FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
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PERMITTEE

Jacksonville Lime, LLC
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Authorized Representative:
Nick Caggiano, Production Manager

Air Permit No. 0310583-001-AC
Expires: March 31, 2019
PSD-FL-426
Jacksonville Lime
Facility ID No. 0310583
Lime Manufacturing Project

PROJECT

This is the final air construction permit, which authorizes the installation and operation of a new lime manufacturing plant – the Jacksonville Lime, which is categorized under Standard Industrial Classification No. 3274. The proposed new plant will be located in Duval County at 1915 Wigmore Street in Jacksonville, Florida. The UTM coordinates are Zone 17, 439.33 kilometers (km) East, and 3359.62 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Executed in Tallahassee, Florida

Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

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CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

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Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

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PROPOSED PROJECT

Jacksonville Lime, LLC proposes to construct and operate a lime manufacturing plant. The facility will receive limestone containing primarily calcium carbonate ($CaCO_3$) and in some instances magnesium carbonate ($MgCO_3$). Under high temperatures, the limestone is calcined to produce lime and carbon dioxide (CO_2). The project will be constructed on a Brownfield site located on the west bank of the St. Johns River in Jacksonville, Florida. The project is subject to PSD preconstruction review for carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and particulate matter (PM), PM with a mean particle diameter of 10 microns or less (PM_{10}), and PM with a mean particle diameter of 2.5 microns or less ($PM_{2.5}$).

The plant will consist of two twin-shaft vertical parallel flow regenerative lime kilns (Cimprogetti – FS Design, or equivalent) and associated raw material, product, and fuel handling systems. The kilns are operated at temperatures of approximately 1,800 degrees Fahrenheit (°F) at which temperature the thermal decomposition of limestone to lime and CO_2 occurs. The kilns each have two vertical shafts (burning and non-burning) that are connected by a cross-over channel. Heated limestone and hot combustion gases flow parallel in the burning shaft, while simultaneously in the non-burning shaft hot lime product and combustion gases flow countercurrent to the raw limestone. Each kiln has a nominal lime production rate of 330 tons/day (maximum 396 tons/day) and is capable of firing petroleum coke (petcoke), coal (including lignite), natural gas, and wood chips. The lime kilns are each equipped with and are vented through a fabric filter dust collector (baghouse) to reduce emissions of $PM/PM_{10}/PM_{2.5}$.

The facility's fuel handling system consists of a mill for petcoke/coal processing, in conjunction with a natural gas fired heater to dry the fuel. Emissions will be controlled by fabric filter dust collectors. Wood derived fuel will be loaded into a dump hopper by front end loaders or trucks and sent to a raw storage area. From the wood storage area the biomass will be transferred via drag chain conveyor to mill then to small bins for kiln feed. Multiple conveyors, storage bins, wet suppression points, and dust collectors will be associated with fuel handling. This project includes the following emissions units.

EU No.	Emission Unit Description
001	Vertical Lime Kiln No. 1
002	Vertical Lime Kiln No. 2
003	Limestone Screening Operations
004	Limestone Screening and Crushing Operations
005	Lime Screening Operations
006	Wood Grinding Mill
007	Coke Grinding
008	Truck/Railcar Loading Areas and Enclosure
009	Conveyors, Transfer Points, and Storage Bins
010 - 016	Fabric Filter Baghouses

FACILITY REGULATORY CLASSIFICATION

- The project will be a major source of hazardous air pollutants (HAP).
- The project will be a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The project includes no units subject to the acid rain provisions of the Clean Air Act.
- The project is subject to PSD preconstruction review in accordance with Rule 62-212.400, F.A.C.
- The project includes units subject to applicable New Source Performance Standards (NSPS) in Title 40, Part 60 of the Code of Federal Regulations.
- The project includes units subject to applicable National Emissions Standards for Hazardous Air Pollutants (NESHAP) in Title 40, Part 63 of the Code of Federal Regulations.

