alpha three
Consulting, LLC

Consultants to Process & Power Industries

31 January 2014

Mr. Alvaro Linero
Florida Department of Environmental Protection
Division of Air Resource Management
Office of Permitting and Compliance
2600 Blair Stone Road, M.S. 5505
Tallahassee, Florida 32399-2400

DELIVERED VIA ELECTRONIC MAIL [To: Alvaro.Linero@dep.state.fl.us] AND OVERNIGHT EXPRESS MAIL

Re: Written Comments on the Draft Air Permit No. 0310583-001-AC
Jacksonville Lime, LLC Lime Manufacturing Facility
Jacksonville, Duval County, Florida

Dear Mr. Linero:

This letter presents written comments on the Draft Air Permit No. 0310583-001-AC / PSD-FL-426 for the Jacksonville Lime, LLC Lime Manufacturing Facility to be located in Jacksonville, Duval County, Florida. Based on the Public Notice of Intent (Published January 3, 2014) posted on the FDEP's website the following is understood as the process for submittal of public comments and request for public meeting:

- The Permitting Authority will accept written comments concerning the proposed Draft Permit and requests for a public meeting for a period of 30 days from the date of publication of the Public Notice.
- Written comments must be received by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 30-day period.
- If a public meeting is requested within the 30-day comment period and conducted by the Permitting Authority, any oral and written comments received during the public meeting will also be considered by the Permitting Authority.

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Suite #101
Kennett Square, PA 19348-2043
610.836.1864

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610.566.8555

— If timely received comments result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice.

Based on the above understanding, written comments may be received until the close of business on Monday, February 3, 2014 (actual 30-day period ends on Sunday, February 2, 2014; therefore, the next business day is the final day public comments should be accepted).

The purpose of this letter is to formally request that FDEP notice and schedule a new public comment period for the proposed Permit on behalf of the interested party that Alpha Three Consulting, LLC represents. In addition, via this letter, we respectfully request a public meeting on behalf of the interested party that we represent to allow an adequate opportunity to address deficiencies in the Draft Permit and potential adverse impacts on ambient air quality, Class I areas, and human health.

The requests for a new comment period and a public meeting are being made on the basis of serious deficiencies and misrepresentations contained in the permit application, deficiencies in the Best Available Control Technology (BACT) demonstration, and errors and omissions in the dispersion modeling that may allow the proposed source to cause or contribute to exceedances of the National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD) Increment limits. In addition, the Draft Permit available for public review is not representative of the permit FDEP intends to issue to Jacksonville Lime as during the comment period, FDEP has been making significant revisions to the Draft Permit that have not been made available for public review and comment. Extension of the public comment period and scheduling of a public meeting will not result in a hardship on the applicant as the proposed Permit does not allow the applicant to commence construction. As FDEP acknowledges, the Permit for the Jacksonville Lime Facility does not address BACT requirements for Greenhouse Gases and is, therefore, incomplete.

If the FDEP has any questions or concerns regarding the written comments presented with this letter, please do not hesitate to contact me for clarification or additional details. I may be reached by phone at (610) 836-1864 or by email at mpsanders@alphathree.com.

Sincerely,

Michael P. Sanders

Principal Director

cc: Mr. Brian Himes, FDEP Air Quality Modeling [Brian.Himes@dep.state.fl.us]
Ms. Natasha Hazziez, US EPA Region 4 Jacksonville Lime GHG Permitting Contact [hazziez.natasha@epa.gov];
Ms. Heather Ceron, US EPA Region 4 Air Permits Section Chief [ceron.heather@epa.gov]

Enclosures:

1. Written Comments on the Draft Air Permit No. 0310583-001-AC / PSD-FL-426, Jacksonville Lime, LLC Lime Manufacturing Facility, Jacksonville, Duval County, Florida
2. Dispersion Modeling Review Summary Tables
3. Ambient Air Dispersion Modeling Receptors Overlay on Aerial Figure

Written Comments on the Draft Air Permit No. 0310583-001-AC / PSD-FL-426
Jacksonville Lime, LLC Lime Manufacturing Facility
Jacksonville, Duval County, Florida

Comments Provided By: Alpha Three Consulting, LLC

Date: January 31, 2014

Comment 1. Significant Revisions to Permit's Section Related to Material Handling Sources

FDEP has indicated that the Department is re-writing the Draft Permit, specifically the sections related to the Materials Handling Sources, Subpart OOO and Subpart AAAAA. The Draft Permit fails to present sufficient information to demonstrate that the EPA Top-Down BACT Procedures were followed for establishing emission limits for the Material Handling Sources. Further, the Draft Permit does not sufficiently identify the individual emission sources and specific emission limits that are to be enforceable in a manner that allows for review of such emission limits during the Public Comment period.

As a result of these significant deficiencies, the Draft Permit is not "complete"; and therefore, another Public Notice and Comment Period is requested in accordance with Rule 62-110.106, F.A.C., and paragraphs 62 210.350(1)(a) and (2)(a), F.A.C. Furthermore, as drafted, the Permit is not practically enforceable. The public should have an opportunity to review and provide comments on any significant changes to the Draft Permit.

Comment 2. PSD Permit Issuance Without Addressing Greenhouse Gas Emissions

The Draft Permit does not address greenhouse gas emissions. It is understood that 40 CFR 52.21, which is the federal PSD regulation potentially applicable to sources of six greenhouse gases (GHGs), is administered by EPA until the Florida SIP at 40 CFR 52, Subpart K is updated to reflect approval of a State rule to regulate GHGs. That said, it is not clear in the Draft Permit how the Permit will be affected in the event that EPA does not agree with the process as presented in the Draft Permit, or if there are other factors that may change or affect the information presented in the Draft Permit. Because GHG emissions are a regulated PSD pollutant, the logical approach to the issuance of this permit would be to hold the permit until the GHG emissions are permitted by EPA and then incorporate that document by reference into the Final Permit for the facility, with a Public Comment period allowing for review of the Facility's PSD Permit in its entirety.

Without addressing GHG emissions, the Draft Permit is not "complete"; therefore another Public Notice and Comment Period are requested in accordance with Rule 62-110.106, F.A.C., and paragraphs 62-210.350(1)(a) and (2)(a), F.A.C. The Public Notice and Comment Period and the public meeting should be scheduled after GHG emissions are incorporated into the Draft Permit. The public should have an opportunity to provide comments on the proposed GHG BACT determination and any other changes to the Draft Permit or Facility operations that may result from the GHG BACT.

Comment 3. Commencement of Construction

According to the EPA's Request for Additional Information letter dated April 17, 2013, the following information should be relied upon for clarification of when construction may begin: § 52.21 (a)(2)(iii) – No new major stationary source or major modification to which the requirements of paragraphs (j) through (r)(5) of this section apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements. § 52.21 (b)(11) defines ***"Begin actual construction"*** as, is general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipe work and construction of permanent storage structures.

Issuance of the Permit prior to the GHG emissions being permitted by EPA will start the timeline on the construction phase of the project; however, according to the EPA, the Facility will not be able to begin construction until the GHG emissions are permitted. The Permit should include an enforceable permit limit that identifies when commencement of construction may begin.

Comment 4. Draft Permit Emissions Standards for the Vertical Lime Kilns (EU001 and EU002)

The Emissions Standards presented in Section 3 of the Draft Permit do not specifically limit emissions on a pound per hour (lb/hr) basis for NOx, SO2 and CO or on a 24-hour basis for PM10/PM2.5. Without these short-term emissions limits expressly listed in the Permit, there is no assurance that the 1-hour NOx, 1-hour SO2, 1-hour CO, 24-hour PM10 and 24-hour PM2.5 NAAQS are protected. Since the ambient air quality modeling that was completed for the Facility uses a mass per unit of time emission rate expressed in units of grams per second (g/s), the Permit must also expressly include a mass per unit of time emission limit. The enforceable mass emission limits must be equal to or less than the emission rates used in the dispersion modeling analysis. The emission limits for point sources may also be represented as a concentration limit but only if an associated maximum flow rate for each source is included as an enforceable condition of the Permit. Without short-term emissions limits for each pollutant, there is no way of ensuring protection of the NAAQS and PSD Increment limits.

Comment 5. PM10 and PM2.5 Condensable Emissions Standards

The PM10 and PM2.5 BACT limits presented in Section 3 of the Draft Permit do not include condensable emissions; however the TESD clearly states that "[A]ccording to Department Rule 62-210.200 (Definitions), F.A.C., for purposes of PSD and PSD avoidance, PM10 and PM2.5 emissions shall include condensable PM10 and PM2.5, respectively."

The Draft Permit does indicate that "NOx is a precursor of the condensable portions of PM10 and PM2.5. Therefore, the NOx BACT determination is part of the BACT for PM10 and PM2.5;" and "Most condensable PM10 and PM2.5 emissions from the Jacksonville Lime project will be caused by SO2 conversion to sulfur trioxide (SO3) in an excess air environment and then to sulfuric acid mist (SAM)…". These two pollutants do not account for the entire condensable portion, which is comprised of compounds such as ammoniated chlorides, sulfates, nitrates, VOC and other such species condensing at low temperature.

The Permit should include both filterable and condensable particulate matter in the BACT limits in Section 3. The Permit should also specify appropriate emissions test methods to measure both components.

Comment 6. Exclusion of Direct Condensable PM in Modeling

PM2.5 consists of directly emitted particles, including those particles that are measurable (filterable) at stack or exhaust temperatures as well as those particles which quickly condense to fine particles, including aerosols, at ambient air conditions (PM_{cond}). PM2.5 also includes secondary particulates that are formed in the complex interaction of gases, particles and the atmosphere itself to form secondary particles.

