

(please use blue ink)

n/a

Authorized Representative (if applicable)

n/a

Date

Applicant's Name _____

Brian Riedmaier

Phone & Fax _____

(419) 424-5662 x1412

Phone

(419) 424-5675

Fax

Email _____

briedmaier@natlime.com

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Attachment A

Current Business Certificate

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

THE NATIONAL LIME AND STONE COMPANY

Control Number: 99JHX

a corporation formed under the laws of Ohio has filed its "Application for Certificate of Authority" to transact business in West Virginia as required by the provisions of the West Virginia Code. I hereby declare the organization to be registered as a foreign corporation from its effective date of April 20, 2010.

Therefore, I issue this

CERTIFICATE OF AUTHORITY

to the corporation authorizing it to transact business in West Virginia



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
April 20, 2010*

Natalie E. Tennant
Secretary of State

Attachment B

Process Description

January 2016

- 1. The processes at this facility will consist of constructing and operating unpaved roadways and storage piles. The purpose of this facility is to distribute aggregate material into the construction market which may include, but is not limited to, limestone, sand, gravel, recycled asphalt pavement, and concrete. NLS will receive the aggregate materials by way of barge, truck, or rail (there are no immediate plans to unload railcars and substantial changes, including financial obligation, at the site would be necessary to proceed with rail unloading). At this time, any material handling equipment necessary to unload or convey the materials will not be owned or operated by NLS.**
- 2. The emission sources at this site will consist of unpaved roadways and storage piles. There will be no specific air pollution control devices utilized at this site.**
- 3. N/A.**
- 4. N/A.**
- 5. N/A.**

Attachment C

Description of Fugitive Emissions

January 2016

- 1. Potential sources of fugitive particulate emissions include unpaved roadways and storage piles.**
- 2. Fugitive dust control equipment for unpaved roadways may consist of, but is not limited to, water truck, chemical stabilization, or wet suppression system. Fugitive emissions from operating unpaved roadways can also be minimized through best management practices similar to, but not limited to, monitoring vehicle speed. Fugitive dust control equipment for storage piles may consist of, but is not limited to, wet suppression or chemical stabilization. Fugitive emissions from operating storage piles can also be minimized through best management practices similar to, but limited to, reducing drop heights and not excessively dragging front end loader bucket. It also should be noted that, in most cases, the aggregate material will have inherent moisture contents sufficient to reduce emissions.**
- 3. Any water or chemical stabilizations measures will be applied at a rate that is sufficient to minimize fugitive emissions and remain in compliance with the terms of an issued permit. The times when control is necessary will be determined by the site operator, therefore, an application frequency, application rate, and potential mix ratio cannot be determined at this time. In addition, the need for control will be determined while the potential sources are in operation and are representative of normal operating conditions.**
- 4. See 3. above.**
- 5. At this time, winterization of potential control equipment will be done through normal winterization practices.**
- 6. The surface of the unpaved roadways will consist of aggregate materials. The roadways will be resurfaced with course aggregate as necessary to minimize fugitive emissions as a best management practice.**
- 7. N/A.**
- 8. N/A.**

Attachment D

Process Flow Diagram

The National Lime & Stone Company – Williamstown Dock
Attachments

The National Lime & Stone Company

Williamstown Dock Facility

Process Flow Diagram/Plot Plan (01/2016)

