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JEA
Northside Generating Station
Air Permit Application
Unit 3
Repair and Maintenance Project

April 2009

JEA

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BUREAU OF AIR REGULATION

May 15, 2009

Trina L. Vielhauer
Chief, Bureau of Air Regulation
Division of Air Resource Management
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: JEA Northside Generating Station Unit 3 Air Permit Application

Dear Ms. Vielhauer:

On behalf of JEA, please find enclosed an original and four (4) copies of an Air Permit Application for the repair and maintenance activities for Unit 3 at the Northside Generation Station.

If you have any questions, please do not hesitate to contact me at (913) 458-9062 or Bert Gianazza, P.E. of JEA at (904) 665-6247.

Very truly yours,

BLACK & VEATCH CORPORATION

Kyle Lucas

Kyle Lucas
Air Permitting Manager

kjl
Enclosures

cc: Jeff Koerner – FDEP w/o enclosure
Bert Gianazza – JEA
Angela Morrison – HG&S
FIle

AIR PERMIT APPLICATION

JEA – Northside Generating Station

Jacksonville, Florida

Prepared for:
JEA
Jacksonville, Florida

Prepared by:
Black & Veatch Corporation
Overland Park, Kansas 66211

May 2009
Black & Veatch Project No. 163593

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TABLES

1.0 INTRODUCTION

It is the purpose of this minor modification air permit application to request approval for JEA to proceed with replacement and maintenance projects (hereinafter referred to as "Projects") for Unit 3 at the Northside Generating Station (NGS). As explained further in Section 1.2, the Projects include the replacement of boiler waterwall tubing, fan rotors, a feedwater heater, and other equipment, but will not result in any increase in fuel consumption, heat input, steam generation, or emissions.

1.1 Background

NGS Unit 3 began operation in June of 1977 and operates on residual oil, natural gas, and landfill gas fuels. Unit 3 is currently one of JEA's three available intermediate load units, but the only one capable of firing residual oil, which enhances Unit 3's value and importance in JEA's generating portfolio. Additionally, JEA currently operates under a Community Commitment made in June 1999 involving among other things, a 10 percent reduction in stack emissions from NGS Units 1, 2, and 3 from their base line levels in 1994 and 1995. The NGS is not currently exceeding nor will it exceed after completion of these project these established emission levels. In fact, the Unit 3 boiler has restrictions in place that effectively limit the unit's annual operations.

1.2 Project Description

JEA is proposing to improve the reliability of the NGS Unit 3. The proposed replacement and maintenance Projects will include various boiler components meant to repair and maintain the boiler and its associated systems but these Projects are not intended to regain lost capacity as the unit is currently capable of operating as required and can achieve its permitted heat input rate. The unit is available on an annual basis to a greater extent than it is has been operated in recent years due to the constraints mentioned above and not due to any maintenance issues. The unit has historically operated at a low annual capacity factor (approximately 25 percent) but has been available over 85 percent since 2008.

There are no known defects or deficiencies with the unit and the Projects are being completed solely to enhance the unit's reliability and to ensure that it is available and in good working order when needed. Briefly, the replacement and maintenance of equipment will include:

- Handcuff replacement on the primary superheat elements.
- Condenser structural assessment and repairs.
- Fiberglass circulating piping assessment and repairs.
- Feedwater and heater drains piping flow corrosion inspection and repairs.

- Fuel oil piping condition assessment and repairs.
- Boiler sootblowing system piping replacement.
- No. 4 feedwater heater replacement.
- Furnace left and right waterwall replacement.
- Boiler waterside chemical cleaning.
- Replacement of Digital Control System (DCS) field devices.
- 480 V motor control center (MCC) refurbishment.
- Boiler duct work repair and replacement.
- Rebuild water rack.
- East airheater to windbox expansion joint replacement.
- Induced draft fans A and B rotor replacements.
- Upgrade drum level transmitters.
- Closed cooling strainer cabinet replacement.
- Feedwater heater and boiler feedwater pump valve inspection and repair.
- Force draft fan motor replacement.
- Main steam line and cold reheat line elevation sag correction.
- Boiler feed pump turbine blade replacement.
- Other changes as appropriate to ensure safe, reliable operations of the unit will be required.

It should be noted that many of these projects would, individually, be considered routine maintenance activities. Because one or two of these activities are fairly expensive and extensive, and because most are being undertaken during a common outage, they are being collectively addressed herein. Again, replacement and maintenance of this equipment is not expected to increase boiler heat input, fuel consumption, steam generation, or unit emissions. The replacement and maintenance Projects will be coincident with the scheduled outage for Unit 3 starting in the fall of 2010 and are expected to be completed by January 2011. The Projects' emission calculation procedures for NSR applicability is discussed further in subsequent sections of this document. The associated air permit application forms are listed in Appendix A and detailed emission calculations are provided in Appendix B.

1.3 Electric Generator Description

As described at the pre-application meeting held at the FDEP offices on March 18, 2009 JEA intends to replace the Unit 3 electric generator rotor and assembly. This replacement will be separate from and unrelated to the boiler and associated system maintenance previously described. The replacement of the rotor and assembly will be with like-kind equipment, designed to produce the same amount of electricity, will not increase performance of the unit,

and will not debottleneck Unit 3 (i.e., the Unit 3 boiler has pollutant emission limits, fuel based heat input limits, and the CCL's which limit boiler operation), or allow it to operate at a higher capacity. Currently, there are no physical problems with the electric generator rotor and assembly and the equipment is capable of achieving maximum short-term or annual availability factors as necessary. This equipment replacement is to ensure uninterrupted electricity production for JEA's system. While the electric generator (and its rotor) are not considered part of the air emission unit and are outside and separate from the Unit 3 boiler and steam turbine system, as requested by FEDP in the March meeting, JEA has included the electric generator rotor discussion for informational purposes.

JEA is investigating vendors capable of providing this equipment and associated schedules for delivery. The current global economic crisis is further complicating procurement. At this time, purchase and delivery of the generator rotor equipment may exceed the period of construction for the boiler and associated system maintenance project. Due to the significant lead time to construct and install Unit 3's electric generator rotor, the replacement of this equipment may be delayed until fall of 2013.

2.0 NEW SOURCE REVIEW APPLICABILITY

It is the purpose of this section to demonstrate that the proposed Projects for Unit 3 are not subject to the New Source Review Prevention of Significant Deterioration (NSR/PSD) review.

2.1 Major Modification Under PSD

The NSR/PSD program establishes requirements for major PSD sources of air pollutants to undergo pre-construction review for major modifications to existing sources. The definition of a major modification is any physical change or change in the method of operation of a major stationary source that would result in a significant net emissions increase of a regulated pollutant. The regulation sets forth specific threshold levels of annual emission rates that constitute a significant emissions increase. The PSD significant emission rates, as defined in FDEP Rules Chapter 62-210.200, pertaining to net emissions increase resulting from modifications are summarized in Table 2-1 below.

Table 2-1
PSD Significant Emission Rates

Pollutant	Significant Emission Rate (tpy)
CO	100
NO_x	40
SO_2	40
PM	25
PM_{10}	15
VOC	40

Note: The pollutant $PM_{2.5}$ is not currently defined in the PSD significant emission rates in FDEP Rules Chapter 62-210.200

As an existing major PSD source, the proposed Projects at NGS would be subject to NSR/PSD review if the modifications resulted in a significant emissions increase. The emissions increase is determined by comparing the pre-Project, baseline actual emissions (BAE), with the post-Project potential to emit (PTE). Electric utility steam generating units (EUSGUs) have the option of using post-Project projected actual emissions (PAE) instead of PTE in determining the significant emission increase. Representative BAE are defined in FDEP Rules Chapter 62-210.200(36)(a) as,

"...the average rate, in tons per year, at which the unit actually emitted the pollutant during any consecutive 24-month period selected by the owner or operator within the 5-year period immediately preceding the date a complete permit application is received by the Department. The Department shall allow the use of a different time period upon a determination that it is more representative of normal source operation."

In projecting future emissions the FDEP Rules Chapter 62-210.200(250) cite the definition of PAE as,

"The maximum annual rate, in tons per year, at which an existing emissions unit is projected to emit a PSD pollutant in any one of the 5 years following the date the unit resumes regular operation after the Project, or in any one of the 10 years following that date, if the Project involves increasing the emissions unit's design capacity or its potential to emit that PSD pollutant and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase at the major stationary source."

In projecting future emissions the Department shall:

- "Consider all relevant information, including historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans or orders, including consent orders."

- "Exclude that portion of the unit's emissions following the Project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular Project including any increased utilization due to product demand growth."

Under the above discussed methodology, EUSGUs compare their actual annual emissions before the change with their projected annual emissions after the change to determine if a physical or operational change would result in a significant increase in emissions, and thus subject the Project to NSR/PSD. Major modifications that result in a significant emissions increase are subject to PSD review, possibly including:

- Implementation of Best Available Control Technology (BACT)
- Increment analysis (air dispersion modeling)

- NAAQS analysis (air dispersion modeling)
- Class I analysis (air dispersion modeling)

For the purposes of this air permit application for the proposed Projects, the report demonstrates that there is no significant emissions increase and thus the Project's are excluded from NSR/PSD review. The methodology used to make this determination is provided in the following sections.

2.2 Unit 3: Emissions Calculations

Baseline Actual Emissions

The first step in determining whether or not the Projects will result in a significant emissions increase, and thus become subject to NSR/PSD review, is to determine the pre-Project BAE. Unit 3 has a long operationally representative history of emissions, fuel consumption, and heat input data from which to calculate the BAE. As such Unit 3's baseline emissions were determined as currently defined in FDEP air regulations Chapter 62-210(36) and 62-210(370), by calculating pre-Project BAE as the average rate, in ton per year (tpy), at which the emissions unit actually emitted during a consecutive 24-month period within the 5-year period immediately preceding the Project. The pollutant emission calculations to determine the BAE were performed utilizing available NO_x and SO_2 CEMs and particulate matter stack test information, emission factors and unit specific operational data. The BAE represents the highest 24-month period within this 5-year period. It is important to note that the 5-year look-back period is based on the date a complete permit application is received by the Department. The emission calculations are presented in Appendix B and particulate matter stack test information for oil firing has been included in Appendix C.

Unit 3's highest BAE during a consecutive 24-month period within the 5-year period were based on the period from May 2004 through April 2006. Additionally, imposed federally enforceable limits, such as JEA's Community Commitment Levels (CCLs), were also considered when determining Unit 3's baseline emissions. Unit 3's actual baseline emissions are presented in Table 2-2 along with NGS's community commitment levels.

As seen from the table, Unit 3's BAE are less than the CCLs and do not need to be corrected with respect to this federally enforceable limit. The CCLs represent the combined emissions of Units 1, 2, and 3; therefore, Unit 3's operations will be limited by the CCLs because on a facility-wide basis, JEA will continue to be in compliance with the CCLs.

Table 2-2
Unit 3 Pre-Project Baseline Actual Emissions

Pollutants (tpy)	NO_x	SO_2	PM_{10}	PM	CO	VOC
BAE 24-Month Period Annual Average[(a)]	1,916	6,791	232	232	243	29
Community Commitment Levels[(b)]	3,600	12,284	881	881	-	-

[(a)]The 24-month period is from May 2004 through April 2006.
[(b)]Community Commitment Emission Levels are for the combined emissions of Units 1, 2, and 3. Emission limits for CO and VOC in the Community Commitment are limited to Units 1 and 2 only.