On May 16, 2008, EPA published the *Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5 Rule).* Based on this rule, PM_{cond} should be included for both the PM10 and PM2.5 NAAQS evaluations when the condensable fraction of particulate emissions can be estimated using published AP-42 emission factors or other reasonable means of estimating PM_{cond}. PM_{cond} should be treated the same as direct PM10 and PM2.5 filterable emissions for the purposes of demonstrating compliance with the applicable NAAQS and PSD Increment.

Comment 7. Start-Up, Shutdown and Malfunction Emissions Standards

The Permit should define the terms start-up, shutdown and malfunction (SSM) within the context of each emissions standard.

In addition to defining SSM, the Permit should specify for all BACT emissions standards an alternative BACT limit that applies during SSM. BACT emission limits apply at all times and may not be waived during periods of SSM. As a rationale for the SSM permit conditions, the TESD should contain an analysis of whether compliance with normal BACT limits is feasible during SSM. To establish a work practice standard as BACT, the TESD should identify technical or economical constraints on the application of a measurement methodology that would make the imposition of an emissions standard infeasible during SSM and provide a rationale why the control methodologies and work practices were selected.

Comment 8. Plant Haul Road Emissions Standards

The permit application claims that the plant haul roads will be paved. This could be considered BACT since fugitive emission sources must be included in the Permit; therefore, the Permit should at a minimum require that all in-plant haul roads be paved and swept or watered with a specified frequency and that adequate records are maintained to demonstrate compliance with these permit conditions. The Permit should also include maintenance requirements for all roads on plant property to ensure that the integrity of the roads is preserved and that fugitive emissions of PM, PM10 and PM2.5 from all roads on plant property are minimized.

Comment 9. Modeling Fugitive Sources

The applicant claimed that "Plant roadways will be paved. Accordingly, fugitive PM10/PM2.5 emissions due to vehicle travel on the plant roadways will be negligible, and, therefore, not included in the modeling analyses. Per FDEP recommendations, fugitive sources of

PM10/PM2.5 were not included in the modeling." Review of the modeling indicates that only the following sources were included in the PM10/PM2.5 air dispersion modeling:

Emission Unit ID	Description	Emission Unit ID	Description
BM-3	Wood Chip Raw Storage Collector	BM-16	Lime Silo Truck Loadout Spouts
BM-4	Wood Chip Process Dust Collector Stack	BM-17	Reject Bin Top
BM-6	Dosing Bin #1	BM-19	Kiln Stack
BM-7	Dosing Bin #2	BM-21	Lime Reject Bin Loadout
BM-9	Lime Handling Under Kilns	BM-23	Stone Feed Reject Bin Loadout
BM-11	Lime Crusher Bldg	BM-27	Coke Conveyor Belt Transfer
BM-12	Top of Lime Silos / Screening	BM-28	Coke Raw Storage Bin
BM-13	Lime Silo Truck Loadout Spouts	BM-30	Coke Process Dust Collector Stack
BM-14	Lime Silo Truck Loadout Spouts	BM-31	Lime Railcar Loadout
BM-15	Lime Silo Truck Loadout Spouts	BM-32	Stone Feed Reject Bin

The exclusion of fugitive sources from the ambient air quality dispersion modeling analysis is inappropriate for lime manufacturing facilities. Fugitive particulate matter emissions in such operations are significant and have the potential to cause or contribute to exceedances of the NAAQS and PSD Increment limits.

FDEP should include all fugitive emission sources of PM10 and PM2.5 in the SIL, NAAQS and PSD Increment modeling.

Comment 10. Modeled Source Parameters

Stack parameters for all equipment, including but not limited to stack heights, stack diameters, exhaust temperatures, emission rates, and exit velocities, should be included as enforceable permit conditions. These conditions are necessary to ensure protection of the NAAQS and PSD Increment limits.

If significant changes are made, or modeling parameters are not representative of site conditions, the Facility should be expressly required in the Permit to document compliance with the NAAQS and PSD Increment prior to making such changes.

Comment 11. Confirmation of NO2/NOx Ratio

Dispersion modeling for the 1-hour NO2 NAAQS was approved by EPA to use an NO2/NOx ratio of 0.14 for the vertical lime kilns (stack BM-19). The Permit should include a requirement to confirm this value as part of the Performance Testing requirements.

Comment 12. Reduced Load Operations

The ambient air dispersion modeling did not address reduced load operations. Reduced load operations generally result in lower emissions; however, the stack parameters may change (i.e. reduced flow rate), which can affect plume rise and dispersion of the pollutants, thereby increasing ground level concentrations. Exceedances of the NAAQS and PSD Increment limits may occur when stack exit velocities are reduced even with a reduced emission rate. The

applicant's modeling should include an analysis of reduced load operations to demonstrate compliance with the NAAQS and PSD Increment limits.

Comment 13. Modeled Facility Fenceline and Ambient Air Receptors

The attached figure depicts the extracted the source and receptor coordinates that were analyzed in the models. These points were overlain over an aerial of the facility to confirm the UTM datum used and position of the fenceline with respect to the Facility and ambient air. As shown on the figure, the eastern "fenceline" is offshore up to 67 meters (220 feet) in the southeast corner of the Facility. The TESD does not address the placement of receptors beyond the Facility's fenceline; therefore, it appears that ambient air along the east property boundary was not adequately evaluated in the modeling completed. Fenceline receptors should be placed along the Facility's property boundary in accordance with EPA modeling procedures. As discussed in the April 30, 1987 Ambient Air Memorandum published by the EPA OAQPS, air over a river is ambient air if it is not controlled by the source. EPA further states that the river does indeed form a sufficient natural boundary/barrier and that fencing is not necessary, since the ambient air policy requires a fence or other physical barrier. However, the following conditions should be met:

- The riverbank must be clearly posted and regularly patrolled by plant security.
- It must be very clear that the area is not public. Any areas where there is any question (i.e., grassy areas, etc.) should be fenced and marked, even if there is a very remote possibility that the public would attempt to use this property.

Using this memorandum as guidance, FDEP should have included as ambient air in the dispersion modeling analysis, any part of the eastern waterway not controlled by the Facility. The FDEP should also include in the Permit, an enforceable permit condition requiring control of the shore at the Facility based on the conditions presented in the EPA's April 30, 1987 memorandum.

Comment 14. PM10/PM2.5 Modeling Results

Due to the inadequate description of sources and applicable BACT limits in the Draft Permit and TESD for the sources at the facility other than the vertical lime kilns (stack BM-19); it is not possible to confirm the emission rates that should have been relied upon for the PM10/PM2.5 air dispersion modeling. Concerns and deficiencies with the PM10/PM2.5 modeling are listed below:

- No fugitive emission sources were included in the PM10 and PM2.5 modeling analyses.
- Only filterable PM10 and PM2.5 emissions were included in the PM10 and PM2.5 modeling analyses.
- Ambient temperatures were not set to "0 deg K", therefore, the model did not adjust temperatures based on ambient temperatures. The temperature was maintained at 70 deg F in the PM10/PM2.5 modeling analyses.
- Inconsistent emission rates were used in SIL, NAAQS and PSD Increment modeling files for the PM10 and PM2.5 24-hour and annual averaging periods. The specific emission

rate differences are detailed in the attached tables for these pollutants and averaging time periods. Please see either column titled, "Difference in g/s From Model to App (RED Indicates APP Value Higher Than Model" or "File Review Notes When Comparing to B_PM2.5_24_SILYR Files (Discrepancies Noted)".

In addition to the deficiencies identified above, specific comments for the PM2.5 modeling are enumerated below:

1. Two sets of PM2.5 24-hour SIL output runs were observed to be part of the Permit's modeling files. The first set of SIL runs were for each individual year, while the second set was a combined 5-year run. The emission rates in these two sets of SIL runs were different.

2. Only 11 receptors were included in the PM2.5 24-hour NAAQS model runs while 75 receptors were included for the PSD Increment runs. This is not explained in the TESD and is not generally what would be expected since the receptors are selected based on those that exceed the SIL. The SIL runs are independent of the NAAQS and PSD Increment runs, so the receptors used in each run should be the same.

3. Review of the PM2.5 24-hour NAAQS model runs identified several errors. First, the emission rates used in the modeling were not consistent with the emission rates contained in the Draft Permit. In addition the model results did not agree with the reported PM2.5 24-hour NAAQS results in the TESD. The NAAQS for the PM2.5 24-hour averaging period is 35ug/m^3 based on the 98th percentile, averaged over 3 years. The NAAQS compliance demonstration should then compare the high 8th high 24-hour value averaged on a receptor-by-receptor basis over the 5 year period to the NAAQS. The high 8th high 24-hour maximum concentration from the PM2.5 NAAQS model runs occurred when wood was fired: 24.38 ug/m^3 plus background (19 ug/m^3) = 43.36 ug/m^3. Although Facility's contribution is less than SIL in the model run, the reported results are artificially low since the modeling excluded all fugitive dust emission sources and excluded condensable PM from the Facility's modeled PM2.5 emission rates.

4. Based on Table 25 in the TESD, the FDEP reports that the Facility's maximum PM2.5 24-hour NAAQS contribution is 0.6 ug/m^3. Adding the background concentration plus nearby source contributions results in a modeled maximum concentration of 53.58 ug/m^3, which is greater than the 35 ug/m^3 NAAQS limit. The FDEP states at the bottom of this table that, "While some modeled exceedances exist, Jacksonville Lime is not expected to cause or significantly contribute to any actual violation of a NAAQS." Although the value presented in Table 25 for the Facility is less than the SIL (1.2 ug/m^3), the receptor selection, the omissions of fugitive emission sources and condensable PM, and discrepancies between the Draft Permit emission limits, the application and the dispersion modeling files necessitate that the modeling analysis be performed again to ensure protection of the NAAQS and PSD Increment limits.