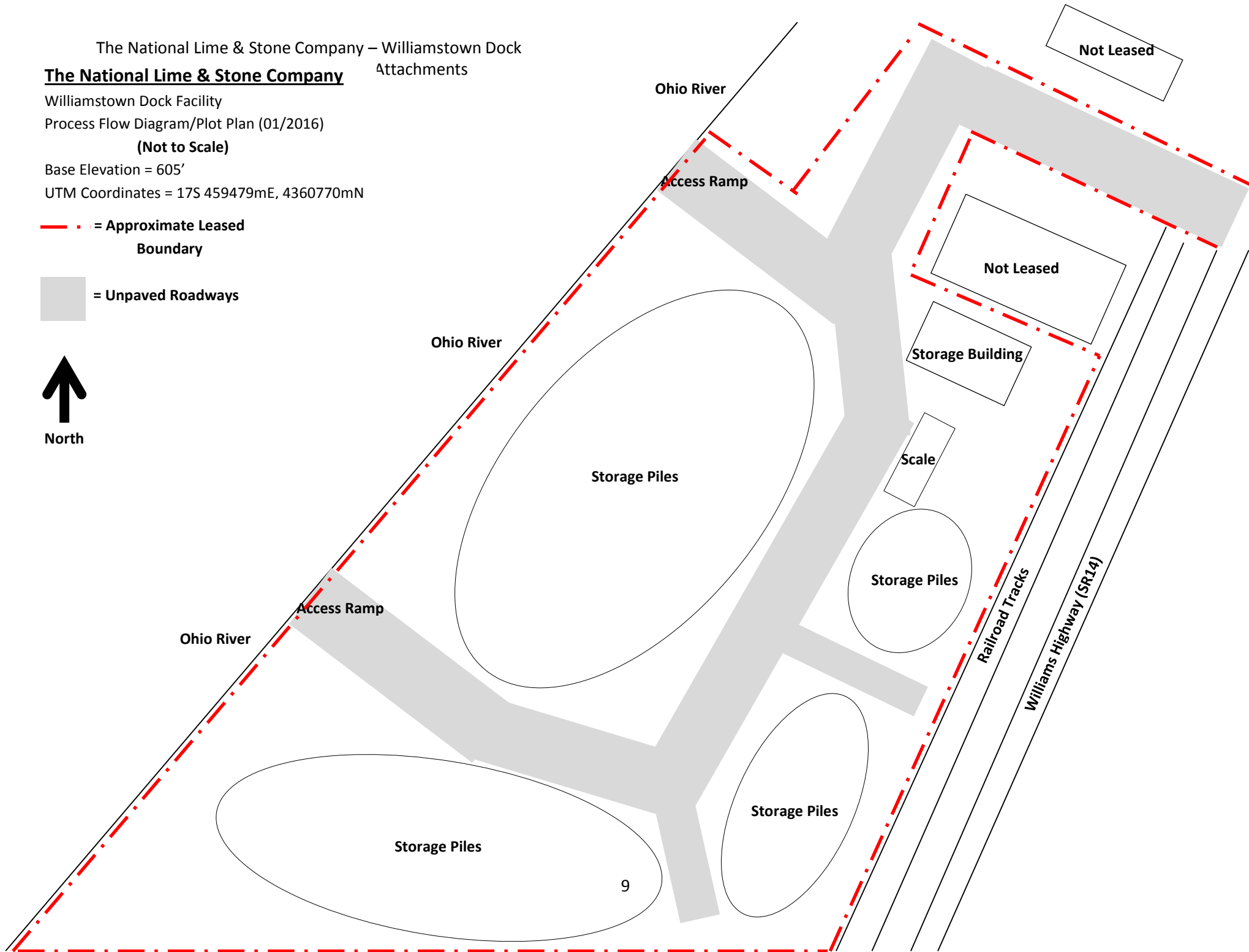
(Not to Scale)

Base Elevation = 605'