As previously discussed, in terms of PSD applicability, a project at an existing major source will not be subject to PSD review if it does not result in a significant emissions increase. In general, a project's emissions increase is determined as the difference between its BAE and its future PAE. The PSD and FDEP rules allow for exclusion from the emission increase calculation that portion of the emissions increase that is due to demand growth and could have been accommodated by the unit prior to the changes associated with the Project. While not specifically defined in FDEP rules, these emissions due to demand growth that Unit 3 can accommodate are referred to as excludable emissions (EE) in this report.

These excludable emissions are simply those emissions that could have been accommodated during the baseline period by the pre-Project (unmodified) unit and that are also unrelated to the Project itself. The projected emissions increase (PEI), also not defined in FDEP rules but used in this report, is calculated as the difference between the PAE and the greater of the EE or BAE. The PEI is then compared with the PSD significant emission rate (SER) to determine the PSD applicability on a pollutant by pollutant basis.

To calculate a Project's future PAE, it is necessary to determine the duration of the projection period. The projection period begins on the date the Project resumes regular operation and typically encompasses the first 5 years of subsequent operation. However, under certain circumstances, the projection period must be extended an additional 5 years, for a total of 10 years following the date the affected unit resumes normal operation. Since the Projects associated with this assessment will not result in a design capacity increase or emissions increase, a 5-year projection period is appropriate for this assessment.

The primary goal of this assessment is to demonstrate that the PEI for the Project will be less than the PSD SER levels. This determination is made using the calculated BAE values, the EE values, and the forecasted post-Project or PAE emissions. As previously described for this

project, the result of these replacement and maintenance activities will not result in any increase in fuel consumption, heat input, steam generation, or emissions.

Excludable Emissions

Once the BAE is established, the next step is to determine the EE based on the projected demand growth for Unit 3. The projected demand growth is independent of the Project and would be the demand placed upon Unit 3 regardless of maintenance requirements. As requested by FDEP in the March meeting, documentation regarding Unit 3's capability of currently accommodating demand growth (or market demand growth) has been included Appendix D. This information is important to demonstrate that Unit 3 already has the ability to achieve the projected future demand growth regardless of the Project's maintenance activities (described in Section 1.2) which may then be excluded from the PAE as described later in this text. The information contained in Appendix D is a sampling of data points from the period from January 2008 through April 2009 which depicts the total unit heat input from firing residual oil, natural gas, and landfill gas. The maximum short-term heat input rates achieved recently are at or near the permitted heat input rate – the unit is fully capable as is to achieve the maximum permitted heat input rates – the proposed Projects are not being done to regain any lost short-term or annual capacity. Not only is the maximum hourly heat input rate achievable, a higher annual utilization rate is also possible without the Projects. The annual capacity factor of the unit has been effectively restricted due other unrelated constraints like the CCLs, being an intermediate load unit, and due to usage of other, more efficient and less costly generation (due to primarily oil and natural gas usage). The data provided demonstrates Unit 3's ability to accommodate more utilization as necessary and prior to the start of the Projects. Thus, this information substantiates that demand growth can be excluded because Unit 3 is available and can accommodate this project growth already.

Therefore, for this project, the heat input used to calculate EE is defined as the BAE heat input plus the demand growth times the baseline period pollutant emissions. The demand growth for Unit 3 was based on Unit 3's projected operation by JEA's System Generation Planning Department. Unit 3's demand growth was calculated as the percent increase of Unit 3's projected net Gigawatt-Hour (GWh) requirement due to demand growth over a 5 year period following the Project as compared to Unit 3's past net GWh associated with the aforementioned BAE period. The Project is expected to end in January 2011 with the completion of the aforementioned replacement and maintenance activities. The 5-year period following the Project was estimated to be January 2011 to December 2016. The maximum estimated demand growth projected for Unit 3 is 39.7 percent during the 5-year period following the Project. It should be noted that this estimated 39.7 percent demand growth value is based on JEA's latest projections for Unit 3 and considers the delay in startup of JEA's Greenland Energy Center and future fuel

prices for oil and natural gas. To reiterate, Unit 3 is one of JEA's three available intermediate load units, but the only one capable of firing residual oil, which enhances Unit 3's value and importance in JEA's generating portfolio. The coal units and combined cycle natural gas units will remain baseload units. As more generation is needed, this intermediate load unit will be operated for more hours per year. Though this unit is capable of generating in excess of 500 MW, this unit is not considered a baseload unit and the completion of the aforementioned Projects will not change the unit's dispatch order. Unit 3 has recently operated with a low annual capacity factor as compared to other units in JEA system due to the recent history of high gas and oil prices and more efficient gas-fired combustion turbines. For reference, the calculated capacity factor for the baseline period is approximately 24 percent. Thus, because of Unit 3's recent low annual capacity factor and the unit's high annual availability factor, the projected increase of this unit's operation based on demand growth can physically be accommodated. Additionally, Unit 3's operation, and subsequent emissions, will be monitored coincidentally with Unit 1 and 2's operation and will not exceed the emission limitations defined by the CCLs. A simple formula for EE can be illustrated as:

EE = (BAE Heat Input) x (1 + Market Demand Growth (%)) x (Baseline Period Pollutant Emission Factor)

EE = (BAE Heat Input) x (1 + 39.7%) x (Pollutant Emissions Factor)

Projected Actual Emissions

Once the heat input for BAE and demand growth for the EE are established, the next step is to determine the PAE values for each pollutant. In determining the PAE for Unit 3, it is important to differentiate between the projected increases in emissions due to an increase in due to increased utilization (tied to demand growth) and increases due to unit capacity as a result of the Projects (which is not applicable for this project). This is important because, as previously discussed, emission increases associated with demand growth and that could have been accommodated without the Projects are considered EE as previously discussed while emissions increases associated with the Projects themselves must be accounted for in the future projections and cannot be excluded. A simple formula for PAE can be illustrated as:

PAE = (BAE Heat Input) x (1 + Market Demand Growth (%) + Project Demand

Growth (%) + Capacity Increase (%)) x (Post Project Pollutant Emission Factor)

As previously described for this project, the result of these replacement and maintenance activities will not result in any increase in fuel consumption, heat input, steam generation, or emission factors. Therefore, if there is no short-term emissions increase (i.e., hourly or lb/MBtu) associated with the Projects, and the Projects will not result in an increase of the heat input rate of the unit, or result in an increase in the unit's demand based on the Project, then the only consideration is demand growth. For this project, unit demand growth as a direct result of the Projects equals zero and capacity increases (on a heat input or MW basis) also equals zero. Also, the Unit 3's post project pollutant emissions on a short-term basis (i.e., lb/hr or lb/MBtu) will not change from the baseline emissions (i.e., no change in post-project emission factors). The resulting PAE emissions are then only increased by the 39.7 percent demand growth rate. This is illustrated as:

PAE = (BAE Heat Input) x (1 + 39.7% + 0 + 0) x (1) = EE

Note: that this formula reduces to the same formula as EE shown above.

Projected Emission Increase

The PEI is calculated as the difference between the PAE and the EE (recall the EE are considered adjusted BAE values due to the demand growth that the unit could accommodate without the Projects). In this case the resulting PAE equals the EE because there are no increases (or decreases) considered for this project other than those associated with demand growth. Therefore, the difference in emissions on a pollutant by pollutant basis is zero. Table 2-3 illustrates Unit 3's BAE, PAE, and EE and compares the change in emissions to the PSD SERs. As Table 2-3 indicates, the difference in PAE and BAE is zero and thus does not exceed the PSD SERs. Table 2-4 compares Unit 3's PAE to the CCL's. As seen from the Table 2-4, Unit 3's PAE are less than the CCLs. Again, the CCLs represent the combined emissions of Units 1, 2, and 3; therefore, Unit 3's operations will be limited by the CCLs because on a facility-wide basis, JEA will continue to be in compliance with the CCLs.

Unit 3's proposed Project consisting of replacement and maintenance activities will not result in an increase in maximum boiler heat input, steam generation, or emissions and will not trigger PSD review. The Project will be considered a minor modification under PSD and FDEP rules.

Table 2-3
Unit 3 – Comparison of BAE, PAE, and EE tpy Levels

Pollutant[(b)]	BAE Emission Level (tpy)	PAE[(a)] Emission Level (tpy)	EE Emission Level (tpy)	PAE to EE Emissions Increase (tpy)	PSD SER (tpy)	PSD Major Modification (Yes/No)
NO_x	1,916	2,676	2,676	0	40	No
SO_2	6,791	9,488	9,488	0	40	No
PM_{10}	232	325	325	0	15	No
PM	232	325	325	0	25	No
CO	243	340	340	0	40	No
VOC	29	40	40	0	100	No

Notes:
[(a)]Unit 3's PAE are only based on a 39.7 percent demand growth rate. Project demand growth and capacity increases for this project were not considered as they were not applicable.
[(b)]Emissions of lead, fluorides, H_2SO_4, H_2S, and $PM_{2.5}$ were not included in this analyses. However, as illustrated in this analyses their respective PAE to EE emissions would also equal zero. Therefore, the emissions increase of these pollutants would also be less than the PSD SER. Calculations are contained in Appendix C.

Table 2-4
Unit 3 Projected Actual Emissions

Pollutants (tpy)	NO_x	SO_2	PM_{10}	PM	CO	VOC
PAE[(a)]	2,676	9,488	325	325	340	40
Community Commitment Levels[(b)]	3,600	12,284	881	881	-	-

[(a)]Unit 3's PAE are only based on a 39.7 percent demand growth rate. Project demand growth and capacity increases for this project were not considered as they were not applicable.
[(b)]Community Commitment Emission Levels are for the combined emissions of Units 1, 2, and 3.

2.3 New Source Review Standards Applicability

Since there will be no increase in emissions of any pollutant from Unit 3 on a pound per hour basis, the proposed Projects do not qualify as modifications under the NSPS rules. Therefore, NSPS review is not triggered for this unit.

Appendix A

FDEP Air Permit Application Forms

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial, revised, or renewal Title V air operation permit.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: JEA	
2. Site Name: Northside Generating Station/St. John's River Power Park	
3. Facility Identification Number: 0310045	
4. Facility Location... Street Address or Other Locator: 4377 Heckscher Drive City: Jacksonville County: Duval Zip Code: 32202	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: N. Bert Gianazza – Environmental Services
2. Application Contact Mailing Address... Organization/Firm: JEA (T-8) Street Address: 21 West Church Street City: Jacksonville State: FL Zip Code: 32202
3. Application Contact Telephone Numbers... Telephone: (904) 665 - 6247 ext. Fax: (904) 665 - 7376
4. Application Contact E-mail Address: gianNB@jea.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 5/18/09	3. PSD Number (if applicable):
2. Project Number(s): 0310045-026-AC	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

This application for air permit is being submitted to obtain: (Check one)

Air Construction Permit

[x] Air construction permit.

[ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).

[ ] Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

Air Operation Permit

[ ] Initial Title V air operation permit.

[ ] Title V air operation permit revision.

[ ] Title V air operation permit renewal.