Specific comments for the PM10 modeling are enumerated below:

1. The NAAQS for the PM10 24-hour averaging period is 150 ug/m^3, not to be exceeded more than once per year. The value selected for comparison to the NAAQS when a 5

year cumulative meteorological data file is used is the high 6th high, or H6H. What this means for this standard is that for all of the receptors, for every 24-hour averaging period over a 5 year period, there can be only 5 exceedances of the NAAQS standard (or one per year). The PM10 24-hour NAAQS cumulative analysis results presented in the TESD are not based on the H6H. The explanation for this requires the attached tables be reviewed in detail, as well as the PM10_CUM_24hr5y.ADO model run and the PM10_CUM_24HR5Y.MAX model run.

The true 6th high cumulative impact value obtained from the set of 1st-highest 24-hour results averaged over 5 years is 58.96 ug/m^3. The MAXDCONT analysis was performed inappropriately and relied upon the set of 6th-highest 24-hour results average over 5 years. In other words, the MAXDCONT values compared to the NAAQS allowed for the receptors modeled to have potential exceedances of the NAAQS when there was an exceednace of the SIL up to 5 times for each receptor. The MAXDCONT file's set of 6th-highest 24-hour results are the individual receptors 6th high, not the cumulative receptor set's 6th high.

The MAXDCONT file should be the 1ST-HIGHEST 24-HR VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP ALL; then the 6th high average concentration reported should be reviewed to see what the contribution was from Jacksonville Lime for comparison to the NAAQS standard of 150 ug/m^3. This high 6th high (H6H) allows for one exceedance per the 5 year period and the 6th high is the 6th exceedance that should be compared to the NAAQS.

The maximum cumulative concentration value of 31.77 ug/m^3 reported in Table 25 of the TESD as the maximum modeled cumulative source contribution is the individual receptor's 6th high, not the overall 6th high cumulative impact. The true 6th high cumulative impact value is 58.96 ug/m^3. This impact plus the background concentration is 135.96 ug/m^3; however, the reported results are artificially low since the modeling excluded all fugitive dust emission sources and excluded condensable PM from the Facility's modeled PM10 emission rates. Although the reported cumulative impacts plus background concentration from this modeling analysis are less than the PM10 24-hour NAAQS standard, the omission of fugitive emission sources and condensable PM, and discrepancies between the Draft Permit emission limits, the application and the dispersion modeling files necessitate that the modeling analysis be performed again to ensure protection of the NAAQS and PSD Increment limits.

Comment 15. NO2 Modeling Results

Concerns and deficiencies with the NO2 modeling are listed below:

— The modeled NO2 emission rate for the vertical lime kilns (stack BM-19) is 10.4 g/s, which is 41.27 lb/hr per kiln (or approximately 82.54 lb/hr). The modeled emission rate is lower than the BACT limit established in the Draft Permit (43.6 lb/hr). The modeled NO2 emission rate should have been 11.0 g/s.

Specific comments for the 1-hour NO2 modeling are enumerated below:

1. The TESD presents approved in-stack ratios to be used for the OLM Option when modeling 1-hour NO2 impacts. The 1-hour NO2 SIL run used an in-stack ratio of 0.05 for the Dryer (BM-30). This in-stack ratio was not approved by EPA, nor is it listed as an approved in-stack ratio in Table 26 of the TESD. Use of the in-stack ratio of 0.05 for the Dryer (BM-30) results in artificially lower SIL impacts that in turn reduce the number of receptors selected for inclusion in the NAAQS analysis. Therefore, the use of this in-stack ratio for BM-30 is not appropriate and modeling with the default in-stack ratio of 0.5 for BM-30 should be performed.
2. The number of receptors for the 1-hour NO2 SIL run were different than the number of receptors for all other SIL runs. All other SIL runs used 2,478 receptors, while the 1-hour NO2 SIL run used only 2,143 receptors.
3. The NAAQS for the NO2 1-hour averaging period is 100 ppb based on the 98^{th} percentile, averaged over 3 years. The 100 ppb limit converts to 188 ug/m^3. The NAAQS compliance demonstration should then compare the high 8^{th} high maximum daily 1-hour value averaged on a receptor-by-receptor basis over the 5 year period to the NAAQS. The high 8^{th} high maximum daily 1-hour maximum concentration from the NO2 NAAQS model run was: 189.28 ug/m^3 including background concentrations. Although Facility's contribution is less than SIL in the model run, the reported results are artificially low since the modeling did not use the BACT limit established in the Draft Permit.

Specific comments for the annual NO2 modeling are enumerated below:

1. Only year 2007 appears to have been evaluated for annual NO2 NAAQS and PSD Increment modeling. This is not appropriate since the maximum impact with cumulative sources may not occur at the same date and time as the maximum facility receptor and any exceedance of the NAAQS when the facility is contributing over then SIL is a NAAQS violation. A review of the annual NO2 SIL modeling files provided by the FDEP show SIL exceedances for all years (maximum annual values were 1.3, 1.5, 1.2, 1.1 and 1.3 ug/m^3 for years 2006 through 2010, respectively). Modeling for all years the SIL is exceeded should be performed.
2. The TESD indicates that for the annual NO2 NAAQS cumulative run, the maximum contribution from the Facility is 1.49 ug/m^3 (see Table 25); however, the maximum SIL value reported in Table 23 is 1.1 ug/m^3. Since the modeling submitted by the Facility used an emission rate less than the BACT limit established in the Draft Permit and because a higher emission rate would result in a higher result than the SIL value reported in the TESD, the modeling results are not reliable. Modeling should be performed again using the correct BACT limit and proper receptor selection.
3. The TESD indicates for the annual NO2 PSD Increment run, the maximum cumulative modeled impact was 2.57 ug/m^3; while review of the modeling file for the 2007 PSD Increment analysis indicated the maximum cumulative concentration was 3.41 ug/m^3. Due to this discrepancy, and since the modeling submitted by the Facility used an

emission rate less than the BACT limit established in the Draft Permit, the modeling results are not reliable. Modeling should be performed again using the correct BACT limit and proper receptor selection.

Comment 16. SO2 Modeling Results

Concerns and deficiencies with the 1-hour, 3-hour, 24-hour and annual SO2 modeling are listed below:

— The modeled 1-hour, 3-hour, 24-hour and annual SO2 SIL emission rate for the vertical lime kilns (stack BM-19) is 4.51 g/s, which is 17.9 lb/hr per kiln (or approximately 35.79 lb/hr). The modeled emission rate is lower than the BACT limit established in the draft permit (18.2 lb/hr). The modeled SO2 SIL emission rate should have been 4.59 g/s.

Specific comments for the 1-hour SO2 modeling are enumerated below:

1. Based on Table 25 in the TESD, the FDEP reports that the Facility's maximum SO2 1-hour NAAQS contribution is 7.51 ug/m^3. Adding the background concentration plus nearby source contributions results in a modeled maximum concentration of 534.95 ug/m^3, which is greater than the 196 ug/m^3 NAAQS limit. The FDEP states at the bottom of this table that, "While some modeled exceedances exist, Jacksonville Lime is not expected to cause or significantly contribute to any actual violation of a NAAQS." Although the value presented in Table 25 for the Facility is less than the SIL (7.9 ug/m^3), the receptor selection based on the modeled SIL emission rate and less than 5% difference from the SIL threshold value and the Facility's contribution at this maximum concentration necessitate that the modeling analysis be performed again to ensure protection of the NAAQS. The re-model should also include a refined receptor grid in the area of concern where the NAAQS is exceeded and the Facility's contribution is within 10% of the SIL.

4. The results in the MAXDCONT__SO2.MAX file provided by the FDEP did not correlate to the modeled concentrations presented on Table 25 in the TESD. The NAAQS for the SO2 1-hour averaging period is 75 ppb based on the 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years. The 75 ppb limit converts to 196 ug/m^3. The NAAQS compliance demonstration should then compare the high 4th high maximum daily 1-hour maximum value averaged on a receptor-by-receptor basis over the 5 year period to the NAAQS. The high 4th high maximum daily 1-hour maximum concentration from the SO2 NAAQS MAXDCONT model run was: 291.92 ug/m^3 including background concentrations. This discrepancy indicates that the modeling results are not reliable.

Comment 17. Cumulative Particulate Modeling for Wood and Coke Scenarios

The cumulative modeling for PM10 and PM2.5 included two different operating scenarios: 1) combusting wood in the vertical lime kilns and 2) combusting coal in the vertical lime kilns. Because the two different scenarios presented sources with emissions rates set to zero (0.0) to indicate those sources would not be operating during the given scenario, the Permit should include an enforceable permit condition prohibiting the use of those sources to the specific

scenario modeled. Fugitive dust emission sources such as stockpiles are always subject to wind erosion and should not be set at zero at any time. Likewise, if any of the fuels will be fired in combination, the emission rates for any one fuel handling system cannot be set to zero. If the Facility requires the operational flexibility to work various fuel equipment when a certain fuel is being combusted, then the modeling should not set fuel-specific equipment to zero.

Comment 18. Class I SIL Modeling

Class I SIL modeling files were not reviewed; however, due to the significant comments related to the Class II modeling presented herein, it is apparent that the Class I SIL modeling emissions rates should be reviewed by FDEP to ensure the emission rates are consistent with the BACT emissions limits presented in the Draft Permit. Further, the PM10 and PM2.5 emission rates used in the Class I SIL modeling should include fugitive emission sources and condensable PM.