UTM Coordinates = 17S 459479mE, 4360770mN

— · — · — = Approximate Leased
Boundary

■ = Unpaved Roadways



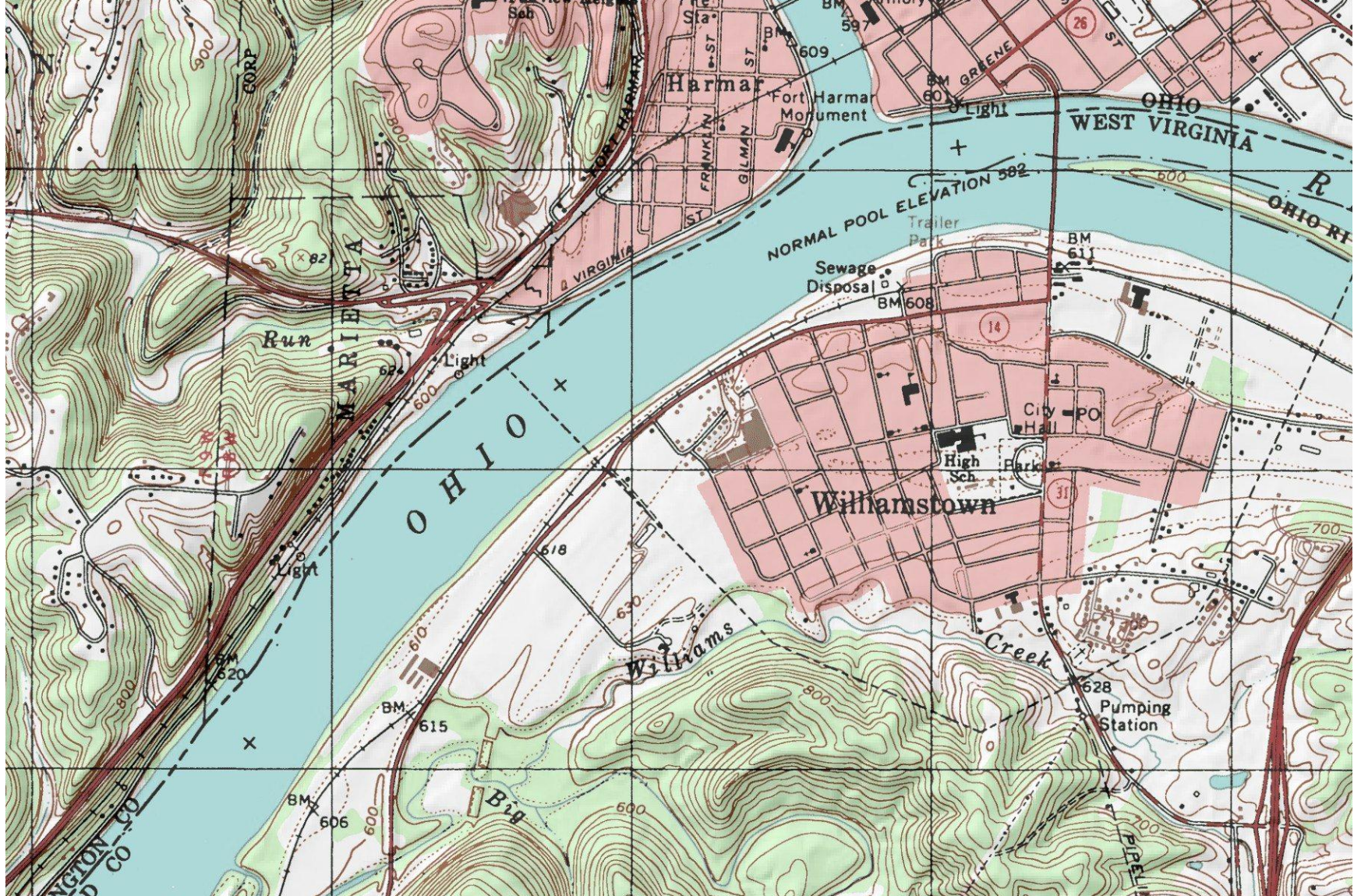
Attachment E

Plot Plan

(See Attachment D, Process Flow Diagram above)

Attachment F

Area Map



The National Lime & Stone Company – Williamstown Dock
General Permit Registration #G40-C – Attachments
January 2016



The National Lime & Stone Company – Williamstown Dock
General Permit Registration #G40-C – Attachments
January 2016