[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.

[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

[ ] Air construction permit and Title V permit revision, incorporating the proposed project.

[ ] Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

[ ] I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

It is the purpose of this minor source air permit application to request approval for JEA to proceed with upgrade and enhancement projects for Unit 3 at the Northside Generating Station (NGS). The Projects include the replacement of boiler water wall tubing, fan rotors, a feedwater heater, and other equipment, but will not result in any increase in fuel consumption, heat input, steam generation, or emissions. The scope of this air construction permit application is limited to NGS Unit 3. Supplemental information previously submitted with the July 2008 Title V Operating Permit Application Package are not included in this application, as it is less than 5 years old.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
003	NGS – Boiler No. 3	NA	NA

Application Processing Fee

Check one: ☐ Attached - Amount: $_____ ☒ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : James M. Chansler, P.E., D.P.A. Vice President, Operations and Maintenance
2. Owner/Authorized Representative Mailing Address... Organization/Firm: JEA Street Address: 21 West Church Street City: Jacksonville State: FL Zip Code: 32202
3. Owner/Authorized Representative Telephone Numbers... Telephone: (904) 665 - 4433 ext. Fax: (904) 665- 7990
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement: *I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.* Signature Date 5/11/09

APPLICATION INFORMATION

Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name:
   James M. Chansler, P.E., D.P.A. Vice President, Operations and Maintenance

2. Application Responsible Official Qualification (Check one or more of the following options, as applicable):

   ☐ For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

   ☐ For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

   ☐ For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

   ☐ The designated representative at an Acid Rain source, CAIR source, or Hg Budget source.

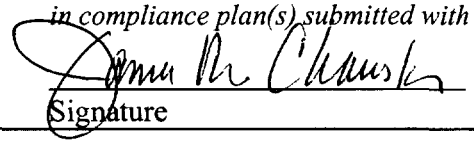
3. Application Responsible Official Mailing Address...
   Organization/Firm: JEA
   Street Address: 21 West Church Street
   City: Jacksonville State: FL Zip Code: 32202

4. Application Responsible Official Telephone Numbers...
   Telephone: (904) 665 - 4433 ext. Fax: (904) 665-7990

5. Application Responsible Official E-mail Address: chanJM@jea.com

6. Application Responsible Official Certification:

   I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.



Signature

5/11/09

Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: N. Bert Gianazza
   Registration Number: 38640
2. Professional Engineer Mailing Address...
   Organization/Firm: JEA (T-8)
   Street Address: 21 West Church Street
   City: Jacksonville State: FL Zip Code: 32202
3. Professional Engineer Telephone Numbers...
   Telephone: (904) 665-6247 ext. Fax: (904) 665-7376
4. Professional Engineer E-mail Address: gianNB@jea.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here [x], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 5/11/09 Date

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 446.70 North (km) 3365.10		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 30/25/51 Longitude (DD/MM/SS) 81/33/3	
3. Governmental Facility Code: 4	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: N. Bert Gianazza – Environmental Services
2. Facility Contact Mailing Address... Organization/Firm: JEA (T-8) Street Address: 21 West Church Street City: Jacksonville State: FL Zip Code: 32202
3. Facility Contact Telephone Numbers: Telephone: (904) 665-6247 Fax: (904) 665-7376
4. Facility Contact E-mail Address: giannb@jea.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☐ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☐ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
CO	A	
NO_x	A	Y (for NGS)
PM	A	Y (for NGS)
PM_{10}	A	
SO_2	A	Y (for NGS)
VOC	A	
PB	B	
H114	B	
SAM	B	
H107	A	
H106	A	
H095	A	
H104	A	
H113	A	
H133	A	
HAPS	A	

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
NO_x	N	NGS Units 1, 2 and 3		3,600	PSD-FL-265
PM	N	NGS Units 1, 2 and 3		881	PSD-FL-265
SO_2	N	NGS Units 1, 2 and 3		12,284	PSD-FL-265

7. Facility-Wide or Multi-Unit Emissions Cap Comment:
The emission limit is based on a consecutive 12-month period for NGS Units 1, 2 and 3.

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ [x] Previously Submitted, Date: July 2008
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ [x] Previously Submitted, Date: July 2008
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ [x] Previously Submitted, Date: July 2008

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID: _____ [x] Not Applicable (existing permitted facility)
2. Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL):
   [x] Attached, Document ID: Technical Support Document
3. Rule Applicability Analysis:
   [x] Attached, Document ID: Technical Support Document
4. List of Exempt Emissions Units:
   ☐ Attached, Document ID: _____ [x] Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification:
   ☐ Attached, Document ID: _____ [x] Not Applicable
6. Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
   ☐ Attached, Document ID: _____ [x] Not Applicable
7. Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
   ☐ Attached, Document ID: _____ [x] Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
   ☐ Attached, Document ID: _____ [x] Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID: _____ [x] Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID: _____ [x] Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units:
   ☐ Attached, Document ID:_____ ☐ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable (revision application)
2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
   ☐ Attached, Document ID:_____
   ☐ Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
   ☐ Attached, Document ID:_____
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities Onsite but Not Required to be Individually Listed
   ☐ Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
   ☐ Attached, Document ID:_____ ☐ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☐ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

1. Acid Rain Program Forms:

   Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: July 2008
   ☐ Not Applicable (not an Acid Rain source)

   Phase II NO_X Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: July 2008
   ☐ Not Applicable

   New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____
   ☒ Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: July 2008
   ☐ Not Applicable (not a CAIR source)

3. Hg Budget Part (DEP Form No. 62-210.900(1)(c)):
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date: _____
   ☒ Not Applicable (not a Hg Budget unit)

Additional Requirements Comment

Additional requirement items were previously submitted within the past 5 years and would no be altered with this project.

EMISSIONS UNIT INFORMATION
Section [1] of [1]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

[x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

[x] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: NGS – Boiler No. 3

3. Emissions Unit Identification Number: 003

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:
A		June 28, 1977	49

8. Federal Program Applicability: (Check all that apply)

[x] Acid Rain Unit

[x] CAIR Unit

[ ] Hg Budget Unit

9. Package Unit:
Manufacturer: Model Number:

10. Generator Nameplate Rating: 563.5 MW

11. Emissions Unit Comment:
NGS Boiler No. 3 may be used to evaporate on-site generated boiler non-hazardous cleaning chemicals.

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ___ of ___

1. Control Equipment/Method Description:
2. Control Device or Method Code:

Pollutant emissions from this emissions unit are uncontrolled.

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate:	
2. Maximum Production Rate:	
3. Maximum Heat Input Rate: 5,260 million Btu/hr	
4. Maximum Incineration Rate: pounds/hr tons/day	
5. Requested Maximum Operating Schedule: 24 hours/day 52 weeks/year	7 days/week 8,760 hours/year

6. Operating Capacity/Schedule Comment:
The nominal maximum heat input rates are:

5,260 MMBtu/hr when firing natural gas;
5,260 MMBtu/hr when firing landfill gas;
5,033 MMBtu/hr when firing New No. 6 fuel oil;
5,033 MMBtu/hr when firing "On-specification" used oil;
5,033 – 5,260 MMBtu/hr when firing a combination of fuel oil and natural gas
5,033 – 5,260 MMBtu/hr when firing a combination of fuel oil and natural/landfill gases

It is requested that the permitting note that was removed by FDEP for this emission unit be reinstated in the renewed Title V permit, as follows:

"The heat input limitations have been placed in the permit to identify the capacity of each emissions unit for the purposes of confirming that emissions testing is conducted within 90-100 percent of the emission unit's rated capacity (or to limit future operation to 110 percent of the test load), to establish appropriate limits and to aid in determining future rule applicability."

It is also requested that further clarification be added as follows:

"The permittee and the Department agree that the CEMS used for the federal Acid Rain Program conservatively overestimates the heat input for this unit. The monitoring data for heat input is therefore not appropriate for purposes of compliance, including annual compliance certification."

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: EU003	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: The combustion gases exhaust through a 300 foot stack.		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack Height: 300 feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment:		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): No. 6 fuel oil used in NGS Boiler No. 3		
2. Source Classification Code (SCC): 10100401	3. SCC Units: 1,000 gallons burned	
4. Maximum Hourly Rate: 33.55 (approx.)	5. Maximum Annual Rate: 293,926 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 1.8	8. Maximum % Ash:	9. Million Btu per SCC Unit: 150 (approx.)
10. Segment Comment (limit to 200 characters): No. 6 fuel oil heating value data taken from USEPA AP-42 Appendix A. The maximum sulfur content given in operation permit 0310045-016-AV applies if the SO_2 continuous emissions monitor system is temporarily inoperative.		

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas used in NGS Boiler No. 3		
2. Source Classification Code (SCC): 10100601	3. SCC Units: Million cubic feet burned	
4. Maximum Hourly Rate: 5.01 (approx.)	5. Maximum Annual Rate: 43,883 (approx.)	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,050 (approx.)
10. Segment Comment (limit to 200 characters): The natural gas heating value was taken from USEPA AP-42 Appendix A.		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Landfill gas used in NGS Boiler No. 3		
2. Source Classification Code (SCC): 10100601	3. SCC Units: Million cubic feet burned	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): "On-specification" used oil		
2. Source Classification Code (SCC):	3. SCC Units: 1,000 gallons burned	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 1,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): The use of "on-specification" used oil is limited by operation permit 0310045-016-AV to 1,000,000 gallons per calendar year.		

D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)

Segment Description and Rate: Segment _5_ of _5_

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Fuel oil and natural gas		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			**NS**
NO_X			**EL**
PM			**EL**
PM_{10}			**NS**
SO_2			**EL**
VOC			**NS**
PB			**NS**
H014			**NS**
H047			**NS**
H095			**NS**
H104			**NS**
H133			**NS**
H148			**NS**
H169			**NS**
HAPS			**NS**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOX	2. Total Percent Efficiency of Control:
3. Potential Emissions: 1,578 lb/hour 3,600 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: Operation permit 0310045-016-AV and Rule 62-296.405(1)(d)1., F.A.C.	7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

The NO_x Emissions limit of 0.30 lb/MMBtu is set by operation permit 0310045-016-AV.
The heat input rate to EU003 is 5,260 MMBtu/hr.
Hourly NO_x emissions rate = (0.30 lb/MMBtu)(5,260 MMBtu/hr) = 1,578 lb/hr

Construction Permit PSD-FL-265 limits combined NOx emissions from Units 1, 2 and 3 to 3,600 tons per consecutive 12-month period.