Comment 19. BACT Using Natural Gas As Baseline Fuel

The Facility has proposed natural gas, petroleum coke, coal and wood chips as alternative fuels for the kilns. The BACT analysis for SO2 and NOx should evaluate natural gas as the baseline fuel. Increased emissions of CO, NOx and SO2 associated with the proposed alternative fuels (wood chips, coal and petroleum coke) should be compared against baseline emissions from natural gas. The BACT should compare the costs of control ($/ton of pollutant removed) assuming natural gas as the baseline fuel with coal, coke and wood chips as the alternative fuels.

The natural gas cost estimates included in the BACT analysis are higher than supported by past, current and forecast prices. In the period January 1, 2010 through December 13, 2013, actual, delivered natural gas prices in Jacksonville have averaged $5.22 per MMBtu according to Schneider Electric, an energy consulting firm. Furthermore, natural gas prices are projected to remain low due to the significant increases in production across the US. The natural gas pricing presented in the application was an average price of $7.70 per MMBtu, an inflation of 47% over actual natural gas prices.

For purposes of the Facility's BACT analysis, natural gas should be considered as the BACT baseline fuel. The emission increases associated with the alternative fuels proposed should be evaluated through EPA's "top-down" BACT approach.

Comment 20. SCR Control for NOx

The application indicates the cost of SCR is ~$9,900/ton of NOx removed (not incremental). Review of PSD permits issued in other states indicate that this economic justification would not have been determined to be infeasible and add-on control would have been required at a cost of only $9,900/ton of pollutant removed.

SCR and SNCR control should be reviewed again using the EPA's "top-down" BACT approach and representative cost values for emission controls and alternative fuels (see Comment 20).

Comment 21. SO2 BACT Analysis

After review of the RBLC database information for SO2 provided in the application, much lower SO2 limits for inherent dry scrubbing on coal/coke fired kilns were observed than the 1.10 lb SO2/ton lime in the permit. The newest kiln in Illinois at Mississippi Lime for two 1200 tpd

kilns was 0.65 lb/ton lime based on a 24-hour average. The TESD focuses on European data for establishing the BACT limit (over 90% of the PFR kiln SO2 measurements were less than 50 mg/Nm^3, thus FDEP used 50 mg/Nm^3 (~4.2 lb/hr) as the limit for natural gas and wood combustion. The selection of 200 mg/Nm^3 for petroleum coke and coal seems to come from Figure 12 of the TESD, which shows no PFR kilns with SO2 emissions greater than 200 mg/Nm^3 (18.2 lb/hr)). The BACT costs presented were incremental for SO2 control, but the FDEP indicated in the TESD that it didn't necessarily agree with the cost assessment.

Proposed emissions for SO2 should be reviewed again based on the EPA's "top-down" BACT approach using a thorough cost evaluation to determine what controls are not technically and/or economically feasible. Further, incorporation of Comment 20 regarding assumptions for natural gas pricing should be considered in the BACT analysis for this pollutant.

Comment 22. CO BACT Analysis

The establishment of a CO BACT limit of 200 mg/Nm^3 instead of 100 mg/Nm^3 for natural gas does not seem justified since the PFR kiln is suppose to be more efficient and operated in such a manner to reduce CO emissions. The use of 400 mg/Nm^3 for the solid fuels appears to be the high end of expected emissions range. The proposed BACT values for this pollutant seem higher than what the unit is capable of readily achieving and a review of the established values should be performed to ensure BACT guidelines are being met. Comment 20 concerning natural gas price assumptions should be considered in the BACT analysis for this pollutant.

Comment 23. Continuous Emissions Monitoring for CO

Continuous emissions monitoring for CO should be required for the vertical lime kilns exhaust. Because CO has a BACT limit based on a concentration of 400 mg/Nm^3 when combusting coal, petroleum coke and wood chips; and 200 mg/Nm^3 when combusting natural gas, the BACT limit should be monitored at all times to ensure proper combustion and tuning of the system.

Comment 24. Emissions Testing for VOC, HCl and HF

The Permit should include Performance Testing requirements for the following pollutants: VOC, Lead, Mercury, HCL and HF. The application indicated that the Facility would not exceed the PSD SER threshold of 40 tpy VOC or 3 tpy total fluorides. Because the proposed vertical lime kilns are a newer technology, the VOC emissions should be confirmed for purposes of comparison to the PSD SER. Further, the application indicated that the potential total fluoride emissions were 2.7 tpy, which is within 10% of the PSD SER for this pollutant. HCl is a hazardous air pollutant (HAP), and is emitted in quantities large enough to result in the Facility being classified as a major source of HAPs.

Comment 25. Request for Public Meeting

A Public Meeting is requested to allow for the public to review and comment on the above written comments, as well as any changes made to the Draft Permit prior to the issuance of the Final Permit. Serious deficiencies in the application, Draft Permit and TESD combined with the potential impacts on the nearby residential neighborhood make a public meeting appropriate.

PM2.5 24-HR Modeling Review Summary

						From Application		B_PM2.5_24_SILYR File Inputs							
Source ID	Group ID	Source Type	X Coord	Y Coord	Base Elevation	Emission Rate (lb/hr)	Emission Rate (g/s)	Emission Rate (g/s)	Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)	Emission Rate (ton/yr)	Stack Height (m)	Stack Temp (deg K)	Stack Exit Velocity (m/sec)	Stack Dia (m)	File Review Notes When Comparing to B_PM2.5_24_SILYR Files (Discrepancies Noted)
BM3	Wood_Sto	POINT	439320.67	3359679.40	3.9624	0.008	0.001	0.001	0	0.0348	18.3	294.1	25.4	0.24	Emission rate set to zero for PM24CUMCOKE
BM4	Wood_Pro	POINT	439335.69	3359645.21	3.9624	0.045	0.0057	0.0057	0	0.1981	18.3	294.1	26.1	0.57	Emission rate set to zero for PM24CUMCOKE
BM6	Dose_Bin	POINT	439341.69	3359622.50	3.9624	0.019	0.0024	0.0023	**(0.0001)**	0.0800	27.4	294.1	27.2	0.29	Emission rate set to zero for PM24CUMCOKE
BM7	Dose_Bin	POINT	439339.43	3359621.34	3.9624	0.013	0.0017	0.0017	0	0.0591	27.4	294.1	27.2	0.29	0.0016 g/s used in 2006 PM2.5INC24hr06 Emission Rate set to zero for PM24CUMWOOD
BM9	K12_Lime	POINT	439321.61	3359609.08	3.9624	0.103	0.013	0.013	0	0.4519	18.3	338.6	25.8	0.4	0.0065 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)
BM11	Crusher	POINT	439298.32	3359657.04	3.9624	0.139	0.0175	0.0175	0	0.6083	44.2	338.6	21.1	0.52	0.0088 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)
BM12	Top_Silo	POINT	439289.96	3359654.42	3.9624	0.049	0.0062	0.0062	0	0.2155	44.2	294.1	21.7	0.52	0.0104 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)
BM17	Rej_Bin	POINT	439303.09	3359603.04	3.9624	0.012	0.0015	0.0015	0	0.0521	29.9	338.6	20.8	0.3	0.0007 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE) 0.004 g/s used in 2006 PM2.5INC24hr06 0.0015 g/s used for 2007-2010 PM2.5INC24hrYR
BM19	Kiln	POINT	439339.20	3359613.08	3.9624	1.697	0.2138	0.2138	0	7.4321	65	418.71	20	1.457	This modeled emission rate is approximately 0.848 lb/hr per kiln, which is lower than the BACT emissions limit of 0.9 lb/hr presented in the Draft Permit. The modeled PM2.5 emission rate should have been 0.23 g/s.
BM21	Rej_Load	POINT	439305.66	3359603.63	3.9624	0.006	0.0008	0.0008	0	0.0278	10.7	294.1	20.1	0.21	0.004 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)
BM23	LS_Feed	POINT	439339.20	3359592.39	3.9624	0.002	0.0002	0.0002	0	0.0070	10.7	294.1	20.1	0.21	None
BM27	Coke_Tx	POINT	439343.23	3359679.73	3.9624	0.003	0.0004	0.0004	0	0.0139	10.7	294.1	21.4	0.31	Emission rate set to zero for PM24CUMWOOD
BM28	Coke_Sto	POINT	439334.93	3359677.17	3.9624	0.002	0.0003	0.0003	0	0.0104	23.2	294.1	21.4	0.29	Emission rate set to zero for PM24CUMWOOD
BM30	Dryer	POINT	439348.26	3359648.84	3.9624	0.037	0.0047	0.0047	0	0.1634	36.6	294.1	27.9	0.49	Emission rate set to zero for PM24CUMWOOD
BM31	RR_Load	POINT	439277.14	3359627.39	3.9624	0.026	0.0033	0.0033	0	0.1147	12.5	294.1	20.1	0.21	0.0016 used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)
BM32	SFRB	POINT	439339.20	3359593.31	3.9624	0.026	0.0033	0.0033	0	0.1147	33.5	294.1	26.8	0.44	

PM2.5 24-HR Modeling Review Summary

Source ID	Group ID	Source Type	X Coord	Y Coord	Base Elevation	Emission Rate (lb/hr)	Emission Rate (g/s)	Emission Rate (g/s)	Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)	Emission Rate (ton/yr)	Release Height (m)	Initial σy (m)	Initial σz (m)	File Review Notes When Comparing to B_PM2.5_24_SILYR Files (Discrepancies Noted)
BM1314	Trk_Load	VOLUME	439282.33	3359676.35	3.9624	0.004	0.0004	0.0002	**(0.0002)**	0.00695	3.6	13.43	1.5	0.0001 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)
BM1516	Trk_Load	VOLUME	439293.69	3359627.13	3.9624	0.004	0.0004	0.0002	**(0.0002)**	0.00695	3.6	13.43	1.5	0.0001 g/s used in cum SIL 5 yr run (PM25SIL5YR) and NAAQS (PM24CUMWOOD & PM24CUMCOKE)

Run Type	Number of Receptors	Run Name
PM2.5 SIL 24-HR	2478	B_PM2.5_24_SILYR Runs
PM2.5 SIL 24-HR 5 YR Combined	2478	PM25SIL5YR
PM2.5 SIL ANN	2478	B_PM2.5_ANN_SILYR Runs
PM2.5 INC	**75**	PM2.5INC24hrYR Runs
PM2.5 NAAQS	**11**	PM24CUMWOOD & PM24CUMCOKE Runs

Only 11 receptors were included in the PM2.5 24-hour NAAQS model runs while 75 receptors were included for the PSD Increment runs. Receptors are selected based on those that exceed the SIL. The SIL runs are independent of the NAAQS and PSD Increment runs, so the receptors used in each run should be the same.