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SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The mailing address for the Office of Permitting and Compliance is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256-7590.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); Appendix D (Common Testing Requirements); Appendix E (NESHAP Subparts A and AAAAA); and Appendix F (NSPS Subparts A and OOO).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Source Obligation:

   (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

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(c) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

9. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to each Compliance Authority.
[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

10. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.; Rule 62-4.070, F.A.C. Reasonable Assurance]

{Permitting Note: An objectionable odor is defined in Rule 62-210.200(Definitions), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.}

11. General Visible Emissions (VE) Standard:

(a) No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity).

(b) Notwithstanding subparagraph 62-296.320(4)(b)1., F.A.C., above, the owner or operator of an emissions unit subject to the general visible emission standard may request the Department to establish a higher visible emissions standard for that emissions unit. The owner or operator may request that a visible emissions standard be established at that level at which the emissions unit will be able, as indicated by compliance tests, to meet the opacity standard at all times during which the emissions unit is meeting the applicable particulate matter standard. The Department shall establish such a standard, through the permitting process, if it finds that:

(i.) The emissions unit was in compliance with the applicable particulate emission standard while a compliance test was being conducted but failed to comply with the general visible emissions standard during the test;

(ii.) The emissions unit and associated air pollution control equipment were operated and maintained in a manner to minimize the opacity emissions during the compliance test; and

(iii.) The emissions unit and associated air pollution control equipment were incapable of being adjusted or operated in such a manner as to meet the opacity standard.

(iv.) If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this rule, such failure shall not be a violation of this rule.

[Rule 62-296.320(4)(b) F.A.C, General Visible Emissions Standard]

12. Unconfined Emissions of Particulate Matter: No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by

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that facility to control the emissions of unconfined particulate matter. Reasonable precautions include the following: a) Paving and maintenance of roads, parking areas and yards; b) Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing; c) Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities; d) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne; e) Landscaping or planting of vegetation; f) Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter; g) Confining abrasive blasting where possible; and, h.) Enclosure or covering of conveyor systems. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice. [Rule 62-296.320(4)(c), F.A.C.]

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A. Vertical Lime Kilns (EU 001 and EU 002)

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
001	Vertical Lime Kiln No. 1
002	Vertical Lime Kiln No. 2

{Permitting Note: In accordance with Rule 62-212.400(PSD), F.A.C., the above emission units are subject to Best Available Control Technology (BACT) determinations for the following pollutants: CO, NO_X, SO_2, PM, PM_{10} and $PM_{2.5}$}

EQUIPMENT

1. Vertical Lime Kilns: The permittee is authorized to install and operate two vertical twin-shaft parallel flow regenerative (PFR) lime kilns that will have the capability of firing petcoke, coal (including lignite), natural gas, and wood chips. The lime kilns shall employ the following air pollution controls:

   a. Low temperature combustion to avoid production of thermal NO_X;

   b. Efficient, vertical twin shaft PFR kiln design to minimize fuel use and resulting emissions of all pollutants;

   c. Thorough mixing and residence time through preheat section to complete burnout of CO and volatile organic compounds (VOC);

   d. Inherent scrubbing of burning zone exhaust gases by hot lime and of kiln exhaust gases by incoming limestone to reduce SO_2 and sulfuric acid mist (SAM);

   e. Use of fabric filters (baghouses) to control emissions of PM, PM_{10} and $PM_{2.5}$ and provide further control of SO_2 and SAM on the filter cake.

   [Design, Application No. 0310583-001-AC, Rules 62-210.200(BACT) and 62-212.400, F.A.C.]

2. Fabric Filters: The permittee shall install a fabric filter (baghouse) in each kiln designed to meet the Department's BACT emission standard for filterable PM given in Specific Condition 7 of this section.
   [Design, Application No. 0310583-001-AC, Rules 62-210.200(BACT) and 62-212.400, F.A.C.]