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.30 lb/MMBtu	4. Equivalent Allowable Emissions: 1,578 lb/hour tons/year
5. Method of Compliance: Compliance with the NO_x emission limit will be demonstrated using CEMs.	
6. Allowable Emissions Comment (Description of Operating Method): The NO_x emissions limit along with compliance determination requirements are included in operation permit 0310043-002-AV and are based on Rule 62-296.405(1)(d)1., F.A.C. and Rule 62-296.405(1)(e)4., F.A.C. The NO_x emissions limit is on a 30-day rolling average basis. Excess emissions resulting from malfunction are allowed pursuant to Rule 62-210.700(1), F.A.C. and excess emissions resulting from startup or shutdown are allowed pursuant to Rule 62-210.700(2), F.A.C.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour 3,600 tons/year
5. Method of Compliance: Compliance with the NO_x emission limit will be demonstrated using CEMs.	
6. Allowable Emissions Comment (Description of Operating Method): Construction Permit PSD-FL-265 limits combined NOx emissions from Units 1, 2 and 3 to 3,600 tons per consecutive 12-month period. Therefore, the maximum NOx emissions from Unit 3, absent operation of Units 1 and 2, is 3,600 tons per year. This NOx emissions limit along with compliance determination requirements are included in construction permit PSD-FL-265.	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control:
3. Potential Emissions: 30 lb/hour 881 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: Operation permit 0310045-016-AV, Rule 62-296.405(1)(b), F.A.C. and Rule 62-296.702(2)(a), F.A.C.	7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

The PM Emissions limit of 0.1 lb/MMBtu is set by operation permit 0310045-016-AV.
The heat input rate to EU003 is 5,260 MMBtu/hr.
Hourly PM emissions rate = (0.1 lb/MMBtu)(5,260 MMBtu/hr) = 526 lb/hr

Construction Permit PSD-FL-265 limits combined PM emissions from Units 1, 2 and 3 to 881 tons per consecutive 12-month period.

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 3

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.1 lb/MMBtu	4. Equivalent Allowable Emissions: 526 lb/hour tons/year
5. Method of Compliance: Using appropriate EPA Methods	
6. Allowable Emissions Comment (Description of Operating Method): The PM emissions limit along with compliance determination requirements are included in operation permit 0310045-016-AV and are based on Rule 62-296.405(1)(b), F.A.C. and Rule 62-296.702(2)(a), F.A.C. Excess emissions resulting from malfunction are allowed pursuant to Rule 62-210.700(1), F.A.C. and excess emissions resulting from startup or shutdown are allowed pursuant to Rule 62-210.700(2), F.A.C.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.3 lb/MMBtu during boiler cleaning (soot blowing) and load change	4. Equivalent Allowable Emissions: 526 lb/hour tons/year
5. Method of Compliance: Using appropriate EPA Methods	
6. Allowable Emissions Comment (Description of Operating Method): The PM emissions limit along with compliance determination requirements are included in operation permit 0310045-016-AV and are based on Rule 62-210.700(3), F.A.C. This emissions limit applies during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions ___3___ of ___3___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour 881 tons/year
5. Method of Compliance (limit to 60 characters): Determining particulate matter emissions from this emissions unit to show compliance with this limit is based on the formula provided in Construction Permit PSD-FL-265.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Construction Permit PSD-FL-265 limits combined PM emissions from Units 1, 2 and 3 to 881 tons per consecutive 12-month period. Therefore, the maximum PM emissions from Unit 3, absent operation of Units 1 and 2, is 881 tons per year.	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:
3. Potential Emissions: 10,415 lb/hour 12,284 tons/year	4. Synthetically Limited? [x] Yes [ ] No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: Reference: Operation permit 0310045-016-AV and Rule 62-296.405(1)(c)1.a., F.A.C.	7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: [ ] 5 years [ ] 10 years

10. Calculation of Emissions:

The SO_2 Emissions limits of 1.98 lb/MMBtu (firing oil) is set by operation permit 0310045-016-AV.
The heat input rate to EU003 is 5,033 MMBtu/hr.
Hourly SO_2 emissions rate = (1.98 lb/MMBtu)(5,033 MMBtu/hr) = 9,965 lb/hr

Construction Permit PSD-FL-265 limits combined SO_2 emissions from Units 1, 2 and 3 to 12,284 tons per consecutive 12-month period.

11. Potential, Fugitive, and Actual Emissions Comment:

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.98 lb/MMBtu	4. Equivalent Allowable Emissions: 10,415 lb/hour tons/year
5. Method of Compliance (limit to 60 characters): Compliance with the SO_2 emission limit will be demonstrated using CEMs.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): The SO_2 emissions limits along with compliance determination requirements are included in operation permit 0310045-016-AV and based on rule 62-296.405(1)(c)1.a., F.A.C. Excess emissions resulting from malfunction are allowed pursuant to Rule 62-210.700(1), F.A.C. and excess emissions resulting from startup or shutdown are allowed pursuant to Rule 62-210.700(2), F.A.C.	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour 12,284 tons/year
5. Method of Compliance (limit to 60 characters): Compliance with the SO_2 emission limits are demonstrated using CEMs.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Construction Permit PSD-FL-265 limits combined SO_2 emissions from Units 1, 2 and 3 to 12,284 tons per consecutive 12-month period. Therefore, the maximum SO_2 emissions from Unit 3, absent operation of Units 1 and 2, is 12,284 tons per year. This SO_2 emissions limit along with compliance determination requirements are included in construction permit PSD-FL-265.	

G. VISIBLE EMISSIONS INFORMATION

Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity: [x] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 40 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: DEP Method 9.	
5. Visible Emissions Comment (limit to 200 characters): The visible emissions limit along with compliance determination requirements are included in operation permit 0310045-016-AV and are based on Rule 62-296.405(1)(1), F.A.C. and Rule 62-296.702(2)(b), F.A.C. Excess emissions resulting from malfunction are allowed pursuant to Rule 62-210.700(1), F.A.C. and excess emissions resulting from startup or shutdown are allowed pursuant to Rule 62-210.700(2), F.A.C.	

Visible Emissions Limitation: Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: VE60	2. Basis for Allowable Opacity: [x] Rule [ ] Other
3. Allowable Opacity: Normal Conditions: 60 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: DEP Method 9	
5. Visible Emissions Comment: The visible emissions limit along with compliance determination requirements are included in operation permit 0310045-016-AV and are based on Rule 62-210.700(3), F.A.C. This visible emissions limit applies during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.	

H. CONTINUOUS MONITOR INFORMATION

Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 3

1. Parameter Code: EM	2. Pollutant(s): NOX
3. CMS Requirement:	[x] Rule [ ] Other
4. Monitor Information... Manufacturer: TECO	
Model Number: 42C	Serial Number: 0501710240
5. Installation Date: March 20, 2005	6. Performance Specification Test Date: April-May 2005
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor 2 of 3

1. Parameter Code: EM	2. Pollutant(s): SO2
3. CMS Requirement:	[x] Rule [ ] Other
4. Monitor Information... Manufacturer: TECO	
Model Number: 43C	Serial Number: 0462408776
5. Installation Date: March 20, 2005	6. Performance Specification Test Date: April-May 2005
7. Continuous Monitor Comment:	

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Continuous Monitoring System: Continuous Monitor 3 of 3

1. Parameter Code: CO2	2. Pollutant(s):
3. CMS Requirement:	[x] Rule [ ] Other
4. Monitor Information... Manufacturer: CAI Model Number: ZRH01	Serial Number: A4B1700T
5. Installation Date: March 20, 2005	6. Performance Specification Test Date: April-May 2005
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ___ of ___

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date July 2008

2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date July 2008

3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☐ Previously Submitted, Date _____

4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date July 2008
   ☐ Not Applicable (construction application)

5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID: _____ ☒ Previously Submitted, Date July 2008
   ☐ Not Applicable

6. Compliance Demonstration Reports/Records:
   ☐ Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☒ Previously Submitted, Date: July 2008
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   ☐ Not Applicable
   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute:
   ☐ Attached, Document ID: _____ ☒ Not Applicable

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring: ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation: ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading): ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements Comment

Appendix B

Emission Calculations

Annual Unit 3 Emissions[1]

	NOx	VOC	PM10[4]	SOx	CO	PM[3]
2003 Annual Emissions (tons/year)	2,478.00	41.44	314.96	8,836.00	412.44	596.92
2004 Annual Emissions (tons/year)	2,219.80	39.45	309.85	8,336.00	346.54	309.85
2005 Annual Emissions (tons/year)	2,073.40	28.21	243.03	7,292.90	225.41	243.03
2006 Annual Emissions (tons/year)	1,374.00	22.59	52.29	4,195.00	227.19	52.29
2007 Annual Emissions (tons/year)	777.30	17.94	63.52	1,293.20	235.78	63.52

"Fuel By Month" Input Data[2]

	OIL (MBTUs)	GAS (MBTUs)	LANDFILL GAS (MBTUs)	TOTAL (MBTUs)
2003 Jan	865,996	602,715	0	1,468,711
2003 Feb	95,196	77,474	282	172,952
2003 Mar	705,231	777,888	8,590	1,491,710
2003 Apr	492,751	603,041	1,206	1,096,998
2003 May	706,397	635,382	816	1,342,596
2003 Jun	856,151	597,579	10,053	1,463,782
2003 Jul	924,663	514,202	7,212	1,446,077
2003 Aug	1,118,348	794,171	6,194	1,918,713
2003 Sep	1,165,911	630,493	12,073	1,808,476
2003 Oct	1,040,747	380,631	8,181	1,429,560
2003 Nov	880,977	331,700	11,933	1,224,610
2003 Dec	1,019,856	335,737	6,569	1,362,163
2003 TOTAL	**9,872,225**	**6,281,013**	**73,110**	**16,226,347**
2004 Jan	478,397	227,402	3,708	709,507
2004 Feb	659,030	211,152	1,892	872,074
2004 Mar	1,020,739	368,212	4,036	1,392,987
2004 Apr	1,095,729	536,259	7,532	1,639,521
2004 May	875,135	363,179	6,192	1,244,506
2004 Jun	1,325,634	480,456	6,894	1,812,984
2004 Jul	1,439,122	605,236	1,786	2,046,144
2004 Aug	1,283,951	392,171	2,691	1,678,812
2004 Sep	1,482,584	268,153	9,547	1,760,284
2004 Oct	1,035,233	273,921	2,277	1,311,431
2004 Nov	253,410	56,928	1,527	311,865
2004 Dec	587,820	118,077	3,255	709,152
2004 TOTAL	**11,536,784**	**3,901,147**	**51,337**	**15,489,268**
2005 Jan	728,535	113,178	5,711	847,424
2005 Feb	464,253	86,831	3,759	554,843
2005 Mar	594,250	103,494	1,815	699,559
2005 Apr	427,204	102,204	0	529,407
2005 May	949,293	351,572	4,795	1,305,661
2005 Jun	1,231,988	256,852	11,538	1,500,379
2005 Jul	1,518,654	344,091	9,781	1,872,526
2005 Aug	1,574,359	155,386	3,506	1,733,251
2005 Sep	1,196,840	213,646	4,447	1,414,933
2005 Oct	535,784	73,169	1,605	610,559
2005 Nov	0	0	0	0
2005 Dec	0	14,792	0	14,792
2005 TOTAL	**9,221,161**	**1,815,216**	**46,958**	**11,083,334**
2006 Jan	0	120,406	2,503	122,909
2006 Feb	0	137,241	2,513	139,754
2006 Mar	0	2,310	0	2,310
2006 Apr	0	124,020	0	124,020
2006 May	0	504,269	872	505,141
2006 Jun	0	522,704	819	523,523
2006 Jul	0	752,480	0	752,480
2006 Aug	0	464,889	0	464,889
2006 Sep	36,710	119,939	0	156,650
2006 Oct	452,082	253,907	2,427	708,416
2006 Nov	754,051	368,390	3,157	1,125,598
2006 Dec	304,152	100,106	0	404,258
2006 TOTAL	**1,546,996**	**3,470,660**	**12,290**	**5,029,946**
2007 Jan	168,993	30,206	0	199,199
2007 Feb	581,766	50,069	0	631,835
2007 Mar	0	0	0	0
2007 Apr	0	0	0	0
2007 May	16,294	39,227	0	55,521
2007 Jun	157,790	859,931	1,863	1,019,583
2007 Jul	112,195	1,493,491	3,003	1,608,689
2007 Aug	704,848	817,375	765	1,522,985
2007 Sep	11,105	823,908	0	835,013
2007 Oct	4,391	1,052,538	0	1,056,929
2007 Nov	0	0	0	0
2007 Dec	5,965	102,349	123	108,438
2007 TOTAL	**1,763,346**	**5,269,093**	**5,753**	**7,038,192**