PM2.5 SIL 24-HR Results						Conc (ug/m^3)	X Coord	Y Coord
2006	ALL	1ST	HIGHEST	VALUE	IS	1.73283	439157.28	3359535.28
2007	ALL	1ST	HIGHEST	VALUE	IS	3.27099	439256.84	3359454.86
2008	ALL	1ST	HIGHEST	VALUE	IS	2.31448	439292.42	3359432.96
2009	ALL	1ST	HIGHEST	VALUE	IS	3.44824	439327.99	3359411.05
2010	ALL	1ST	HIGHEST	VALUE	IS	2.52635	439220.51	3359470.19
5 YR	ALL	1ST	HIGHEST	VALUE	IS	1.63078	439220.51	3359470.19

***This value is from the cumulative 5 year file reported as a SIL file; emission rates are different than individual year SIL runs (B_PM2.5_24_SILYR); this is the value that matches the TESD reported SIL value.

PM2.5 24-HR Modeling Review Summary

PM2.5 NAAQS 24-HR Results (Contribution Analysis)
Only 11 receptors were included in the PM2.5 24-hour NAAQS model runs while 75 receptors were included for the PSD Increment runs. This is not explained in the TESD and is not generally what would be expected since the receptors are selected based on those that exceed the SIL. The SIL runs are independent of the NAAQS and PSD Increment runs, so the receptors used in each run should be the same.

PM2.5 NAAQS 24-HR Results		8th-Highest	24-Hr Results Averaged Over 5 Years			Conc (ug/m^3)	X Coord	Y Coord	
5 Year	ALL	1ST	HIGHEST	VALUE	IS	24.36139	439292.42	3359432.96	***From PM24CUMCOKE.ADO

PM24CUMCOKE.MAX MAXDCONT Results for 8TH-HIGHEST 24-HR VALUES AVERAGED OVER 5 YEARS

Averaging Period	RANK	ALL Conc (Nearby Sources Plus Jax Lime) (ug/m^3)	Conc From Jax Lime Only (ug/m^3)	
24-HR	1ST	24.36139	0.14978	***These reported concentrations DO NOT include the additional background concentration of 19 ug/m^3.

PM2.5 NAAQS 24-HR Results		8th-Highest	24-Hr Results Averaged Over 5 Years			Conc (ug/m^3)	X Coord	Y Coord	
5 Year	ALL	1ST	HIGHEST	VALUE	IS	24.38454	439292.42	3359432.96	***From PM24CUMWOOD.ADO

PM24CUMWOOD.MAX MAXDCONT Results for 8TH-HIGHEST 24-HR VALUES AVERAGED OVER 5 YEARS

Averaging Period	RANK	ALL Conc (Nearby Sources Plus Jax Lime) (ug/m^3)	Conc From Jax Lime Only (ug/m^3)	
24-HR	1ST	24.38454	0.17293	***These reported concentrations DO NOT include the additional background concentration of 19 ug/m^3.

PM2.5 INC 24-HR Results		8th-Highest	24-Hr Results Averaged Over 5 Years			Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	1.98002	439220.51	3359470.19	
2007	ALL	1ST	HIGHEST	VALUE	IS	3.41272	439256.84	3359454.86	
2008	ALL	1ST	HIGHEST	VALUE	IS	2.55448	439292.42	3359432.96	
2009	ALL	1ST	HIGHEST	VALUE	IS	3.46049	439327.99	3359411.05	***This value matches TESD reported value; emission rates used in this analysis match the individual year SIL runs (B_PM2.5_24_SILYR).
2010	ALL	1ST	HIGHEST	VALUE	IS	2.61376	439220.51	3359470.19	

PM2.5 Annual Modeling Review Summary

						From Application		B_PM2.5_ANN_SILYR File Inputs							
Source ID	**Group ID**	**Source Type**	**X Coord**	**Y Coord**	**Base Elevation**	**Emission Rate (lb/hr)**	**Emission Rate (g/s)**	**Emission Rate (g/s)**	**Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)**	**Emission Rate (ton/yr)**	**Stack Height (m)**	**Stack Temp (deg K)**	**Stack Exit Velocity (m/sec)**	**Stack Dia (m)**	
BM3	Wood_Sto	POINT	439320.67	3359679.40	3.9624	0.008	0.001	0.0006	**(0.0004)**	0.0209	18.3	294.1	25.4	0.24	
BM4	Wood_Pro	POINT	439335.69	3359645.21	3.9624	0.045	0.0057	0.0035	**(0.0022)**	0.1217	18.3	294.1	26.1	0.57	
BM6	Dose_Bin	POINT	439341.69	3359622.50	3.9624	0.019	0.0024	0.0023	**(0.0001)**	0.0800	27.4	294.1	27.2	0.29	
BM7	Dose_Bin	POINT	439339.43	3359621.34	3.9624	0.013	0.0017	0.0017	0	0.0591	27.4	294.1	27.2	0.29	
BM9	K12_Lime	POINT	439321.61	3359609.08	3.9624	0.103	0.013	0.0065	**(0.0065)**	0.2260	18.3	338.6	25.8	0.4	
BM11	Crusher	POINT	439298.32	3359657.04	3.9624	0.139	0.0175	0.0088	**(0.0087)**	0.3059	44.2	338.6	21.1	0.52	
BM12	Top_Silo	POINT	439289.96	3359654.42	3.9624	0.049	0.0062	0.0104	0.0042	0.3615	44.2	294.1	21.7	0.52	
BM17	Rej_Bin	POINT	439303.09	3359603.04	3.9624	0.012	0.0015	0.0002	**(0.0013)**	0.0070	29.9	338.6	20.8	0.3	
BM19	Kiln	POINT	439339.20	3359613.08	3.9624	1.697	0.2138	0.2138	0	7.4321	65	418.71	20	1.457	This modeled emission rate is approximately 0.848 lb/hr per kiln, which is lower than the BACT emissions limit of 0.9 lb/hr presented in the Draft Permit. The modeled PM2.5 emission rate should have been 0.23 g/s.
BM21	Rej_Load	POINT	439305.66	3359603.63	3.9624	0.006	0.0008	0.0001	**(0.0007)**	0.0035	10.7	294.1	20.1	0.21	
BM23	LS_Feed	POINT	439339.20	3359592.39	3.9624	0.002	0.0002	0.0001	**(0.0001)**	0.0035	10.7	294.1	20.1	0.21	
BM27	Coke_Tx	POINT	439343.23	3359679.73	3.9624	0.003	0.0004	0.0001	**(0.0003)**	0.0035	10.7	294.1	21.4	0.31	
BM28	Coke_Sto	POINT	439334.93	3359677.17	3.9624	0.002	0.0003	0.0001	**(0.0002)**	0.0035	23.2	294.1	21.4	0.29	
BM30	Dryer	POINT	439348.26	3359648.84	3.9624	0.037	0.0047	0.0029	**(0.0018)**	0.1008	36.6	294.1	27.9	0.49	
BM31	RR_Load	POINT	439277.14	3359627.39	3.9624	0.026	0.0033	0.0004	**(0.0029)**	0.0139	12.5	294.1	20.1	0.21	
BM32	SFRB	POINT	439339.20	3359593.31	3.9624	0.026	0.0033	0.0019	**(0.0014)**	0.0660	33.5	294.1	26.8	0.44	

Source ID	**Group ID**	**Source Type**	**X Coord**	**Y Coord**	**Base Elevation**	**Emission Rate (lb/hr)**	**Emission Rate (g/s)**	**Emission Rate (g/s)**	**Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)**	**Emission Rate (ton/yr)**	**Release Height (m)**	**Initial σy (m)**	**Initial σz (m)**
BM1314	Trk_Load	VOLUME	439282.33	3359676.35	3.9624	0.004	0.0004	0.0003	**(0.0001)**	0.0104	3.6	13.43	1.5
BM1516	Trk_Load	VOLUME	439293.69	3359627.13	3.9624	0.004	0.0004	0.0003	**(0.0001)**	0.0104	3.6	13.43	1.5

Run Type	**Number of Receptors**	**Run Name**
PM2.5 SIL ANN	2478	B_PM2.5_ANN_SILYR Runs

PM2.5 SIL ANN Results						**Conc (ug/m^3)**	**X Coord**	**Y Coord**	
2006	ALL	1ST	HIGHEST	VALUE	IS	0.14903	439157.28	3359535.28	
2007	ALL	1ST	HIGHEST	VALUE	IS	0.24776	439256.84	3359454.86	***Max value did not exceed SIL; this value matches the TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	0.17887	439256.84	3359454.86	
2009	ALL	1ST	HIGHEST	VALUE	IS	0.19783	439256.84	3359454.86	
2010	ALL	1ST	HIGHEST	VALUE	IS	0.17506	439256.84	3359454.86	