Attachment G

Registration Section Applicability & Equipment Data Sheets

General Permit G40-C Registration

Section Applicability Form

General Permit G40-C allows qualified registrants to seek registration for a variety of sources. These sources include nonmetallic mineral processing plants which include crushers, screens, transfer points (loading, unloading, etc.), open stockpiles, bins, haulroads, reciprocating internal combustion engine driven compressors, emergency standby generators, and tanks. All registered facilities will be subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

General Permit G40-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Section 5 ¹	Nonmetallic Mineral Processing Operations	<input checked="" type="checkbox"/>
Section 6	Standards of Performance for Nonmetallic Mineral Processing Plants that Commenced Construction, Reconstruction or Modification after August 31, 1983 but before April 22, 2008 (40CFR60 Subpart OOO)	<input type="checkbox"/>
Section 7	Standards of Performance for Nonmetallic Mineral Processing Plants that Commenced Construction, Reconstruction or Modification on or after April 22, 2008. (40CFR60 Subpart OOO)	<input type="checkbox"/>
Section 8 ²	Reciprocating Internal Combustion Engines (R.I.C.E.)	<input type="checkbox"/>
Section 9	Tanks	<input type="checkbox"/>
Section 10	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	<input type="checkbox"/>
Section 11	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	<input type="checkbox"/>

¹ Affected facilities that are subject to Section 5 may also be subject to Sections 6 and 7. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

² Affected facilities that are subject to Section 8 may also be subject to Sections 10 or 11. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

HAULROAD EMISSIONS

Include G40-C Emission Calculation Spreadsheet indicating haulroad emissions, or submit calculations indicating assumptions made to substantiate emission values.

Emission Source	Uncontrolled Emissions		Controlled Emissions	
	Hourly (lb/hr)	Annual (tpy)	Hourly (lb/hr)	Annual (tpy)
Unpaved Roadways (PM)	62.90	81.77	18.87	24.53
Unpaved Roadways (PM ₁₀)	18.60	24.18	5.58	7.25

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number ¹	OS 1-8
Type of Material Stored ²	Various sized - Limestone, Sand, Gravel, Recycled Asphalt Pavement, Concrete
Average Moisture Content (%) ³	2.1
Maximum Yearly Storage Throughput (tons) ⁴	1,000,000
Maximum Storage Capacity (tons) ⁵	unknown
Maximum Base Area (ft ²) ⁶	348,480
Maximum Pile Height (ft) ⁷	30
Method of Material Load-in ⁸	MC,TD, FE
Load-in Control Device Identification Number ⁹	n/a
Storage Control Device Identification Number ⁹	SW-WS
Method of Material Load-out ⁸	FE
Load-out Control Device Identification Number ⁹	n/a

1. Enter the appropriate Source Identification Number for each storage activity using the following codes. For example, if the facility utilizes three storage bins, four open stockpiles and one storage building (full enclosure), the Source Identification Numbers should be BS-1, BS-2, and BS-3; OS-1, OS-2, OS-3, and OS-4; and SB-1, respectively.

BS	Bin or Storage Silo (full enclosure)	E3	Enclosure (three sided enclosure)
OS	Open Stockpile	SB	Storage Building (full enclosure)
SF	Stockpiles with wind fences	OT	Other

2. Describe the type of material stored or stockpiled. (e.g. sized material, raw material, refuse, etc).
3. Enter the average percent moisture content of the stored material.
4. Enter the maximum yearly storage throughput for each storage activity.
5. Enter the maximum storage capacity for each storage activity in tons (e.g. silo capacity, maximum stockpile size, etc.)
6. For stockpiles, enter the maximum stockpile base area.
7. For stockpiles, enter the maximum stockpile height.
8. Enter the method of load-in or load-out to/from stockpiles or bins using the following codes:

CS	Clamshell	SS	Stationary Conveyor/Stacker
FC	Fixed Height Chute from Bins	ST	Stacking Tube
FE	Front Endloader	TC	Telescoping Chute from Bins
MC	Mobile Conveyor/Stacker	TD	Truck Dump
UC	Under-pile or Under-Bin Reclaim Conveyor	PC	Pneumatic Conveyor/Stacker
RC	Rake or Bucket Reclaim Conveyor	OT	Other

9. Enter the appropriate Control Device Identification Number for each storage activity. Refer to Table A - *Control Device Listing* and *Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.