Annual Emission Factor Calculations

	NOx	VOC	PM10[4]	SOx	CO	PM[3]
2003 Emission Factor (lb/MBtu)	0.3054	0.0051	0.0388	1.0891	0.0508	0.0736
2004 Emission Factor (lb/MBtu)	0.2866	0.0051	0.0400	1.0764	0.0447	0.0400
2005 Emission Factor (lb/MBtu)	0.3741	0.0051	0.0439	1.3160	0.0407	0.0439
2006 Emission Factor (lb/MBtu)	0.5463	0.0090	0.0208	1.6680	0.0903	0.0208
2007 Emission Factor (lb/MBtu)	0.2209	0.0051	0.0180	0.3675	0.0670	0.0180

Note:

1 - The annual emission values were calculated based on data provided by JEA based on CEMs, stack test, emission factors and fuel flow

2 - The emissions and heat input information for 2008 is not provided. However, JEA noted that NGS3's operation in 2008 was less than that of previous years. Therefore, data for 2008 will not be included in this analysis.

3 - FDEP rule 62-210.370(2)(d)(1)(a) Emission Computation and Reporting - requires the use of 5 years of valid stack test data to develop an emission factor. FDEP confirmed this approach via conference call on March 18, 2009 for use when calculating PM emissions. Particulate emission stack tests were conducted once annually from 2004 to 2008. The results from these tests for the non-soot blowing tests were averaged and included as the emission factor for each year. PM total emissions based on oil fired stack test data and emission factors and fuel flow for natural gas and landfill gas firing.

4 - *PM10 emissions were calculated using emission factors and fuel flow rates for oil, natural gas, and landfill gas firing. In some case the* annual PM10 emissions were higher than those annual PM emissions calculated using an oil fired stack test result. In those cases, the annual PM10 emissions were set equal to the annual PM emissions.

NSR Reform Method (Any 2 Years of the Most Recent 5 Years)

	Oil Heat Input		Natural Gas Heat Input		Landfill Gas Heat Input	
	Monthly Heat Input (MBtu)	24-Mon Ann Rolling Avg. (MBtu)	Monthly Heat Input (MBtu)	24-Mon Ann Rolling Avg. (MBtu)	Monthly Heat Input (MBtu)	24-Month Annual Avg. (MBtu)
2003 Jan	865,996.31		602,714.82		0.00	
2003 Feb	95,196.09		777,473.91		282.30	
2003 Mar	705,231.05		777,888.37		8,590.31	
2003 Apr	492,751.41		603,040.58		1,206.24	
2003 May	706,397.07		635,382.02		816.42	
2003 Jun	856,151.00		597,578.68		10,052.76	
2003 Jul	924,663.10		514,201.87		7,211.86	
2003 Aug	1,118,347.64		794,171.04		6,193.83	
2003 Sep	1,165,910.62		630,493.04		12,072.57	
2003 Oct	1,040,747.42		380,631.38		8,181.11	
2003 Nov	880,976.93		331,700.09		11,932.73	
2003 Dec	1,019,856.03		335,737.18		6,569.49	
2004 Jan	478,396.63		227,401.56		3,708.45	
2004 Feb	659,029.96		211,152.49		1,891.66	
2004 Mar	1,020,738.99		368,212.40		4,035.57	
2004 Apr	1,095,729.33		536,259.27		7,532.45	
2004 May	875,135.03		363,179.19		6,192.03	
2004 Jun	1,325,634.41		480,456.10		6,893.89	
2004 Jul	1,439,122.42		605,236.30		1,785.72	
2004 Aug	1,283,950.80		392,170.73		2,690.84	
2004 Sep	1,482,583.65		268,152.64		9,547.38	
2004 Oct	1,035,232.64		273,921.47		2,277.08	
2004 Nov	253,410.18		56,928.16		1,526.63	
2004 Dec	587,820.13	10,704,504.41	118,076.80	5,091,080.04	3,255.08	62,223.19
2005 Jan	728,535.04	10,635,773.78	113,177.72	4,846,311.50	5,711.13	65,078.76
2005 Feb	464,253.01	10,820,302.23	86,831.49	4,850,990.29	3,758.54	66,816.87
2005 Mar	594,250.22	10,764,811.82	103,494.17	4,513,793.18	1,814.63	63,429.03
2005 Apr	427,203.85	10,732,038.04	102,203.54	4,263,374.67	0.00	62,825.91
2005 May	949,292.92	10,853,485.96	351,572.37	4,121,469.85	4,795.47	64,815.44
2005 Jun	1,231,988.30	11,041,404.62	256,852.48	3,951,106.75	11,538.06	65,558.09
2005 Jul	1,518,654.27	11,338,400.20	344,090.92	3,866,051.27	9,781.16	66,842.74
2005 Aug	1,574,358.75	11,566,405.76	155,386.00	3,546,658.75	3,506.40	65,499.03
2005 Sep	1,196,840.40	11,581,870.65	213,646.11	3,338,235.29	4,446.94	61,686.21
2005 Oct	535,784.36	11,329,389.12	73,169.07	3,184,504.14	1,605.42	58,398.37
2005 Nov	0.00	10,888,900.66	0.00	3,018,654.09	0.00	52,432.00
2005 Dec	0.00	10,378,972.64	14,791.73	2,858,181.36	0.00	49,147.26
2006 Jan	0.00	10,139,774.33	120,406.00	2,804,683.58	2,502.67	48,544.37
2006 Feb	0.00	9,810,259.35	137,240.86	2,767,727.77	2,513.09	48,855.09
2006 Mar	0.00	9,299,889.85	2,310.18	2,584,776.66	0.00	46,837.30
2006 Apr	0.00	8,752,025.19	124,019.53	2,378,656.80	0.00	43,071.07
2006 May	0.00	8,314,457.67	504,268.70	2,449,201.55	871.86	40,410.99
2006 Jun	0.00	7,651,640.47	522,703.75	2,470,325.38	819.16	37,373.63
2006 Jul	0.00	6,932,079.26	752,479.69	2,543,947.07	0.00	36,480.77
2006 Aug	0.00	6,290,103.86	464,888.78	2,580,306.09	0.00	35,135.35
2006 Sep	36,710.48	5,567,167.28	119,939.33	2,506,199.43	0.00	30,361.66
2006 Oct	452,081.85	5,275,591.88	253,907.10	2,496,192.24	2,426.64	30,436.44
2006 Nov	754,051.48	5,525,912.53	368,389.89	2,651,923.11	3,156.81	31,251.53
2006 Dec	304,151.88	5,384,078.41	100,105.93	2,642,937.67	0.00	29,623.99
2007 Jan	168,993.48	5,104,307.63	30,205.77	2,601,451.70	0.00	26,768.43
2007 Feb	581,766.48	5,163,064.36	50,068.58	2,583,070.24	0.00	24,889.16
2007 Mar	0.00	4,865,939.26	0.00	2,531,323.16	0.00	23,981.84
2007 Apr	0.00	4,652,337.33	0.00	2,480,221.39	0.00	23,981.84
2007 May	16,294.04	4,185,837.89	39,226.83	2,324,048.62	0.00	21,584.11
2007 Jun	157,789.52	3,648,738.50	859,931.22	2,625,587.99	1,862.68	16,746.42
2007 Jul	112,195.06	2,945,508.89	1,493,491.05	3,200,288.05	3,002.64	13,357.16
2007 Aug	704,845.76	2,510,752.39	817,374.87	3,531,282.49	764.63	11,986.27
2007 Sep	11,105.44	1,917,884.91	823,907.62	3,836,413.25	0.00	9,762.80
2007 Oct	4,390.95	1,652,188.21	1,052,538.11	4,326,097.76	0.00	8,960.10
2007 Nov	0.00	1,652,188.21	0.00	4,326,097.76	0.00	8,960.10
2007 Dec	5,965.32	1,655,170.87	102,348.88	4,369,876.34	123.43	9,021.81

	Calculated NOx Emissions					
	Monthly Emissions (tons)	24-Mon Ann Rolling Avg. (tons)	Maximum 24-Mon Ann Rolling Avg. (tons)	Associated Oil Heat Input (MBtu)	Associated Natural Gas Heat Input (MBtu)	Associated Landfill Gas Heat Input (MBtu)
2003 Jan	280.30					
2003 Feb	21.20					
2003 Mar	224.60					
2003 Apr	156.30					
2003 May	201.30					
2003 Jun	196.90					
2003 Jul	233.20					
2003 Aug	296.30					
2003 Sep	276.20					
2003 Oct	195.70					
2003 Nov	174.70					
2003 Dec	220.40					
2004 Jan	109.30					
2004 Feb	155.50					
2004 Mar	169.40					
2004 Apr	232.00					
2004 May	179.70					
2004 Jun	247.50					
2004 Jul	290.60					
2004 Aug	228.10					
2004 Sep	271.20					
2004 Oct	176.80					
2004 Nov	44.70					
2004 Dec	114.80					
2005 Jan	137.60					
2005 Feb	88.00					
2005 Mar	123.30					
2005 Apr	113.90					
2005 May	245.80					
2005 Jun	274.20					
2005 Jul	377.30					
2005 Aug	333.40					
2005 Sep	263.20					
2005 Oct	115.70					
2005 Nov	0.00					
2005 Dec	1.20					
2006 Jan	62.30					
2006 Feb	95.00					
2006 Mar	0.01					
2006 Apr	46.80	1,915.56	1,915.56	8.75E+06	2.38E+06	4.31E+04
2006 May	133.70	1,892.56				
2006 Jun	185.60	1,861.61				
2006 Jul	220.50	1,826.56				
2006 Aug	240.80	1,832.91				
2006 Sep	15.20	1,704.91				
2006 Oct	126.90	1,679.96				
2006 Nov	167.60	1,741.41				
2006 Dec	66.90	1,717.46				
2007 Jan	35.10	1,666.21				
2007 Feb	137.80	1,691.11				
2007 Mar	0.00	1,629.46				
2007 Apr	0.00	1,572.51				
2007 May	5.40	1,452.31				
2007 Jun	101.00	1,365.71				
2007 Jul	153.30	1,253.71				
2007 Aug	192.50	1,183.26				
2007 Sep	62.70	1,083.01				
2007 Oct	82.50	1,066.41				
2007 Nov	0.00	1,066.41				
2007 Dec	7.00	1,069.31				