PM10 24-Hour and Annual Modeling Review Summary

						From Application		PMSILYR File Inputs							
Source ID	Group ID	Source Type	X Coord	Y Coord	Base Elevation	Emission Rate (lb/hr)	Emission Rate (g/s)	Emission Rate (g/s)	Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)	Emission Rate (ton/yr)	Stack Height (m)	Stack Temp (deg K)	Stack Exit Velocity (m/sec)	Stack Dia (m)	
BM3	Wood_Sto	POINT	439320.67	3359679.40	3.9624	0.086	0.007	0.0066	**(0.0004)**	0.2294	18.3	294.1	25.4	0.24	
BM4	Wood_Pro	POINT	439335.69	3359645.21	3.9624	0.489	0.038	0.0377	**(0.0003)**	1.3105	18.3	294.1	26.1	0.57	
BM6	Dose_Bin	POINT	439341.69	3359622.50	3.9624	0.127	0.015	0.0151	0.0001	0.5249	27.4	294.1	27.2	0.29	
BM7	Dose_Bin	POINT	439339.43	3359621.34	3.9624	0.127	0.011	0.0106	**(0.0004)**	0.3685	27.4	294.1	27.2	0.29	
BM9	K12_Lime	POINT	439321.61	3359609.08	3.9624	0.206	0.026	0.0259	**(0.0001)**	0.9003	18.3	338.6	25.8	0.4	
BM11	Crusher	POINT	439298.32	3359657.04	3.9624	0.278	0.035	0.035	0	1.2167	44.2	338.6	21.1	0.52	
BM12	Top_Silo	POINT	439289.96	3359654.42	3.9624	0.329	0.042	0.0415	**(0.0005)**	1.4426	44.2	294.1	21.7	0.52	
BM17	Rej_Bin	POINT	439303.09	3359603.04	3.9624	0.093	0.003	0.0029	**(0.0001)**	0.1008	29.9	338.6	20.8	0.3	
BM19	Kiln	POINT	439339.20	3359613.08	3.9624	9.999	1.261	0.2138	This emission rate was adjusted by FDEP to be lower than presented in the application. The modeled emission rate for this source is equivalent to the BACT emissions standard in the Draft Permit	7.4321	65	418.71	20	1.457	This modeled emission rate is approximately 0.848 lb/hr per kiln, which is lower than the BACT emissions limit of 0.9 lb/hr presented in the Draft Permit. The modeled PM2.5 emission rate should have been 0.23 g/s.
BM21	Rej_Load	POINT	439305.66	3359603.63	3.9624	0.051	0.002	0.0016	**(0.0004)**	0.0556	10.7	294.1	20.1	0.21	
BM23	LS_Feed	POINT	439339.20	3359592.39	3.9624	0.051	0.002	0.0016	**(0.0004)**	0.0556	10.7	294.1	20.1	0.21	
BM27	Coke_Tx	POINT	439343.23	3359679.73	3.9624	0.120	0.003	0.0025	**(0.0005)**	0.0869	10.7	294.1	21.4	0.31	
BM28	Coke_Sto	POINT	439334.93	3359677.17	3.9624	0.099	0.002	0.0021	0.0001	0.0730	23.2	294.1	21.4	0.29	
BM30	Dryer	POINT	439348.26	3359648.84	3.9624	0.377	0.029	0.0293	0.0003	1.0185	36.6	294.1	27.9	0.49	
BM31	RR_Load	POINT	439277.14	3359627.39	3.9624	0.051	0.006	0.0065	0.0005	0.2260	12.5	294.1	20.1	0.21	
BM32	SFRB	POINT	439339.20	3359593.31	3.9624	0.172	0.022	0.0217	**(0.0003)**	0.7543	33.5	294.1	26.8	0.44	

PM10 24-Hour and Annual Modeling Review Summary

Source ID	Group ID	Source Type	X Coord	Y Coord	Base Elevation	Emission Rate (lb/hr)	Emission Rate (g/s)	Emission Rate (g/s)	Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)	Emission Rate (ton/yr)	Release Height (m)	Initial σy (m)	Initial σz (m)
BM1314	Trk_Load	VOLUME	439282.33	3359676.35	3.9624	0.052	0.002	0.0004	**(0.0016)**	0.0139	3.6	13.43	1.5
BM1516	Trk_Load	VOLUME	439293.69	3359627.13	3.9624	0.052	0.002	0.0004	**(0.0016)**	0.0139	3.6	13.43	1.5

Run Type	Number of Receptors	Run Name
PM10 SIL	2478	PMSILYR Runs
PM10 CUM (NAAQS)	51	PM10_CUM_24hr5y Run
PM10 INC 24HR	51	PMINCANNYR Runs
PM10 INC ANN	9	PMINCANNYR Runs

PM10 SIL 24HR Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	6.26159	439220.51	3359470.19	
2007	ALL	1ST	HIGHEST	VALUE	IS	12.26108	439256.84	3359454.86	
2008	ALL	1ST	HIGHEST	VALUE	IS	8.77004c	439220.51	3359470.19	
2009	ALL	1ST	HIGHEST	VALUE	IS	13.78405	439327.99	3359411.05	***This value matches the TESD reported value.
2010	ALL	1ST	HIGHEST	VALUE	IS	9.84494c	439220.51	3359470.19	

PM10 SIL ANN Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	0.813	439157.28	3359535.28	
2007	ALL	1ST	HIGHEST	VALUE	IS	1.4804	439292.42	3359432.96	***This value matches the TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	1.05964	439256.84	3359454.86	
2009	ALL	1ST	HIGHEST	VALUE	IS	1.18076	439327.99	3359411.05	
2010	ALL	1ST	HIGHEST	VALUE	IS	1.03488	439292.42	3359432.96	

PM10 24-Hour and Annual Modeling Review Summary

PM10 NAAQS 24-HR Results						Conc (ug/m^3)	X Coord	Y Coord
5 YR	ALL	1ST	HIGHEST	VALUE	IS	61.7855	439435.31	3359370.46
	ALL	2ND	HIGHEST	VALUE	IS	61.46027	439472.9	3359365.12
	ALL	3RD	HIGHEST	VALUE	IS	60.53567	439510.48	3359359.78
	ALL	4TH	HIGHEST	VALUE	IS	60.10341	439397.72	3359375.8
	ALL	5TH	HIGHEST	VALUE	IS	59.99187	439419.13	3359318.5
	ALL	6TH	HIGHEST	VALUE	IS	**58.96334**	439363.57	3359389.15

***This is the true 6th high cumulative impact value obtained from the set of 1st-highest 24-hour results averaged over 5 years. The MAXDCONT analysis performed inappropriately relied upon the set of 6th-highest 24-hour results average over 5 years. In other words, the MAXDCONT values compared to the NAAQS allowed for the modeled receptors to have potential exceedances of the NAAQS when there was an exceedance of the SIL up to 5 times for each receptor. The MAXDCONT file's set of 6th-highest 24-hour results are the individual receptors 6th high, not the cumulative receptor set's 6th high.

PM10 NAAQS 24-HR Results (Contribution Analysis) INAPPROPRIATE RESULTS							
Averaging Period	RANK	ALL Conc (Nearby Sources Plus Jax Lime) (ug/m^3)	Conc From Jax Lime Only (ug/m^3)	Averaging Period	RANK	ALL Conc (Nearby Sources Plus Jax Lime) (ug/m^3)	Conc From Jax Lime Only (ug/m^3)
24-HR	6TH	27.05772	2.63079	24-HR	6TH	25.74066	1.02491
24-HR	6TH	30.61902	2.52977	24-HR	6TH	29.00596	0.88825
24-HR	6TH	**31.76554**	2.30823	24-HR	6TH	25.79906	0.80274
24-HR	6TH	31.22175	2.30821	24-HR	6TH	31.49472	0.75963
24-HR	6TH	27.48417	2.28942	24-HR	6TH	28.08142	0.75104
24-HR	6TH	27.49845	2.16186	24-HR	6TH	28.4715	0.74572
24-HR	6TH	28.18974	2.15142	24-HR	6TH	29.47359	0.6992
24-HR	6TH	27.21966	2.11031	24-HR	6TH	29.17983	0.64652
24-HR	6TH	27.29584	1.97577	24-HR	6TH	27.4858	0.63232
24-HR	6TH	26.53869	1.96379	24-HR	6TH	28.17786	0.58891
24-HR	6TH	25.76629	1.88925	24-HR	6TH	25.41028	0.54072
24-HR	6TH	29.84914	1.76137	24-HR	6TH	28.32808	0.53152
24-HR	6TH	25.81764	1.69931	24-HR	6TH	25.40506	0.4421
24-HR	6TH	26.47054	1.68078	24-HR	6TH	27.00661	0.40965
24-HR	6TH	29.50712	1.6326	24-HR	6TH	26.34029	0.35277
24-HR	6TH	30.14236	1.52162	24-HR	6TH	27.80245	0.30744
24-HR	6TH	28.34453	1.42353	24-HR	6TH	30.52193	0.29426
24-HR	6TH	30.34384	1.32689	24-HR	6TH	27.39967	0.1781
24-HR	6TH	29.16709	1.32454	24-HR	6TH	26.00585	0.15107
24-HR	6TH	29.71789	1.2935	24-HR	6TH	29.8625	0.08766
24-HR	6TH	29.34613	1.27831	24-HR	6TH	25.56188	0.06767
24-HR	6TH	31.31098	1.17594	24-HR	6TH	25.69443	0.05364
24-HR	6TH	26.10332	1.16356	24-HR	6TH	25.7309	0.0529
24-HR	6TH	27.954	1.11043	24-HR	6TH	0	0
24-HR	6TH	25.54719	1.08624	24-HR	6TH	0	0
24-HR	6TH	29.27374	1.06529				

***The MAXDCONT file should be the 1ST-HIGHEST 24-HR VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP ALL; then the 6th high average concentration for the 5 year period reported should be reviewed to see what the contribution was from Jacksonville Lime for comparison to the NAAQS standard of 150 ug/m^3. This high 6th high (H6H) allows for one exceedance per the 5 year period and the 6th high is the 6th exceedance that should be compared to the NAAQS.