PERFORMANCE RESTRICTIONS

3. Permitted Capacity: Production from each twin-shaft PFR lime kiln shall not exceed 396 tons of lime in any 24-hour period (396 tons/day, 24-hour average).
   [Design, Application No. 0310583-001-AC; and Rule 62-210.200(PTE), F.A.C.]

4. Authorized Fuels: The lime kilns are permitted to fire petroleum coke, coal (including lignite), natural gas, and wood chips. The maximum amount of wood chips fired in both lime kilns (total, combined) shall not exceed 54,312 tons per year.
   [Design, Application No. 0310583-001-AC; and Rule 62-210.200(PTE), F.A.C.]

5. Hours of Operation: The lime kilns are permitted to operate continuously (8,760 hours/year).
   [Design, Application No. 0310583-001-AC; and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

6. Applicable NESHAP Provisions: The lime kilns and fabric filter baghouses are subject to, and shall comply with, the applicable provisions in NESHAP Subpart A (General Provisions) and NESHAP Subpart AAAAA (NESHAP for Lime Manufacturing Plants) of 40 CFR 63, which are identified in Appendix E (NESHAP) of this permit. [NESHAP Subparts A and AAAAA; and Rule 62-204.800(11), F.A.C.]

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A. Vertical Lime Kilns (EU 001 and EU 002)

EMISSIONS STANDARDS

7. Emissions Standards: Emissions from each vertical lime kiln shall not exceed the following:

Pollutant	Fuel [a]	BACT Emissions Standards [b, c, d] mg/Nm^3, (equivalent lb/hr)	Compliance Method
NO_X [e]	PC, C	350 (~ 31.9)	30-operating day, rolling, CEMS [e] (prorated by fuel)
	NG	100 (~ 8.3)	
	WC	500 (~ 43.6)	
SO_2 [e]	PC, C	200 (~18.2)	
	NG, WC	50 (~ 4.2)	
CO [f]	PC, C, WC	400 (~39.6)	Stack Tests
	NG	200 (~19.8)	
PM [g, h]	All	10 (~0.9)	Stack Tests COMS
		0.10 lb/ton of stone feed NESHAP Subpart AAAAA	
$PM_{10}/PM_{2.5}$		The Draft BACT limits for PM and the precursors of condensable $PM_{10}/PM_{2.5}$ (i.e. SO_2 and NO_X) shall comprise the BACT for PM_{10} and $PM_{2.5}$, including condensables. Compliance using the methods for BACT PM, SO_2 and NO_X shall indicate compliance with BACT for PM_{10} and $PM_{2.5}$.	
Visible Emissions[i]	All	15% Opacity	COMS[i]

a. PC = petroleum coke, C = coal (including lignite), NG = natural gas and WC = wood chips.
b. lb/ton of stone feed = pounds of PM per ton of limestone feed to kiln; mg/dscm = milligrams per dry standard cubic meter corrected to 11% O_2, 20°C, dry
c. All values are BACT emission standards, except for the NESHAP PM limit of 0.10 lb/ton of stone feed. The allowable emissions standards apply to each lime kiln at all times. Efficient twin shaft PFR design is part of the BACT determination.
d. The potential to emit is limited by the enforceable kiln process limit of 396 tons of lime/day coupled with the BACT concentration limit and the allowable hours of operation. The mass emission rates in pounds per hour (lb/hour) are reference values and are not emission limits.
e. Continuous compliance with the 30-operating day rolling average shall be demonstrated with data collected by the required NO_X and SO_2 CEMS. The applicable limit for a given 30-operating day period shall prorated based on the relative heat input and BACT emissions standard of each fuel used during the same period.
f. Compliance with the CO emissions standard shall be determined by EPA Method 10. The BACT limit for PC, C and WC can be demonstrated on any of the solid fuels or solid fuel blends.
g. EPA Method 5 shall be used to demonstrate compliance with the NESHAP PM limit. The probe and filter holder heating system shall be operated at 120 $\pm$ 14°C (248 $\pm$ 25°F).
h. EPA Method 5 shall be used to demonstrate initial and annual compliance with the PM BACT limit except that the probe and filter holder heating system shall be operated at $\leq$ 160 $\pm$ 14°C (320 $\pm$ 25°F). The test may be conducted using any combination of fuels.
i. Continuous opacity monitoring system (COMS). Not to exceed 15% in any 6-minute block period. Requirement in lieu of a baghouse leak detection system (BLDS) or PM detector for fabric filters to satisfy requirements of NESHAP Subpart AAAAA.