	Calculated VOC Emissions					
	Monthly Emissions (tons)	24-Mon Ann Rolling Avg. (tons)	Maximum 24-Mon Ann Rolling Avg. (tons)	Associated Oil Heat Input (MBtu)	Associated Natural Gas Heat Input (MBtu)	Associated Landfill Gas Heat Input (MBtu)
2003 Jan	3.75					
2003 Feb	0.44					
2003 Mar	3.81					
2003 Apr	2.80					
2003 May	3.43					
2003 Jun	3.74					
2003 Jul	3.69					
2003 Aug	4.90					
2003 Sep	4.62					
2003 Oct	3.65					
2003 Nov	3.13					
2003 Dec	3.48					
2004 Jan	1.81					
2004 Feb	2.22					
2004 Mar	3.55					
2004 Apr	4.18					
2004 May	3.17					
2004 Jun	4.62					
2004 Jul	5.21					
2004 Aug	4.28					
2004 Sep	4.48					
2004 Oct	3.34					
2004 Nov	0.79					
2004 Dec	1.81					
2005 Jan	2.16					
2005 Feb	1.41					
2005 Mar	1.78					
2005 Apr	1.35					
2005 May	3.32					
2005 Jun	3.82					
2005 Jul	4.77					
2005 Aug	4.41					
2005 Sep	3.60					
2005 Oct	1.55					
2005 Nov	0.00					
2005 Dec	0.04					
2006 Jan	0.55					
2006 Feb	0.63					
2006 Mar	0.01					
2006 Apr	0.56	28.83	28.83	8.75E+06	2.38E+06	4.31E+04
2006 May	2.27	28.38				
2006 Jun	2.35	27.24				
2006 Jul	3.38	26.33				
2006 Aug	2.09	25.23				
2006 Sep	0.70	23.34				
2006 Oct	3.18	23.27				
2006 Nov	5.06	25.40				
2006 Dec	1.82	25.40				
2007 Jan	0.51	24.58				
2007 Feb	1.61	24.68				
2007 Mar	0.00	23.79				
2007 Apr	0.00	23.11				
2007 May	0.14	21.52				
2007 Jun	2.60	20.91				
2007 Jul	4.10	20.58				
2007 Aug	3.88	20.31				
2007 Sep	2.13	19.58				
2007 Oct	2.69	20.15				
2007 Nov	0.00	20.15				
2007 Dec	0.28	20.27				

	Calculated PM10 Emissions					
	Monthly Emissions (tons)	24-Mon Ann Rolling Avg. (tons)	Maximum 24-Mon Ann Rolling Avg. (tons)	Associated Oil Heat Input (MBtu)	Associated Natural Gas Heat Input (MBtu)	Associated Landfill Gas Heat Input (MBtu)
2003 Jan	28.51					
2003 Feb	3.36					
2003 Mar	26.95					
2003 Apr	21.29					
2003 May	26.06					
2003 Jun	28.41					
2003 Jul	28.07					
2003 Aug	37.24					
2003 Sep	35.10					
2003 Oct	27.75					
2003 Nov	23.77					
2003 Dec	26.44					
2004 Jan	14.19					
2004 Feb	17.45					
2004 Mar	27.87					
2004 Apr	32.80					
2004 May	24.90					
2004 Jun	36.27					
2004 Jul	40.93					
2004 Aug	33.58					
2004 Sep	35.21					
2004 Oct	26.23					
2004 Nov	6.24					
2004 Dec	14.19					
2005 Jan	18.58					
2005 Feb	12.17					
2005 Mar	15.34					
2005 Apr	11.61					
2005 May	28.63					
2005 Jun	32.90					
2005 Jul	41.06					
2005 Aug	38.01					
2005 Sep	31.03					
2005 Oct	13.39					
2005 Nov	0.00					
2005 Dec	0.32					
2006 Jan	1.28					
2006 Feb	1.45					
2006 Mar	0.02					
2006 Apr	1.29	232.31	232.31	8.75E+06	2.38E+06	4.31E+04
2006 May	5.25	222.49				
2006 Jun	5.44	207.08				
2006 Jul	7.82	190.52				
2006 Aug	4.83	176.15				
2006 Sep	1.63	159.35				
2006 Oct	7.36	149.92				
2006 Nov	11.70	152.65				
2006 Dec	4.20	147.66				
2007 Jan	1.80	139.27				
2007 Feb	5.70	136.03				
2007 Mar	0.00	128.36				
2007 Apr	0.00	122.56				
2007 May	0.50	108.50				
2007 Jun	9.20	96.65				
2007 Jul	14.52	83.38				
2007 Aug	13.74	71.25				
2007 Sep	7.54	59.50				
2007 Oct	9.54	57.58				
2007 Nov	0.00	57.58				
2007 Dec	0.98	57.90				

NSR Reform Method (Any 2 Years of the Most Recent 5 Years)

	Oil Heat Input		Natural Gas Heat Input		Landfill Gas Heat Input	
	Monthly Heat Input (MBtu)	24-Mon Ann Rolling Avg. (MBtu)	Monthly Heat Input (MBtu)	24-Mon Ann Rolling Avg. (MBtu)	Monthly Heat Input (MBtu)	24-Month Annual Avg. (MBtu)
2003 Jan	865,996.31		602,714.82		0.00	
2003 Feb	95,196.09		77,473.91		282.30	
2003 Mar	705,231.05		777,888.37		8,590.31	
2003 Apr	492,751.41		603,040.58		1,206.24	
2003 May	706,397.07		635,382.02		816.42	
2003 Jun	856,151.00		597,578.68		10,052.76	
2003 Jul	924,663.10		514,201.87		7,211.86	
2003 Aug	1,118,347.64		794,171.04		6,193.83	
2003 Sep	1,165,910.62		630,493.04		12,072.57	
2003 Oct	1,040,747.42		380,631.38		8,181.11	
2003 Nov	880,976.93		331,700.09		11,932.73	
2003 Dec	1,019,856.03		335,737.18		6,569.49	
2004 Jan	478,396.63		227,401.56		3,708.45	
2004 Feb	659,029.96		211,152.49		1,891.66	
2004 Mar	1,020,738.99		368,212.40		4,035.57	
2004 Apr	1,095,729.33		536,259.27		7,532.45	
2004 May	875,135.03		363,179.19		6,192.03	
2004 Jun	1,325,634.41		480,456.10		6,893.89	
2004 Jul	1,439,122.42		605,236.30		1,785.72	
2004 Aug	1,283,950.80		392,170.73		2,690.84	
2004 Sep	1,482,583.65		268,152.64		9,547.38	
2004 Oct	1,035,232.64		273,921.47		2,277.08	
2004 Nov	253,410.18		56,928.16		1,526.63	
2004 Dec	587,820.13	10,704,504.41	118,076.80	5,091,080.04	3,255.08	62,223.19
2005 Jan	728,535.04	10,635,773.78	113,177.72	4,846,311.50	5,711.13	65,078.76
2005 Feb	464,253.01	10,820,302.23	86,831.49	4,850,990.29	3,758.54	66,816.87
2005 Mar	594,250.22	10,764,811.82	103,494.17	4,513,793.18	1,814.63	63,429.03
2005 Apr	427,203.85	10,732,038.04	102,203.54	4,263,374.67	0.00	62,825.91
2005 May	949,292.92	10,853,485.96	351,572.37	4,121,469.85	4,795.47	64,815.44
2005 Jun	1,231,988.30	11,041,404.62	256,852.48	3,951,106.75	11,538.06	65,558.09
2005 Jul	1,518,654.27	11,338,400.20	344,090.92	3,866,051.27	9,781.16	66,842.74
2005 Aug	1,574,358.75	11,566,405.76	155,386.00	3,546,658.75	3,506.40	65,499.03
2005 Sep	1,196,840.40	11,581,870.65	213,646.11	3,338,235.29	4,446.94	61,686.21
2005 Oct	535,784.36	11,329,389.12	73,169.07	3,184,504.14	1,605.42	58,398.37
2005 Nov	0.00	10,888,900.66	0.00	3,018,654.09	0.00	52,432.00
2005 Dec	0.00	10,378,972.64	14,791.73	2,858,181.36	0.00	49,147.26
2006 Jan	0.00	10,139,774.33	120,406.00	2,804,683.58	2,502.67	48,544.37
2006 Feb	0.00	9,810,259.35	137,240.86	2,767,727.77	2,513.09	48,855.09
2006 Mar	0.00	9,299,889.85	2,310.18	2,584,776.66	0.00	46,837.30
2006 Apr	0.00	8,752,025.19	124,019.53	2,378,656.80	0.00	43,071.07
2006 May	0.00	8,314,457.67	504,268.70	2,449,201.55	871.86	40,410.99
2006 Jun	0.00	7,651,640.47	522,703.75	2,470,325.38	819.16	37,373.63
2006 Jul	0.00	6,932,079.26	752,479.69	2,543,947.07	0.00	36,480.77
2006 Aug	0.00	6,290,103.86	464,888.78	2,580,306.09	0.00	35,135.35
2006 Sep	36,710.48	5,567,167.28	119,939.33	2,506,199.43	0.00	30,361.66
2006 Oct	452,081.85	5,275,591.88	253,907.10	2,496,192.24	2,426.64	30,436.44
2006 Nov	754,051.48	5,525,912.53	368,389.89	2,651,923.11	3,156.81	31,251.53
2006 Dec	304,151.88	5,384,078.41	100,105.93	2,642,937.67	0.00	29,623.99
2007 Jan	168,993.48	5,104,307.63	30,205.77	2,601,451.70	0.00	26,768.43
2007 Feb	581,766.48	5,163,064.36	50,068.58	2,583,070.24	0.00	24,889.16
2007 Mar	0.00	4,865,939.26	0.00	2,531,323.16	0.00	23,981.84
2007 Apr	0.00	4,652,337.33	0.00	2,480,221.39	0.00	23,981.84
2007 May	16,294.04	4,185,837.89	39,226.83	2,324,048.62	0.00	21,584.11
2007 Jun	157,789.52	3,648,738.50	859,931.22	2,625,587.99	1,862.68	16,746.42
2007 Jul	112,195.06	2,945,508.89	1,493,491.05	3,200,288.05	3,002.64	13,357.16
2007 Aug	704,845.76	2,510,752.39	817,374.87	3,531,282.49	764.63	11,986.27
2007 Sep	11,105.44	1,917,884.91	823,907.62	3,836,413.25	0.00	9,762.80
2007 Oct	4,390.95	1,652,188.21	1,052,538.11	4,326,097.76	0.00	8,960.10
2007 Nov	0.00	1,652,188.21	0.00	4,326,097.76	0.00	8,960.10
2007 Dec	5,965.32	1,655,170.87	102,348.88	4,369,876.34	123.43	9,021.81