***These reported concentrations DO NOT include the additional background concentration of 77 ug/m^3.

***This maximum cumulative concentration value of 31.77 ug/m^3 reported in the TESD as the maximum modeled cumulative source contribution is the individual receptor's 6th high, not the overall 6th high cumulative impact. As detailed in the table above, the true 6th high cumulative impact value is 58.96 ug/m^3. This impact plus the background concentration is 135.96 ug/m^3. Although the cumulative impacts plus background concentration from this modeling analysis are less than the NAAQS standard, the omissions of fugitive emission sources and condensable PM, and discrepancies between the Draft Permit emission limits, the application and the dispersion modeling files necessitate that the modeling analysis be performed again to ensure protection of the NAAQS and PSD Increment limits.

PM10 24-Hour and Annual Modeling Review Summary

PM10 INC 24-HR Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	2ND	HIGHEST	VALUE	IS	6.40471b	439256.84	3359454.86	
2007	ALL	2ND	HIGHEST	VALUE	IS	10.11587c	439256.84	3359454.86	
2008	ALL	2ND	HIGHEST	VALUE	IS	8.60094	439292.42	3359432.96	
2009	ALL	2ND	HIGHEST	VALUE	IS	10.13616c	439363.57	3359389.15	***This value matches TESD reported value.
2010	ALL	2ND	HIGHEST	VALUE	IS	8.59699c	439220.51	3359470.19	

PM10 INC ANN Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	Not modeled. Modeled value currently less than SIL.								
2007	ALL	1ST	HIGHEST	VALUE	IS	1.51881	439292.42	3359432.96	***This value matches TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	1.09566	439256.84	3359454.86	
2009	ALL	1ST	HIGHEST	VALUE	IS	1.21765	439327.99	3359411.05	
2010	ALL	1ST	HIGHEST	VALUE	IS	1.06158	439292.42	3359432.96	

CO 1-Hour and 8-Hour Modeling Review Summary

						From Application		SIL_CO_YR_1H_8H File Inputs							
Source ID	**Group ID**	**Source Type**	**X Coord**	**Y Coord**	**Base Elevation**	**Emission Rate (lb/hr)**	**Emission Rate (g/s)**	**Emission Rate (g/s)**	**Difference in g/s From Model to Application (RED Indicates Application's Value Higher Than Model)**	**Emission Rate (ton/yr)**	**Stack Height (m)**	**Stack Temp (deg K)**	**Stack Exit Velocity (m/sec)**	**Stack Dia (m)**	
BM19	Kiln	POINT	439339.20	3359613.08	3.9624	99.00	12.49	12.49	0	434.1762	65	418.71	20	1.457	This modeled emission rate is 49.56 lb/hr per kiln, which is approximately the 99 lb/hr emission rate presented in application. This modeled value is higher than the BACT emissions limit of 39.6 lb/hr presented in the Draft Permit.
BM30	Dryer	POINT	439348.26	3359648.84	3.9624	0.14	0.02	0.0172	**(0.0028)**	0.5979	36.6	294.1	27.9	0.49	

Run Type	**Number of Receptors**	**Run Name**
CO SIL 1-HR & 8-HR	2478	SIL_CO_YR_1H_8H Runs

CO SIL 1-HR Results						**Conc (ug/m^3)**	**X Coord**	**Y Coord**	
2006	ALL	1ST	HIGHEST	VALUE	IS	54.96248	439319.13	3359118.5	
2007	ALL	1ST	HIGHEST	VALUE	IS	60.14219	439119.13	3359118.5	***This value matches the TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	59.39735	439119.13	3359118.5	
2009	ALL	1ST	HIGHEST	VALUE	IS	56.31132	439019.13	3359118.5	
2010	ALL	1ST	HIGHEST	VALUE	IS	53.54922	439019.13	3359118.5	

CO SIL 8-HR Results						**Conc (ug/m^3)**	**X Coord**	**Y Coord**	
2006	ALL	1ST	HIGHEST	VALUE	IS	35.74592	438819.13	3359318.5	
2007	ALL	1ST	HIGHEST	VALUE	IS	43.92125	439119.13	3359118.5	***This value matches the TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	37.85054	439019.13	3359218.5	
2009	ALL	1ST	HIGHEST	VALUE	IS	40.57753	438719.13	3359518.5	
2010	ALL	1ST	HIGHEST	VALUE	IS	36.79796	438919.13	3359218.5	

NO2 1-Hour and Annual Modeling Review Summary

						From Application		NO2 SIL File Inputs (All Files)								
Source ID	**Group ID**	**Source Type**	**X Coord**	**Y Coord**	**Base Elevation**	**Emission Rate (lb/hr)**	**Emission Rate (g/s)**	**Emission Rate (g/s)**	**Difference in g/s From Model to Application**	**Emission Rate (ton/yr)**	**Stack Height (m)**	**Stack Temp (deg K)**	**Stack Exit Velocity (m/sec)**	**Stack Dia (m)**	**In-Stack NO2 Ratios**	
BM19	Kiln	POINT	439339.20	3359613.08	3.9624	82.50	10.4	10.4	0	361.5238	65	418.71	20	1.457	0.14	This modeled emission rate is 41.27 lb/hr per kiln, which is approximately the 82.54 lb/hr emission rate presented in application which is lower than the BACT emissions limit of 43.6 lb/hr presented in the Draft Permit. The modeled NO2 emission rate should have been 11.0 g/s.
BM30	Dryer	POINT	439348.26	3359648.84	3.9624	0.32	0.04	0.0404	0.0004	1.4044	36.6	294.1	27.9	0.49	0.05	

Run Type		**Number of Receptors**	**Run Name**
NO2 SIL 1-HR		2478	SILNOX1HTIER3R14 Run
NO2 SIL ANN		2478	SIL_NOX_YR_Annual Runs
NO2 NAAQS 1-HR		1850	CUMNOX1H_OLM14 ***Additional receptors evaluated in CUMNOX1H_OLM14C
NO2 NAAQS 1-HR		293	CUMNOX1H_OLM14C Run
NO2 NAAQS 1-HR	Refined Grid	1681	CUMNOX1H_OLM14E is a nested grid over the area of highest concentrations for the cumulative 1-hour NO2 run.
NO2 NAAQS ANN		5	CUMNOXAnn07 Run ***Only 2007 appears to have been run
NO2 INC ANN		5	INCNOXAnn07 Run ***Only 2007 appears to have been run

NO2 SIL 1-HR Results		**OLM Method - 1st-Highest Max Daily 1-Hr Results Averaged Over 5 Years**				**Conc (ug/m^3)**	**X Coord**	**Y Coord**
5 Year	ALL	1ST	HIGHEST	VALUE	IS	41.2846	439119.13	3359118.5

***The OLM Option used for calculating the 1-hour NO2 SIL impacts. NO2STACH 0.05; NO2EQUIL 0.9. Ozone file OZONE06-10R3.DAT. Specified in-stack NO2 ratios for OLM Option were 0.14 for BM-19 and 0.05 for BM30.

NO2 SIL ANN Results		**Default Conc Option**				**Conc (ug/m^3)**	**X Coord**	**Y Coord**
2006	ALL	1ST	HIGHEST	VALUE	IS	1.29694	439885.57	3359410.07
2007	ALL	1ST	HIGHEST	VALUE	IS	1.50558	438719.13	3359518.5
2008	ALL	1ST	HIGHEST	VALUE	IS	1.1607	439841.81	3359781.31
2009	ALL	1ST	HIGHEST	VALUE	IS	1.12618	439719.13	3360018.5
2010	ALL	1ST	HIGHEST	VALUE	IS	1.27355	439931.95	3359425.05

***TESD Table 23 indicates that the maximum NO2 SIL Annual result was 1.1 ug/m3. Since the modeling submitted by Jax Lime used an emission rate less than the BACT limit established in the draft permit and because this result is higher than the SIL value reported in the TESD, the modeling results are not reliable.

NO2 1-Hour and Annual Modeling Review Summary

NO2 NAAQS 1-HR Results		OLM Method - 8th-Highest Max Daily 1-Hr Results Averaged Over 5 Years				Conc (ug/m^3)	X Coord	Y Coord
5 Year	ALL	1ST	HIGHEST	VALUE	IS	177.21343	444319.13	3362118.5

***From initial cumulative model run (CUMNOX1H_OLM14); includes background concentration.

NO2 NAAQS 1-HR Results		OLM Method - 8th-Highest Max Daily 1-Hr Results Averaged Over 5 Years				Conc (ug/m^3)	X Coord	Y Coord
5 Year	ALL	1ST	HIGHEST	VALUE	IS	184.69448	445319.13	3361618.5

***From initial cumulative model run (CUMNOX1H_OLM14C); includes background concentration.

REFINDED NO2 NAAQS 1-HR Results		OLM Method - 8th-Highest Max Daily 1-Hr Results Averaged Over 5 Years				Conc (ug/m^3)	X Coord	Y Coord
5 Year	ALL	1ST	HIGHEST	VALUE	IS	189.27617	447219.13	3363418.5

***From refined receptor grid model run (CUMNOX1H_OLM14E); includes background concentration; this value matches the TESD reported value.