Attachment H

Air Pollution Control Device Sheets

(Not Applicable)

Attachment I

Emission Calculations

INPUTS

Include all information for each emission source and transfer point as listed in the permit application.

Name of applicant: **NLS**

Name of plant: **Williamstown Dock**

1. CRUSHING AND SCREENING (including all primary and secondary crushers and screens)

1a. PRIMARY CRUSHING

Primary Crusher ID Number	Description	Maximum Material Processing Capacity		Control Device ID Number	Control Efficiency %
		TPH	TPY		

1b. SECONDARY AND TERTIARY CRUSHING

Secondary & Tertiary Crusher ID	Description	Maximum Material Processing Capacity		Control Device ID Number	Control Efficiency %
		TPH	TPY		

1c. SCREENING

Secondary & Tertiary Crusher ID	Description	Maximum Material Processing Capacity		Control Device ID Number	Control Efficiency %
		TPH	TPY		

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)	7	

[illegible]

3. WIND EROSION OF STOCKPILES (including all stockpiles of raw coal, clean coal, coal refuse, etc.)

p =	number of days per year with precipitation >0.01 inch				157
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height				20
Source ID No.	Stockpile Description	Silt Content of Material %	Stockpile base area Max. sqft	Control Device ID Number	Control Efficiency %
OS1-8	Various Aggregates	3.9	348,480	SW-WS	75

4. UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

s =	silt content of road surface material (%)				10				
p =	number of days per year with precipitation >0.01 inch				157				
M _{dry} =	surface material moisture content (%) - dry conditions			0.2					
Item Number	Description	Number of wheels	Mean Vehicle Weight(tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1	Unpaved roadways & parking areas	18	24.19	20	0.52	20	50,000	HR-WS	70
2									
3									

5. INDUSTRIAL PAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

sL =	road surface silt loading, (g/ft^2)				70		
P =	number of days per year with precipitation >0.01 inch				157		
Item Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1							
2							

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3. Emissions From WIND EROSION OF STOCKPILES

Stockpile ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PILES	1.739	7.616	0.435	1.904	0.817	3.579	0.204	0.895
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	1.739	7.616	0.435	1.904	0.817	3.579	0.204	0.895

Source:

Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

$$E = 1.7*[s/1.5]*[(365-p)/235]*[f/15] = (\text{lb/day/acre})$$

Where

:

s = silt content of material

p = number of days with >0.01 inch of precipitation per year

f = percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Emission Factors

For PM

$$E = (1.7) * ((\text{Inputs!F147}) / 1.5) * ((365 - \text{Inputs!I139}) / 235) * ((\text{Inputs!I140}) / 15)$$

For PM-10

$$E = 0.47 * (1.7) * ((\text{Inputs!F147}) / 1.5) * ((365 - \text{Inputs!I139}) / 235) * ((\text{Inputs!I140}) / 15)$$

For lb/hr

$$[\text{lb/day/acre}] * [\text{day}/24\text{hr}] * [\text{base area of pile (acres)}] = \text{lb/hr}$$

For Ton/yr

$$[\text{lb/day/acre}] * [365\text{day/yr}] * [\text{Ton}/2000\text{lb}] * [\text{base area of pile (acres)}] = \text{Ton/yr}$$

4. Emissions From UNPAVED HAULROADS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	114.75	143.43	34.42	43.03	33.87	42.34	10.16	12.70
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	114.75	143.43	34.42	43.03	33.87	42.34	10.16	12.70