	Calculated SOx Emissions					
	Monthly Emissions (tons)	24-Mon Ann Rolling Avg. (tons)	Maximum 24-Mon Ann Rolling Avg. (tons)	Associated Oil Heat Input (MBtu)	Associated Natural Gas Heat Input (MBtu)	Associated Landfill Gas Heat Input (MBtu)
2003 Jan	746.00					
2003 Feb	67.90					
2003 Mar	668.40					
2003 Apr	485.70					
2003 May	675.60					
2003 Jun	816.50					
2003 Jul	870.60					
2003 Aug	928.10					
2003 Sep	999.80					
2003 Oct	906.70					
2003 Nov	796.50					
2003 Dec	873.30					
2004 Jan	423.60					
2004 Feb	571.90					
2004 Mar	805.00					
2004 Apr	885.90					
2004 May	653.90					
2004 Jun	968.60					
2004 Jul	1055.80					
2004 Aug	915.00					
2004 Sep	992.70					
2004 Oct	635.30					
2004 Nov	94.30					
2004 Dec	333.80					
2005 Jan	391.30					
2005 Feb	220.80					
2005 Mar	328.20					
2005 Apr	363.50					
2005 May	822.30					
2005 Jun	1018.10					
2005 Jul	1180.50					
2005 Aug	1418.30					
2005 Sep	1130.40					
2005 Oct	408.40					
2005 Nov	0.00					
2005 Dec	11.10					
2006 Jan	203.10					
2006 Feb	288.00					
2006 Mar	0.00					
2006 Apr	149.50	6,791.45	6,791.45	8.75E+06	2.38E+06	4.31E+04
2006 May	346.20	6,637.60				
2006 Jun	591.90	6,449.25				
2006 Jul	538.30	6,190.50				
2006 Aug	828.80	6,147.40				
2006 Sep	28.30	5,665.20				
2006 Oct	377.20	5,536.15				
2006 Nov	586.40	5,782.20				
2006 Dec	219.90	5,725.25				
2007 Jan	110.70	5,584.95				
2007 Feb	447.80	5,698.45				
2007 Mar	0.00	5,534.35				
2007 Apr	0.00	5,352.60				
2007 May	11.60	4,947.25				
2007 Jun	118.40	4,497.40				
2007 Jul	85.90	3,950.10				
2007 Aug	502.70	3,492.30				
2007 Sep	7.00	2,930.60				
2007 Oct	6.40	2,729.60				
2007 Nov	0.00	2,729.60				
2007 Dec	2.70	2,725.40				

	Calculated CO Emissions					
	Monthly Emissions (tons)	24-Mon Ann Rolling Avg. (tons)	Maximum 24-Mon Ann Rolling Avg. (tons)	Associated Oil Heat Input (MBtu)	Associated Natural Gas Heat Input (MBtu)	Associated Landfill Gas Heat Input (MBtu)
2003 Jan	37.33					
2003 Feb	4.40					
2003 Mar	37.92					
2003 Apr	27.88					
2003 May	34.13					
2003 Jun	37.21					
2003 Jul	36.76					
2003 Aug	48.77					
2003 Sep	45.97					
2003 Oct	36.34					
2003 Nov	31.13					
2003 Dec	34.62					
2004 Jan	15.87					
2004 Feb	19.51					
2004 Mar	31.17					
2004 Apr	36.68					
2004 May	27.84					
2004 Jun	40.56					
2004 Jul	45.78					
2004 Aug	37.56					
2004 Sep	39.38					
2004 Oct	29.34					
2004 Nov	6.98					
2004 Dec	15.87					
2005 Jan	17.23					
2005 Feb	11.28					
2005 Mar	14.23					
2005 Apr	10.77					
2005 May	26.55					
2005 Jun	30.51					
2005 Jul	38.08					
2005 Aug	35.25					
2005 Sep	28.78					
2005 Oct	12.42					
2005 Nov	0.00					
2005 Dec	0.30					
2006 Jan	5.55					
2006 Feb	6.31					
2006 Mar	0.10					
2006 Apr	5.60	243.15	243.15	8.75E+06	2.38E+06	4.31E+04
2006 May	22.82	240.63				
2006 Jun	23.65	232.17				
2006 Jul	33.99	226.28				
2006 Aug	21.00	218.00				
2006 Sep	7.08	201.84				
2006 Oct	32.00	203.17				
2006 Nov	50.84	225.10				
2006 Dec	18.26	226.30				
2007 Jan	6.67	221.02				
2007 Feb	21.17	225.96				
2007 Mar	0.00	218.84				
2007 Apr	0.00	213.46				
2007 May	1.86	201.11				
2007 Jun	34.16	202.93				
2007 Jul	53.89	210.84				
2007 Aug	51.02	218.72				
2007 Sep	27.97	218.32				
2007 Oct	35.41	229.82				
2007 Nov	0.00	229.82				
2007 Dec	3.63	231.48				

	Calculated PM Emissions					
	Monthly Emissions (tons)	24-Mon Ann Rolling Avg. (tons)	Maximum 24-Mon Ann Rolling Avg. (tons)	Associated Oil Heat Input (MBtu)	Associated Natural Gas Heat Input (MBtu)	Associated Landfill Gas Heat Input (MBtu)
2003 Jan	54.03					
2003 Feb	6.36					
2003 Mar	54.88					
2003 Apr	40.36					
2003 May	49.39					
2003 Jun	53.85					
2003 Jul	53.20					
2003 Aug	70.58					
2003 Sep	66.53					
2003 Oct	52.59					
2003 Nov	45.05					
2003 Dec	50.11					
2004 Jan	14.19					
2004 Feb	17.45					
2004 Mar	27.87					
2004 Apr	32.80					
2004 May	24.90					
2004 Jun	36.27					
2004 Jul	40.93					
2004 Aug	33.58					
2004 Sep	35.21					
2004 Oct	26.23					
2004 Nov	6.24					
2004 Dec	14.19					
2005 Jan	18.58					
2005 Feb	12.17					
2005 Mar	15.34					
2005 Apr	11.61					
2005 May	28.63					
2005 Jun	32.90					
2005 Jul	41.06					
2005 Aug	38.01					
2005 Sep	31.03					
2005 Oct	13.39					
2005 Nov	0.00					
2005 Dec	0.32					
2006 Jan	1.28					
2006 Feb	1.45					
2006 Mar	0.02					
2006 Apr	1.29	232.31	232.31	8.75E+06	2.38E+06	4.31E+04
2006 May	5.25	222.49				
2006 Jun	5.44	207.08				
2006 Jul	7.82	190.52				
2006 Aug	4.83	176.15				
2006 Sep	1.63	159.35				
2006 Oct	7.36	149.92				
2006 Nov	11.70	152.65				
2006 Dec	4.20	147.66				
2007 Jan	1.80	139.27				
2007 Feb	5.70	136.03				
2007 Mar	0.00	128.36				
2007 Apr	0.00	122.56				
2007 May	0.50	108.50				
2007 Jun	9.20	96.65				
2007 Jul	14.52	83.38				
2007 Aug	13.74	71.25				
2007 Sep	7.54	59.50				
2007 Oct	9.54	57.58				
2007 Nov	0.00	57.58				
2007 Dec	0.98	57.90				

Significant Emissions Increase Calculation

Market Demand Growth**that is independent of project**- Percent increase over the 5 years following the date the Unit resumes regular operation.	39.7	Based on a 5-year projection period (2012-2017) following the date the unit returns to normal operation.
Market Demand Growth**that is directly the result of the project**- Percent increase over the 10 years following the date the Unit resumes regular operation.	0	
Project Related Capacity Increase (%)	0	
Pre-Project (Baseline Period) Maximum Permitted Heat Input (Mbtu/h)	5260	Maximum heat input allowed by permit.
Pre-Project (Baseline Period) Maximum Permitted Annual Hours of Operation	8760	
Post-Project Maximum Permitted Annual Hours of Operation	8760	
Post-Project Maximum Heat Input (Mbtu/hr)	5260	

	NOx				VOC			
	Oil MBtu/yr	Natural Gas Mbtu/yr	Landfill Gas Mbtu/yr	Emissions tpy	Oil MBtu/yr	Natural Gas Mbtu/yr	Landfill Gas Mbtu/yr	Emissions tpy
BAE-Average rate in tpy of actual emissions over any consecutive 24-month period within the 5-years immediately preceeding actual construction of the project.	8.7520E+06	2.3787E+06	4.3071E+04	1,915.56	8.7520E+06	2.3787E+06	4.3071E+04	28.83
Baseline Period Capacity Facto	24.25%				24.16%			
PAE - The HI and initital projected emissions in any one 12-month period of the 5 years following the date the Unit resumes regular operation.	1.22E+07	3.32E+06	6.02E+04	2,676.03	1.22E+07	3.32E+06	6.02E+04	40.27
Post-Project Period Capacity Facto	33.75%				33.75%			
EE - The excludable HI and emissions that would have been emitted anyway without the modification.	1.22E+07	3.32E+06	6.02E+04	2,676.03	1.22E+07	3.32E+06	6.02E+04	40.27
Projected Emission Increase = PAE minus the EI				0.00				0.00
Significant Emission Level (tpy				40.00				40.00
Exceed SEL				NO				NO

	PM10				SOx			
	Oil MBtu/yr	Natural Gas Mbtu/yr	Landfill Gas Mbtu/yr	Emissions tpy	Oil MBtu/yr	Natural Gas Mbtu/yr	Landfill Gas Mbtu/yr	Emissions tpy
BAE-Average rate in tpy of actual emissions over any consecutive 24-month period within the 5-years immediately preceeding actual construction of the project.	8.7520E+06	2.3787E+06	4.3071E+04	232.31	8.7520E+06	2.3787E+06	4.3071E+04	6,791.45
Baseline Period Capacity Facto	24.16%				24.16%			
PAE - The HI and initital projected emissions in any one 12-month period of the 5 years following the date the Unit resumes regular operation.	1.22E+07	3.32E+06	6.02E+04	324.54	1.22E+07	3.32E+06	6.02E+04	9,487.66
Post-Project Period Capacity Facto	33.75%				33.75%			
EE - The excludable HI and emissions that would have been emitted anyway without the modification.	1.22E+07	3.32E+06	6.02E+04	324.54	1.22E+07	3.32E+06	6.02E+04	9,487.66
Projected Emission Increase = PAE minus the EI				0.00				0.00
Significant Emission Level (tpy				15.00				40.00
Exceed SEL				NO				NO

	CO				PM			
	Oil MBtu/yr	Natural Gas Mbtu/yr	Landfill Gas Mbtu/yr	Emissions tpy	Oil MBtu/yr	Natural Gas Mbtu/yr	Landfill Gas Mbtu/yr	Emissions tpy
BAE-Average rate in tpy of actual emissions over any consecutive 24-month period within the 5-years immediately preceeding actual construction of the project.	8.7520E+06	2.3787E+06	4.3071E+04	243.15	8.7520E+06	2.3787E+06	4.3071E+04	232.31
Baseline Period Capacity Facto	24.16%				24.16%			
PAE - The HI and initital projected emissions in any one 12-month period of the 5 years following the date the Unit resumes regular operation.	1.22E+07	3.32E+06	6.02E+04	339.67	1.22E+07	3.32E+06	6.02E+04	324.54
Post-Project Period Capacity Facto	33.75%				33.75%			
EE - The excludable HI and emissions that would have been emitted anyway without the modification.	1.22E+07	3.32E+06	6.02E+04	339.67	1.22E+07	3.32E+06	6.02E+04	324.54
Projected Emission Increase = PAE minus the EI				0.00				0.00
Significant Emission Level (tpy				100.00				25.00
Exceed SEL				NO				NO

Emission Factors (lb/MBtu)	Baseline Period	Post-Project	Pre-Project	
NOx	0.3429	0.3429	**0.3**	Title V
VOC	0.0052	0.0052	0.0052	
PM10	0.0416	0.0416	0.0416	Title V
SOx	1.2156	1.2156	**1.98**	Title V
CO	0.0435	0.0435	0.0435	
PM	0.0416	0.0416	**0.1**	Title V
Pb	0.0000	0.0000	0.0000	

Appendix C

Oil Fired Particulate Emissions Test Data

EXECUTIVE SUMMARY

Ambient Air Services, Inc. (AASI) conducted emissions testing on Northside Generating Station's Unit 3 located in Jacksonville, Florida on July 21-23, 2008. The testing involved the measurement of particulate matter (PM) and visible emissions (VE) during soot blow and non-soot blow conditions. A summary of the results is presented in the table below:

Executive Summary

Northside Generating Station Unit 3
Jacksonville, Florida

July 21-23, 2008

Source	Parameters	Permit Limits	Test Results
Unit 3 (Non-Soot Blow)	Particulate Matter (PM)	0.10 lbs/mmBtu	0.04 lbs/mmBtu
	Visible Emissions (VE)	40% Opacity	0% Opacity
Unit 3 (Soot Blow)	Particulate Matter (PM)	0.30 lbs/mmBtu	0.05 lbs/mmBtu
	Visible Emissions (VE)	60% Opacity	0% Opacity

SUMMARY OF TEST RESULTS

The following presents the results of the emissions tests performed for JEA at the Northside Generating Station on Unit 3.