CUMNOX1H_OLM14E.MAX MAXDCONT Results for 8TH-HIGHEST MAX DAILY 1-HR VALUES AVERAGED OVER 5 YEARS

Averaging Period	RANK	ALL Conc (Nearby Sources Plus Jax Lime) (ug/m^3)	Conc From Jax Lime Only (ug/m^3)
1-HR	1ST	189.27617	0.02967

NO2 NAAQS ANN Results	Default Conc Option					Conc (ug/m^3)	X Coord	Y Coord
2007 Only	ALL	1ST	HIGHEST	VALUE	IS	5.53489	438719.13	3359518.5

***This value matches the TESD reported value.

NO2 INC ANN Results	Default Conc Option					Conc (ug/m^3)	X Coord	Y Coord
2007 Only	ALL	1ST	HIGHEST	VALUE	IS	3.41911	438719.13	3359518.5

***Table 28 of the TESD reported the maximum cumulative modeled impact as 2.57 ug/m3.

SO2 1-Hour, 3-Hour, 24-Hour and Annual Modeling Review Summary

						From Application		SO2 SIL File Inputs (All Files)							
Source ID	**Group ID**	**Source Type**	**X Coord**	**Y Coord**	**Base Elevation**	**Emission Rate (lb/hr)**	**Emission Rate (g/s)**	**Emission Rate (g/s)**	**Difference in g/s From Model to Application**	**Emission Rate (ton/yr)**	**Stack Height (m)**	**Stack Temp (deg K)**	**Stack Exit Velocity (m/sec)**	**Stack Dia (m)**	
BM19	Kiln	POINT	439339.20	3359613.08	3.9624	35.79	4.51	4.51	0	156.7762	65	418.71	20	1.457	This modeled emission rate is 17.9 lb/hr per kiln, which is approximately the 35.79 lb/hr emission rate presented in application and is lower than the BACT emissions limit of 18.2 lb/hr presented in the Draft Permit. The modeled SO2 emission rate should have been 4.59 g/s. SO2 24-HR Increment modeling used emission factor of 5.46 g/s (21.67 lb/hr) emission rate which is higher than the BACT emissions limit.
BM30	Dryer	POINT	439348.26	3359648.84	3.9624	0.01	0	0.00064	0.0006	0.0222	36.6	294.1	27.9	0.49	

Run Type	**Number of Receptors**	**Run Name**
SO2 SIL 1-HR	2478	SILSOX1HC Run
SO2 SIL 3-HR	2478	SIL_SO2_YR_3H Runs
SO2 SIL 24-HR & ANN	2478	SIL_SO2_YR_A_24 Runs
SO2 NAAQS 1-HR	808	CUMSO21HC Run
SO2 INC 24-HR	45	INC_SO2_YR_24 Runs

SO2 1-Hour, 3-Hour, 24-Hour and Annual Modeling Review Summary

SO2 SIL 1-HR Results						Conc (ug/m^3)	X Coord	Y Coord	
5 YR	ALL	1ST	HIGHEST	VALUE	IS	19.66186	439119.13	3359118.5	***This value matches the TESD reported value.

SO2 SIL 3-HR Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	17.33005	439219.13	3359118.5	
2007	ALL	1ST	HIGHEST	VALUE	IS	20.70979	439119.13	3359118.5	***This value matches the TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	19.49783	439119.13	3359118.5	
2009	ALL	1ST	HIGHEST	VALUE	IS	18.27334	439219.13	3359018.5	
2010	ALL	1ST	HIGHEST	VALUE	IS	17.62874	439019.13	3359118.5	

SO2 SIL 24-HR Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	5.52771	438919.13	3359118.5	
2007	ALL	1ST	HIGHEST	VALUE	IS	7.29487	439119.13	3359118.5	
2008	ALL	1ST	HIGHEST	VALUE	IS	9.17618	438919.13	3359018.5	***This value matches the TESD reported value.
2009	ALL	1ST	HIGHEST	VALUE	IS	7.21702	439219.13	3358918.5	
2010	ALL	1ST	HIGHEST	VALUE	IS	5.395	438919.13	3359118.5	

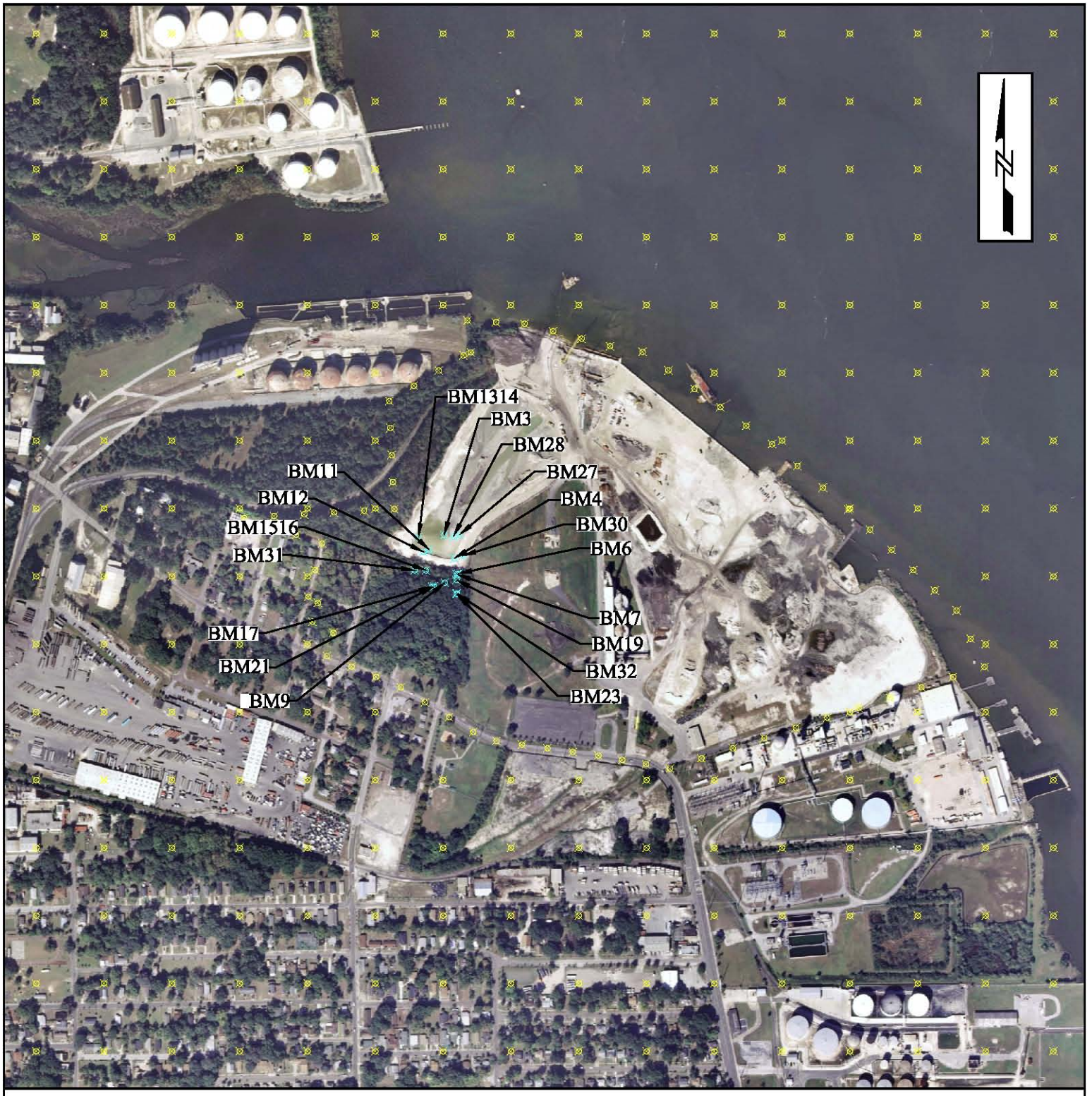
SO2 SIL ANN Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	0.54724	439885.57	3359410.07	
2007	ALL	1ST	HIGHEST	VALUE	IS	0.63439	438719.13	3359518.5	***This value matches the TESD reported value.
2008	ALL	1ST	HIGHEST	VALUE	IS	0.47835	439841.81	3359781.31	
2009	ALL	1ST	HIGHEST	VALUE	IS	0.46888	439719.13	3360018.5	
2010	ALL	1ST	HIGHEST	VALUE	IS	0.53432	439978.32	3359440.02	

SO2 NAAQS 1-HR Results		4th-Highest Max Daily 1-Hr Results Averaged Over 5 Years				Conc (ug/m^3)	X Coord	Y Coord
5 Year	ALL	1ST	HIGHEST	VALUE	IS	291.92351	439219.13	3357918.5

MAXDCONT_SO2.MAX MAXDCONT Results for 4TH-HIGHEST MAX DAILY 1-HR VALUES AVERAGED OVER 5 YEARS

Averaging Period	RANK	ALL Conc (Nearby Sources Plus Jax Lime) (ug/m^3)	Conc From Jax Lime Only (ug/m^3)
1-HR	1ST	291.92351	0.17134

SO2 INC 24-HR Results						Conc (ug/m^3)	X Coord	Y Coord	
2006	ALL	1ST	HIGHEST	VALUE	IS	59.65465c	438619.13	3359718.5	
2007	ALL	1ST	HIGHEST	VALUE	IS	42.12997m	439819.13	3360218.5	
2008	ALL	1ST	HIGHEST	VALUE	IS	54.26752	439819.13	3360218.5	
2009	ALL	1ST	HIGHEST	VALUE	IS	62.64532c	438819.13	3359118.5	***This value matches the TESD reported value.
2010	ALL	1ST	HIGHEST	VALUE	IS	31.7078	438919.13	3359118.5	



SCALE

1"=200m

0 100 200 400 600 800

SCALE IN METERS

Jacksonville Lime, LLC Lime Manufacturing Facility
Jacksonville, Duval County, Florida
Draft PSD Air Permit No. 0310583-001-AC Public Comments Supporting Documentation