TESTING REQUIREMENTS

8. Notification of Testing: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a), F.A.C.]

9. Initial Compliance Tests: Upon startup of any solid fuel and upon startup of natural gas, the emissions unit shall be tested to demonstrate initial compliance with the emissions standards for CO and PM. The permittee may use up to 10% of natural gas during the solid fuel compliance testing. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit.

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[Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.; and NESHAP Subpart AAAAA]

10. Annual Compliance Tests: Annual compliance tests shall be conducted during each federal fiscal year (October 1st to September 30th) to demonstrate compliance with the emissions standards for the BACT CO and PM limits. The annual compliance test shall be conducted on all fuel types or fuel blends used more than 400 hours during a federal fiscal year. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

11. Operating Rate During Testing: During each required compliance stack test, the permittee shall operate the kiln(s) at permitted capacity (defined as 90 to 100% of 16.5 tons/hour/kiln). If it is impracticable to test at permitted capacity, the kiln(s) may be tested at less than the maximum permitted capacity; in this case, subsequent operation is limited to 110 percent of the test rate until a new test is conducted. Once the kiln(s) is (are) so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2)(b), F.A.C.]

12. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	For NESHAP AAAAA: Method for Determining Particulate Matter Emissions
5	For BACT PM: Method for Determining Particulate Matter Emissions except that probe and filter holder heating system shall be operated at $\leq$ 160 $\pm$ 14°C (320 $\pm$ 25°F)
6, 6A, or 6C	Method for Determining Sulfur Dioxide Emissions from Stationary Sources
7 or 7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources {Note: The method shall be based on a continuous sampling train.}

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

MONITORING REQUIREMENTS

13. NO_X CEMS and SO_2 CEMS: The permittee shall install, calibrate, maintain, and operate CEMS in the lime kilns stack to measure and record the emissions of NO_X and SO_2 from the lime kilns, in a manner sufficient to demonstrate compliance with the emission limits given in **Specific Condition 7** of this subsection. Compliance with the emission limit for NO_X and SO_2 shall be based on a 30-day calendar rolling average that shall be recomputed daily from the individual hourly averages. Hourly averages shall be computed according to 40 CFR 60.13. The CEMS system shall express the results in units of mg/Nm^3.
    a. Prorated NO_X Emissions: Continuous compliance with the NO_X emission limits will be demonstrated by a CEMS on the basis of 30 rolling operating days. For each PFR kiln, the applicable NO_X limit (mg/Nm^3) for a given 30 rolling operating day period will be calculated as follows:
        i. [(MMBtu NG)*(100 mg/Nm^3)+(MMBtu C+P)*(350 mg/Nm^3)+(MMBtu W)*(500 mg/Nm^3)]/Total MMBtu
        ii. Where: NG is natural gas, C is coal, P is petcoke and W is wood.
    b. Prorated SO_2 Emissions: Continuous compliance will be demonstrated by a CEMS on the basis of 30 rolling operating days. For each PFR kiln, the applicable SO_2 limit (mg/Nm^3) for a given 30 rolling operating day period will be calculated as follows:
        i. [(MMBtu NG+W)*(10 mg/Nm^3)+(MMBtu C+P)*(200 mg/Nm^3)]/total MMBtu

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ii. Where: NG is natural gas, C is coal, P is petcoke and W is wood.