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.2 Unpaved Roads

Emission Estimate For Unpaved Haulroads at Industrial Sites (equation 1)

$$E = k \cdot ((s/12)^a) \cdot ((W/3)^b) = \text{lb/vmt}$$

Where:

		PM	PM-10
k =	particle size multiplier	4.90	1.50
a =	empirical constant	0.7	0.9
b =	empirical constant	0.45	0.45

Emission Factors

For PM $E = ((\$I\$35) \cdot (((\text{Inputs!}\$I\$163)/12)^{(\$I\$36)}) \cdot (((\text{Inputs!}H171)/3)^{(\$I\$37)}))$

For PM-10 $E = ((\$J\$35) \cdot (((\text{Inputs!}\$I\$163)/12)^{(\$J\$36)}) \cdot (((\text{Inputs!}H171)/3)^{(\$J\$37)}))$

For lb/hr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per hour})$

For Ton/yr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per year}) \cdot (1/2000)$

The National Lime & Stone Company
Williamstown Dock
Emission Calculations (01/2016)

Unpaved Roadways

Unpaved – 70% control efficiency for watering

$$E_{\text{ext}} = k(s/12)^a(W/3)^b[(365-P/365)] \quad [\text{AP-42, Chapter 13.2.2 Equation 2, (11/06)}]$$

where,

k = empirical constant (4.9, 1.5)

s = surface material silt content (10.0%)

a = empirical constant (0.7, 0.9)

W = mean vehicle weight (24.19 tons)

b = empirical constant (0.45)

P = number of days with >1 inch of precipitation (157) **Taken from General Permit G40-C instructions*

$$W = [(2 \text{ ton})(1000 \text{ VMT}/26000 \text{ VMT}) + (25 \text{ ton})(25000 \text{ VMT}/26000 \text{ VMT})] = 24.19 \text{ tons}$$

$$\begin{aligned} E(\text{PE}) &= (4.9)(10/12)^{0.7}(24.19/3)^{0.45}[(365-157)/365] \\ &= 6.29 \text{ lbs/VMT} \\ &= (6.29 \text{ lbs/VMT})(10 \text{ VMT/hr}) \\ &= 62.90 \text{ lbs/hr} \\ &= (62.90 \text{ lbs/hr})(1-0.70) \\ &= \mathbf{18.87 \text{ lbs/hr}} \\ &= (6.29 \text{ lbs/VMT})(26,000 \text{ miles/yr})(1 \text{ ton}/2000 \text{ lbs}) \\ &= 81.77 \text{ tons/yr} \\ &= (81.77 \text{ tons/yr})(1-0.70) \\ &= \mathbf{24.53 \text{ tons/yr}} \end{aligned}$$

$$\begin{aligned} E(\text{PM}_{10}) &= (1.5)(10/12)^{0.9}(24.19/3)^{0.45}[(365-157)/365] \\ &= 1.86 \text{ lbs/VMT} \\ &= (1.86 \text{ lbs/VMT})(10 \text{ VMT/hr}) \\ &= 18.60 \text{ lbs/hr} \\ &= (18.60 \text{ lbs/hr})(1-0.70) \\ &= \mathbf{5.58 \text{ lbs/hr}} \\ &= (1.86 \text{ lbs/VMT})(26,000 \text{ miles/yr})(1 \text{ ton}/2000 \text{ lbs}) \\ &= 24.18 \text{ tons/yr} \\ &= (24.18 \text{ tons/yr})(1-0.70) \\ &= \mathbf{7.25 \text{ tons/yr}} \end{aligned}$$

Storage Piles

Load-in - 80% control efficiency for wet suppression and inherent moisture content

$$E = k(0.0032)[(U/5)^{1.3}/(M/2)^{1.4}] \quad [\text{AP-42 , Chapter 13.2.4 Equation 1, (11/06)}]$$

where,

k = particle size multiplier (0.74, 0.35)