PM EMISSIONS
NON-SOOT

Run No.	Test Date	lb/dscf	lbs/hr	lb/mmBtu	% Opacity
1	07/10/07	3.08E-06	215.39	.045	
2	07/10/07	3.97E-06	280.74	.058	15.46%
3	07/10/07	3.84E-06	267.22	.056	
Avg.		**3.63E-06**	**254.45**	**.053**	

PM EMISSIONS
SOOT

Run No.	Test Date	lb/dscf	lbs/hr	lb/mmBtu	% Opacity
1	07/10/07	4.22E-06	295.31	.061	
2	07/11/07	4.34E-06	307.45	.062	18.40%
3	07/11/07	3.96E-06	276.86	.057	
Avg.		**4.17E-06**	**293.21**	**.060**	

The complete results can be found on the computer printouts following.

SUMMARY OF TEST RESULTS

The following presents the results of the emissions tests performed for JEA at the Northside Generating Station on Unit 3.

PM EMISSIONS
NON-SOOT

Run No.	Test Date	lb/dscf	lbs/hr	lb/mmBtu	% Opacity
1	07/18/06	4.10E-06	275.36	.052	4.8%
2	07/18/06	4.00E-06	270.59	.051	
3	07/18/06	4.16E-06	282.62	.053	
Avg.		**4.09E-06**	**276.19**	**.052**	

The complete results can be found on the computer printouts following.

SUMMARY OF TEST RESULTS

The following presents the results of the emissions tests performed for JEA at the Northside Generating Station on Unit 3.

PM EMISSIONS
SOOT

Run No.	Test Date	lb/dscf	lbs/hr	lb/mmBtu	% Opacity
1	06/15/06	9.74E-06	682.31	.145	
2	06/15/06	9.24E-06	646.29	.137	8.50%
3	06/15/06	9.60E-06	680.81	.143	
Avg.		9.53E-06	669.81	.142	

The complete results can be found on the computer printouts following.

SUMMARY OF TEST RESULTS

The following presents the results of the emissions tests performed for JEA at the Northside Generating Station on Unit 3. Please note the letter from Joseph Werner, PE explaining the plant load conditions during the testing in the Correspondence File Section.

PM EMISSIONS
NON-SOOT

Run No.	Test Date	lb/dscf	lbs/hr	lb/mmBtu	% Opacity
1	06/15/05	8.18E-06	549.79	.120	
2	06/15/05	4.00E-06	271.00	.059	13.38%
3	06/15/05	4.29E-06	292.55	.063	
Avg.		**5.49E-06**	**371.11**	**.081**	

PM EMISSIONS
SOOT

Run No.	Test Date	lb/dscf	lbs/hr	lb/mmBtu	% Opacity
1	06/15/05	1.00E-05	689.77	.148	
2	06/16/05	9.29E-06	630.98	.137	18.73%
3	06/16/05	9.66E-06	649.38	.143	
Avg.		**9.66E-06**	**656.71**	**.143**	

The complete results can be found on the computer printouts following.

EXECUTIVE SUMMARY

On May 4-7, 2004 Ambient Air Services, Inc. performed the requested compliance stack tests at JEA's Northside Generating Station Jacksonville, Florida, Unit 3 Boiler. Testing was performed during non-soot and sootblowing conditions. During these tests all required parameters were met. Table 1 summarized the results of the test.

TABLE 1

Source Test Report JEA Northside Generating Station Jacksonville, Florida Unit 3 Boiler Non-Soot and Sootblowing May 4-7, 2004 EXECUTIVE SUMMARY				
Sources	**Permitted Limits Particulate lb/MMBtu**	**Test Results Particulate lb/MMBtu**	**Permitted Limits % Opacity**	**Test Results % Opacity**
Unit 3 Sootblowing	0.30 Lb/MMBtu	0.08 Lb/MMBtu	60 %	23%
Unit 3 Non-Soot	0.10 Lb/MMBtu	0.03 Lb/MMBtu	40 %	28 %

Appendix D

Unit 3 Historical Heat Input

Northside Unit #3 Hourly Heat Input
1/1/08 through 4/1/09

	NS3	
Date & Time	Heat Input (mmBtu)	Unit Load (MW)
01/03/2008 19:00	4752.7	483
01/03/2008 20:00	4797.3	485
01/03/2008 21:00	4796.1	485
01/03/2008 22:00	4778.8	485
01/03/2008 23:00	4758.2	485
01/04/2008 00:00	4695.1	474
01/04/2008 05:00	4649.6	473
01/04/2008 06:00	4866.3	485
01/04/2008 07:00	4781.3	489
01/28/2008 06:00	4642.7	488
01/28/2008 07:00	4536.5	484
01/28/2008 08:00	4668.3	497
03/25/2008 06:00	4542.5	448
04/02/2008 14:00	4614.3	464
04/02/2008 15:00	4640.6	473
04/04/2008 15:00	4708.5	497
04/04/2008 16:00	4762.4	498
05/16/2008 13:00	4627.6	487
05/16/2008 14:00	4506.6	461
05/31/2008 14:00	4606.5	420
05/31/2008 15:00	4618.9	486
06/01/2008 13:00	4552.7	456
06/01/2008 14:00	4903.1	492
06/03/2008 13:00	4743.5	482
06/03/2008 14:00	4619.4	455
06/03/2008 15:00	4793.7	491
06/04/2008 14:00	4647.1	477
06/04/2008 15:00	4855.7	485
06/04/2008 16:00	4929.6	495
06/04/2008 17:00	4860.9	495
06/05/2008 13:00	4660.2	446
06/07/2008 15:00	4530.6	436
06/07/2008 16:00	4625.8	446
06/08/2008 14:00	4505.0	437
06/09/2008 14:00	4552.3	441
06/09/2008 15:00	4763.6	471
06/16/2008 16:00	4814.7	483
06/25/2008 13:00	4926.4	477
06/25/2008 14:00	4919.8	487
06/26/2008 15:00	4735.1	470
06/26/2008 16:00	4628.8	455
06/27/2008 14:00	4577.7	440
07/07/2008 14:00	4509.8	426
07/07/2008 15:00	4509.0	432
07/08/2008 12:00	4568.3	438

NS3

Date & Time	Heat Input (mmBtu)	Unit Load (MW)
07/13/2008 15:00	4733.0	494
07/13/2008 16:00	4880.9	501
07/13/2008 17:00	4866.4	500
07/13/2008 18:00	4588.7	462
07/16/2008 14:00	4578.2	475
07/21/2008 11:00	4514.4	486
08/03/2008 14:00	5039.4	471
08/03/2008 15:00	5233.0	490
08/03/2008 16:00	5268.2	496
08/03/2008 17:00	5210.9	495
08/05/2008 13:00	4626.1	449
08/05/2008 14:00	5026.5	480
08/05/2008 15:00	4950.0	469
08/05/2008 16:00	4705.3	450
08/06/2008 12:00	4928.1	466
08/06/2008 13:00	4916.0	469
08/06/2008 19:00	4688.2	439
08/07/2008 14:00	4533.4	424
08/07/2008 15:00	4607.8	432
08/25/2008 13:00	4512.2	398
08/26/2008 14:00	5038.4	458
08/27/2008 14:00	4898.2	441
08/27/2008 15:00	4725.1	435
08/27/2008 16:00	4512.2	406
08/31/2008 12:00	4985.6	452
08/31/2008 13:00	4641.4	412
08/31/2008 14:00	4878.3	444
08/31/2008 15:00	4664.3	418
09/01/2008 15:00	4698.7	411
09/09/2008 13:00	4516.7	410
09/09/2008 14:00	4863.3	449
09/14/2008 15:00	4560.5	414
09/15/2008 13:00	4766.3	440
09/15/2008 14:00	4566.9	415
10/08/2008 13:00	4673.6	433
10/12/2008 13:00	4596.9	429
10/12/2008 14:00	5007.0	471
10/12/2008 15:00	5013.2	477
10/12/2008 16:00	4861.0	464
01/21/2009 08:00	4813.0	464
01/21/2009 09:00	5076.2	492
01/21/2009 18:00	4682.6	437
01/21/2009 19:00	4927.6	467
01/21/2009 20:00	5218.1	500
01/21/2009 21:00	5245.9	500
01/21/2009 22:00	5249.9	498
01/21/2009 23:00	5211.6	495
01/22/2009 00:00	4975.7	473
01/22/2009 03:00	4857.0	457
01/22/2009 06:00	5251.6	482
01/22/2009 07:00	4902.0	469
02/04/2009 07:00	4770.6	457

NS3

Date & Time	Heat Input (mmBtu)	Unit Load (MW)
02/04/2009 21:00	5048.8	461
02/04/2009 22:00	4849.6	439
02/04/2009 23:00	4570.1	418
02/05/2009 00:00	4627.5	423
02/05/2009 05:00	4511.7	409
02/05/2009 06:00	5072.7	471
02/05/2009 07:00	4797.5	439
02/05/2009 09:00	4882.4	442
02/05/2009 10:00	5193.9	466
02/05/2009 11:00	4824.1	432
02/05/2009 18:00	4744.6	428
02/05/2009 19:00	5226.0	485
02/05/2009 20:00	5196.1	491
02/05/2009 21:00	5140.2	491
02/05/2009 22:00	4976.0	470
02/05/2009 23:00	5267.5	497
02/06/2009 00:00	5186.7	498
02/06/2009 01:00	5236.9	499
02/06/2009 02:00	5324.7	499
02/06/2009 03:00	5267.2	499
02/06/2009 04:00	5068.6	470
02/06/2009 05:00	4828.2	440
02/06/2009 06:00	4871.4	440
02/06/2009 07:00	4919.0	440
02/06/2009 08:00	4776.7	427
03/02/2009 07:00	4691.9	413
03/03/2009 19:00	4985.2	434
03/03/2009 20:00	4737.5	430
04/29/2009 17:00	4503.9	446
04/30/2009 13:00	4587.0	450