[Application No. 0310583-001-AC; and Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

14. Continuous Opacity Monitoring System (COMS): The permittee shall install and operate a continuous opacity monitoring system (COMS) at the outlet of the control device in accordance with NESHAP Subpart A, General Provisions and 40 CFR 60, Appendix B, Performance Specification (PS)-1. [Application No. 0310583-001-AC; 40 CFR 60 Appendix B, PS-1; and NESHAP Subpart AAAAA, Section 63.7113]

    {The COMS fulfills the requirement in NESHAP Subpart AAAAA to install a continuous monitoring system (CMS) and will be installed in lieu of a baghouse leak detection (BLD) system or a PM detection system.}

15. Operations, Maintenance and Monitoring (OM&M) Plan: The permittee shall prepare and implement a written OM&M plan. The permittee shall submit the plan and any subsequent changes to the Department's Northeast District for review and approval as part of the application for a Title V Operation permit or revision. Each plan must contain the following information as identified in Section 63.7100(d) of NESHAP Subpart AAAAA, including but not limited to: the process and control device parameters to be monitored; a monitoring schedule for each emission unit; procedures for the proper installation, operation, maintenance of monitoring devices, monitoring process, and control device parameters; corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits; and a maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [NESHAP Subpart AAAAA]

16. Startup, Shutdown and Malfunction Plan: The permittee shall develop a written startup, shutdown, and malfunction (SSM) plan that describes, in detail, procedures for operating and maintaining the source during periods of SSM; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The SSM plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard. This plan must be developed by the owner or operator by the source's compliance date for that relevant standard. [NESHAP Subpart AAAAA, Section 63.7100(e) and Subpart A, Section 63.6(e)(3)]

RECORDS AND REPORTS

17. Initial Notification: An Initial Notification shall be submitted no later than 120 days after you begin startup of the lime kilns. [NESHAP Subpart AAAAA of 40 CFR 63]

18. Performance Test Notification: The permittee shall submit a notification of intent to conduct a performance test (to demonstrate compliance with the emission standards in NESHAP Subpart AAAAA) at least 60 calendar days before the performance test is scheduled to begin. In addition, the permittee shall submit a Notification of Compliance after the performance tests are completed. The information that needs to be provided for the notification requirements are identified in NESHAP Subpart AAAAA of 40 CFR 63. [NESHAP Subpart AAAAA of 40 CFR 63]

19. Test Reports: The required test report shall be filed with the Department, as soon as practical, but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. In addition to the information identified in Rule 62-297.310(8)(c), F.A.C., the test report shall also indicate the amount stone feed during the test and the heating value of the fuel fired in the kilns. [Rule 62-297.310(8), F.A.C.]

20. Compliance Reports: The required compliance report shall be filed with the Department semiannually. The initial compliance report must cover from initial startup of the new affected source and ending on June 30 or December 31, whichever date is the first date following the end of the first half calendar year. Each subsequent compliance report must be postmarked or delivered no later than August 29 and March 1

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thereafter containing the information identified in NESHAP Subpart AAAAA of 40 CFR 63. [NESHAP Subpart AAAAA of 40 CFR 63.7131]

21. Startup, Shutdown and Malfunction Special Exceedance Report: If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with §63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator). [NESHAP Subpart AAAAA of 40 CFR 63.6(e)]

22. Startup, Shutdown and Malfunction Report: When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in paragraph 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) compliance certification.

    [NESHAP Subpart AAAAA of 40 CFR 63.6(e)]

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B. Material Handling Operations (EU 003 – EU 016)

This section of the permit addresses the following emissions units.

EU No.	Emission Unit Description
003	Limestone Screening Operations
004	Limestone Screening and Crushing Operations
005	Lime Screening Operations
006	Wood Grinding Mill
007	Coke Grinding
008	Truck/Railcar Loading Areas and Enclosure
009	Conveyors, Transfer Points, and Storage Bins
010 - 016	Fabric Filter Baghouses

{Permitting Note: In accordance with Rule 62-212.400(PSD), F.A.C., the above emission unit is subject to BACT determinations for PM/PM_{10}/$PM_{2.5}$.