U = mean wind speed (10 mph)

***www.noaa.gov

M = material moisture content (2.1%)

$$\begin{aligned} E(\text{PE}) &= (0.74)(0.0032)[(10/5)^{1.3}/(2.1/2)^{1.4}] \\ &= 0.005 \text{ lbs/ton} \\ &= (0.005 \text{ lbs/ton})(1,000 \text{ ton/hr}) \\ &= 5.00 \text{ lbs/hr} \\ &= (5.00 \text{ lbs/hr})(1-0.80) \\ &= \mathbf{1.00 \text{ lbs/hr}} \\ &= (0.005 \text{ lbs/ton})(1,000,000 \text{ tons/year})(1 \text{ ton}/2000 \text{ lbs}) \\ &= 2.50 \text{ tons/yr} \\ &= (2.50 \text{ tons/yr})(1-0.80) \\ &= \mathbf{0.50 \text{ tons/yr}} \end{aligned}$$

$$\begin{aligned} E(\text{PM10}) &= (0.35)(0.0032)[(10/5)^{1.3}/(2.1/2)^{1.4}] \\ &= 0.003 \text{ lbs/ton} \\ &= (0.003 \text{ lbs/ton})(1,000 \text{ ton/hr}) \\ &= 3.00 \text{ lbs/hr} \\ &= (3.00 \text{ lbs/hr})(1-0.80) \\ &= \mathbf{0.60 \text{ lbs/hr}} \\ &= (0.003 \text{ lbs/ton})(1,000,000 \text{ tons/year})(1 \text{ ton}/2000 \text{ lbs}) \\ &= 1.50 \text{ tons/yr} \\ &= (1.50 \text{ tons/yr})(1-0.80) \\ &= \mathbf{0.30 \text{ ton/yr}} \end{aligned}$$

Load-out - 80% control efficiency for wet suppression and inherent moisture content

$$E = k(0.0032)[(U/5)^{1.3}/(M/2)^{1.4}] \quad [\text{AP-42 , Chapter 13.2.4 Equation 1, (11/06)}]$$

where,

k = particle size multiplier (0.74, 0.35)

U = mean wind speed (10 mph)

***www.noaa.gov

M = material moisture content (2.1%)

$$\begin{aligned}
 E(PE) &= (0.74)(0.0032)[(10/5)^{1.3}/(2.1/2)^{1.4}] \\
 &= 0.005 \text{ lbs/ton} \\
 &= (0.005 \text{ lbs/ton})(1,000 \text{ ton/hr}) \\
 &= 5.00 \text{ lbs/hr} \\
 &= (5.00 \text{ lbs/hr})(1-0.80) \\
 &= \mathbf{1.00 \text{ lbs/hr}} \\
 &= (0.005 \text{ lbs/ton})(1,000,000 \text{ tons/year})(1 \text{ ton}/2000 \text{ lbs}) \\
 &= 2.50 \text{ tons/yr} \\
 &= (2.50 \text{ tons/yr})(1-0.80) \\
 &= \mathbf{0.50 \text{ tons/yr}}
 \end{aligned}$$

$$\begin{aligned}
 E(PM_{10}) &= (0.35)(0.0032)[(10/5)^{1.3}/(2.1/2)^{1.4}] \\
 &= 0.003 \text{ lbs/ton} \\
 &= (0.003 \text{ lbs/ton})(1,000 \text{ ton/hr}) \\
 &= 3.00 \text{ lbs/hr} \\
 &= (3.00 \text{ lbs/hr})(1-0.80) \\
 &= \mathbf{0.60 \text{ lbs/hr}} \\
 &= (0.003 \text{ lbs/ton})(1,000,000 \text{ tons/year})(1 \text{ ton}/2000 \text{ lbs}) \\
 &= 1.50 \text{ tons/yr} \\
 &= (1.50 \text{ tons/yr})(1-0.80) \\
 &= \mathbf{0.30 \text{ ton/yr}}
 \end{aligned}$$