EQUIPMENT

1. The permittee is authorized to install and operate the following processes and equipment:

   a. Limestone Handling and Storage Process, including: conveyors; surge hopper; pan feeders; enclosed building containing a screen used to segregate limestone according to size and transferred into a charging bin; two enclosures containing surge bins; reject bin; load-out weigh bins; truck loadout area; two mechanical (blower) rooms; and baghouses throughout the process.

   b. Lime Handling, Crushing, Rejects, and Lime Kiln Dust Process, including: four hoppers each equipped with a pan feeder; conveyors; vents; an enclosed building containing 2-deck screen, 4-roller crusher and baghouse; two weigh bins; two rotary feeders; blowers; a kiln reject dust bin; two portable tote containers; rotary feeder; truck loadout area; and baghouses throughout the process.

   c. Lime Handling, Screening and Storage Process, including: vents; conveyors, an enclosed building containing a 3-deck screen and a baghouse; chute magnets; lime bins equipped with a self contained dustless truck loading spout; an enclosure containing a silo truck load-out area equipped with a truck scale; railcar load-out area; and baghouses throughout the process.

   d. Fuel Handling Processes:

      (1) *Wood Grinding System*, including: walking floor truck and screw conveyor area; raw wood storage bin; conveyors; an enclosure containing a mill; CO_2 systems; ground chip storage, shared ribbon mixer, dosing bin, blowers, baghouses; and a stack.

      (2) *Petroleum Coke/Coal Grinding System*, including: front-end loader/dump truck area; dump hopper; conveyors; feeders; petroleum coke and coal storage bin; an enclosure containing bowl mill, 3.5 Million British thermal units/hour (MMBtu/hour) heater; CO_2 systems; ground coke bin, dosing bin; shared ribbon mixer; blowers; baghouses; and a stack.

   [Design, Application No. 0310583-001-AC]

2. Fabric Filter Baghouses: The permittee shall install baghouses equipped with a differential pressure monitoring system. The general design specifications for the baghouses will consist of:

   - 99% or more removal of PM emissions (with manufacturer certification of this removal efficiency kept on site and available for inspection;

   [Design, Application No. 0310583-001-AC; NSPS Subpart OOO; and Rule 62-212.400 (BACT), F.A.C.]

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B. Material Handling Operations (EU 003 – EU 016)

PERFORMANCE RESTRICTIONS

3. Hours of Operation: The hours of operation are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

4. Limitation on Coal Preparation and Transfer: The coal preparation and processing equipment (consisting of thermal dryers, pneumatic coal-cleaning equipment (air tables), coal processing and conveying equipment (including breakers and crushers), and coal storage systems, transfer and loading systems) shall not process more 200 tons of coal per day. [Avoidance of NSPS Subpart Y - Coal Preparation and Processing Plants]

5. Applicable NSPS Provisions: The crusher, grinding mill, screening operation, bucket elevator, belt conveyor, storage bin, enclosed truck or railcar loading station are subject to, and shall comply with, the applicable provisions in NSPS Subparts A (General Provisions) and OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) of 40 CFR 60, which are identified in Appendix F. [NSPS Subparts A and OOO; and Rule 62-204.800(8), F.A.C.]

6. Applicable NESHAP Provisions: The processed stone handling (PSH) operations are subject to, and shall comply with, the applicable provisions in NESHAP Subparts A (General Provisions) and AAAAA (NESHAP for Lime Manufacturing Plants), which are identified in Appendix E of this permit. The PSH includes all equipment associated with PSH operations beginning at the processed stone storage bins or open storage piles and ending where the processed stone is fed into the kiln which includes man-made processed stone storage bins (but not open processed stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. [NESHAP Subparts A and AAAAA; and Rule 62-204.800(11), F.A.C.]