Wind Erosion - 75% control efficiency for inherent moisture content and/or wet suppression

$$E = (1.7)(s/1.5)[(365-p)/235](f/15) \quad [\text{US EPA Control of Open Fugitive Dust Sources, 09/88}]$$

where,

s = silt content (3.9%)

p = number of day with >1 inch of precipitation (157) **Taken from General Permit G40-C instructions*

f = percentage of time wind speed exceeds 12 mph (20%) **Taken from General Permit G40-C instructions*

$$\begin{aligned}
 E(PE) &= (1.7)(3.9/1.5)[(365-157)/235](20/15) \\
 &= 5.22 \text{ lbs/day/acre} \\
 &= (5.22 \text{ lbs/day/acre})(1 \text{ acre/pile})(8 \text{ piles})(1 \text{ day}/24 \text{ hrs}) \\
 &= 1.74 \text{ lbs/hr} \\
 &= (1.74 \text{ lbs/hr})(1-0.75) \\
 &= \mathbf{0.44 \text{ lbs/hr}} \\
 &= (5.22 \text{ lbs/day/acre})(1 \text{ acre/pile})(8 \text{ piles})(365 \text{ day/yr})(1 \text{ ton}/2000 \text{ lbs}) \\
 &= 7.62 \text{ tons/yr}
 \end{aligned}$$

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General Permit Registration #G40-C – Attachments
January 2016

$$\begin{aligned} &= (7.62 \text{ tons/yr})(1-0.75) \\ &= \mathbf{1.91 \text{ tons/yr}} \end{aligned}$$

$$\mathbf{E(PM_{10})} = (1.7)(3.9/1.5)[(365-157)/235](20/15)(0.47)$$

**Taken from General Permit G40-C calculations*

$$\begin{aligned} &= 2.45 \text{ lbs/day/acre} \\ &= (2.45 \text{ lbs/day/acre})(1 \text{ acre/pile})(8 \text{ piles})(1 \text{ day/24 hrs}) \\ &= 0.82 \text{ lbs/hr} \\ &= (0.82 \text{ lbs/hr})(1-0.75) \\ &= \mathbf{0.21 \text{ lbs/hr}} \\ &= (2.45 \text{ lbs/day/acre})(1 \text{ acre/pile})(8 \text{ piles})(365 \text{ day/yr})(1 \text{ ton/2000 lbs}) \\ &= 3.58 \text{ tons/yr} \\ &= (3.58 \text{ tons/yr})(1-0.75) \\ &= \mathbf{0.90 \text{ tons/yr}} \end{aligned}$$

Attachment J

Class I Legal Advertisement

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that The National Lime & Stone Company has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit Registration for an aggregate distribution facility located at 5067 Williams Highway, Williamstown, Wood County, West Virginia.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: Fugitive PM = 27.44 tons/year; and Fugitive PM₁₀ = 8.75 tons/year.

Start-up of operation is planned to begin on, or about, the 1st day of March, 2016. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, West Virginia 25304, for at least 30 calendar days from the date of publication of this notice.

Attachment K

Electronic Submittal

(Two electronic copies enclosed)

Attachment L

General Permit Registration Application Fee

(Check enclosed)

Attachment M

Siting Criteria Waiver **(Not Applicable)**

Attachment N

Safety Data Sheets

(Not Included – Silica sand is not being stored at this location)

Attachment O

Emission Summary Sheets

<u>EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS</u>										
						Registration Number <small>(Agency Use)</small> <u>G40-C</u>				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_x	CO	VOC	SO₂	PM₁₀	NO_x	CO	VOC	SO₂	PM₁₀
Unpaved Roadways	-	-	-	-	5.58	-	-	-	-	7.25
Storage Piles	-	-	-	-	1.41	-	-	-		1.50
Total	-	-	-	-	6.99	-	-	-	-	8.75