EMISSIONS STANDARDS

7. General Visible Emissions Standard: Except for emissions units that are subject to a PM or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20% opacity. [Rules 62-296.320(4)(b), F.A.C.]

8. Emissions Standards: Emissions from the following emission units shall not exceed the following standards:

Pollutant	EU No.	Emission Point	Description	Maximum Allowable Emissions Standards [a]
$PM/PM_{10}/PM_{2.5}$ [b]	006	ST-601 @ BM-4	Wood Grinding Mill	0.032 g/dscm (0.014 gr/dscf)
	007	ST-902 @ BM-30	Coke Grinding	
VE [c, d]	006	ST-601 @ BM-4	Wood Grinding Mill	5% Opacity
	007	ST-902 @ BM-30	Coke Grinding	
	010	DC-485 @ BM-17	Fabric Filter Baghouses [e]	
	011	DC-715 @ BM-3		
	012	DC-735 @ BM-6		
	013	DC-808 @ BM-28		
	016	DC-908 @ BM-7		
Fugitive VE [c, f]	003	Openings	Limestone Screening Building	5% Opacity
	004	Openings	Limestone Screening/Crushing Building	
	005	Openings	Lime Screening Building	
	008	All	Truck/Railcar Loading Areas and Enclosure	
	009	All	Conveyors, Transfer Points, and Storage Bins	

a. These are the Maximum Allowable Emission Standards that shall never be exceeded.
b. PM RACT Rules 62-296.711 and 62-296.712, F.A.C. requires a PM emission limit of 0.03 gr/dscf. These emission standards are less stringent than NSPS Subpart OOO, which was used to establish BACT (0.032 g/dscm (0.014 gr/dscf)); therefore, meeting BACT emission standards will satisfy these requirements.

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[Rules 62-212.400(BACT), 62-296.711 and 62-296.712, F.A.C.; NSPS Subpart OOO]

c. The BACT standard for visible emissions and fugitive visible emissions is 5% opacity which is more stringent than NSPS Subpart OOO opacity limit of 7% and NESHAP Subpart AAAAA opacity limit of 10%, and equal to the PM RACT Rules 62-296.711 and 62-296.712, F.A.C.; therefore, meeting BACT emission standard will satisfy this requirement. [Rule 62-212.400(BACT), F.A.C.]

d. Compliance with the opacity standard shall be determined by EPA Method 22. [NSPS Subpart OOO of 40 CFR 60; and NESHAP Subpart AAAAA of 40 CFR 63]

e. As specified by the application, the vendor specifications guarantee the baghouses are designed to control $PM/PM_{10}/PM_{2.5}$ to 0.01 gr/ dscf which provide reasonable assurance that annual emissions of $PM/PM_{10}/PM_{2.5}$ from the miscellaneous sources will not exceed 19.9/19.9/9.9 TPY, respectively.

f. Compliance with the opacity standard for fugitive emissions shall be determined by EPA Method 22 for at least 30 minutes. [NSPS Subpart OOO; and NESHAP Subpart AAAAA.]

TESTING REQUIREMENTS

9. Initial Compliance Tests: The emission units shall be tested to demonstrate initial compliance with the emissions standards for $PM/PM_{10}/PM_{2.5}$ and opacity. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit. [Rules 62-4.070(3) and 62-297.310(7)(a)1, F.A.C.]

10. Periodic Compliance Tests: The owner or operator shall conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR Part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility. [NESHAP Subpart AAAAA; NSPS Subpart OOO, §60.674(c)]

11. Compliance Test Prior to Renewal: Prior to Title V permit renewal, the emission units shall be tested to demonstrate compliance with the emissions standards for $PM/PM_{10}/PM_{2.5}$ and opacity unless the emission units did not operate during the year prior to renewal. [Rule 62-297.310(7)(a)3, F.A.C.]

12. Test Requirements: During each required compliance test, the permittee shall have all material handling operations and baghouses in full operation. The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.

13. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5, 5I, 17,	Methods for Determining Particulate Matter Emissions
9	Visual Determination of the Opacity of Emissions from Stationary Sources
22	Fugitive Opacity: Visual Determination of Fugitive Emissions

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The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. Additional procedures identified in NSPS Subpart OOO of 40 CFR 60 and NESHAP Subpart AAAAA of 40 CFR 63 shall also apply. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; Appendix A of 40 CFR 60; NSPS Subpart OOO and NESHAP Subpart AAAAA]

CONTROL EQUIPMENT

14. Wet Suppression: The permittee shall use wet suppression, when necessary to control fugitive particulate emissions. Wet suppression reduces PM emissions by direct contact between the particles within the air and spray droplets or by binding the smaller particles to the surface of the material. [Design, Application 0310583-001-AC; NSPS Subparts A and OOO; and Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

MONITORING REQUIREMENTS

15. Bag Leak Detector System: The permittee must operate and maintain the baghouse such that the bag leak detector system (BLDS) or PM detector alarm conditions does not exist for more than 5% of the total operating time in a 6-month period. Each BLDS shall meet all of the requirements identified in NSPS Subpart OOO and NESHAP Subpart AAAAA, including but not limited to: certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 mg/dscm (0.00044 gr/acf); the sensor on the BLDS shall provide output of relative PM emissions; each BLDS must be equipped with an alarm that will sound automatically when it detects an increase in relative PM emissions greater that a preset level. [NSPS Subpart OOO and NESHAP Subpart AAAAA]

16. Operations, Maintenance and Monitoring (OM&M) Plan: The permittee shall prepare and implement a written OM&M plan. You must submit the plan and any subsequent changes to the Department for review and approval. Each plan must contain the following information as identified in NESHAP Subpart AAAAA of 40 CFR 63, including but not limited to: the process and control device parameters to be monitored; a monitoring schedule for each emission unit; procedures for the proper installation, operation, maintenance of monitoring devices, monitoring process, and control device parameters; corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits; and a maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance. [NESHAP Subpart AAAAA]

17. Wet Suppression: Wet suppression to control fugitive emissions must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook. [NSPS Subpart OOO]

18. Startup, Shutdown and Malfunction Plan: The permittee shall develop a written startup, shutdown, and malfunction (SSM) plan that describes, in detail, procedures for operating and maintaining the source during periods of SSM; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The SSM plan does not need to address any scenario that would not cause the source to exceed an applicable emission limitation in the relevant standard. This plan must be developed by the owner or operator by the source's compliance date for that relevant standard. [NESHAP Subpart AAAAA]

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RECORDS AND REPORT

19. Wet Suppression Logbook: The owner or operator shall record each periodic inspection required for wet suppression, including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Department upon request. [NSPS Subpart OOO]

20. Initial Notification: An Initial Notification shall be submitted no later than 120 days after you begin startup of the lime kilns. [NESHAP Subpart AAAAA]

21. Performance Test Notification: The permittee shall submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin. In addition, the permittee shall submit a Notification of Compliance after the performance tests are completed. The information that needs to be provided for the notification requirements are identified in NESHAP Subpart AAAAA of 40 CFR 63. [NESHAP Subpart AAAAA]

22. Test Reports: The required test report shall be filed with the Department, as soon as practical, but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. [Rule 62-297.310(8), F.A.C.]

23. Compliance Reports: The required compliance report shall be filed with the Department semiannually. The initial compliance report must cover from initial startup of the new affected source and ending on June 30 or December 31, whichever date is the first date following the end of the first half calendar year. Each subsequent compliance report must be postmarked or delivered no later than August 29 and March 1 thereafter containing the information identified in NESHAP Subpart AAAAA. [NESHAP Subpart AAAAA]

24. Wet Suppression Report: The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit of 7% and the emission test requirements. [NSPS Subpart OOO]

25. Startup, Shutdown and Malfunction Report: If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, containing the information identified in NESHAP Subpart AAAAA. [NESHAP Subpart AAAAA]

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