LAKELAND ELECTRIC

Farzie Shelton, chE; REM

Associate GM Technical Support

January 26, 2007

Ms. Trina Vielhauer, Chief
Florida Department of Environmental Protection
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Fl 32399-2400

Attention: MR. Al Linero P.E.

RE: C.D. McIntosh, Jr. Power Plant
Title V Permit # 1050004-018-A
Addition of Low NO_x Burners, Overfire Air, and Selective Catalytic Reduction to Unit No. 3
Request for Additional Information

Dear Al:

We are in receipt of your letter dated January 23, 2007 in which the Department is requesting additional information in reference to the above. Therefore, accordingly we requested Mr. Ken Kosky of Golder Associates (our consulting engineer) to provide the Department with the response which we are enclosing for your review.

As you are aware, Tom Cascio has been in touch with us via several e-mails requesting some of the same information that was contained in your letter to which we had responded satisfactorily.

As we discussed previously, Lakeland will be commencing installation of these pollution controls commencing March 1, 2007 during Unit No. 3 outage which was specifically arranged to take care of the issues of allowances associated with implementation of CAIR. Therefore, we are extremely anxious to receive this permit in timely manner to meet our scheduled outage. We appreciate all help you can extend to us in order to achieve our goal.

In addition to mailing our response, I am sending you the same via e-mail in hope of expediting these permitting efforts. In conclusion, as always, Lakeland greatly values your help and cooperation in this matter as it is imperative for Lakeland to have all permits in hand prior to the March 1, 2007. If you should have any questions, please do not hesitate to contact me.

Sincerely

Farzie Shelton

CC: Hamilton Oven, Administrator; Siting Coordination Office

LAKELAND ELECTRIC

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

   Timothy Bachand, Manager of Engineering

2. Owner/Authorized Representative or Responsible Official Mailing Address:

   Organization/Firm: **Lakeland Electric**
   Street Address: **501 East Lemon Street**
   City: **Lakeland** State: **FL** Zip Code: **33801-5079**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

   Telephone: **(863) 834-6633** Fax: **(863) 834-6373**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.*

   Item(s) Certified: Response to Department RAI letter dated January 23, 2007 regarding DEP File 1050004-AC for C.D. McIntosh Jr., Power Plant

Signature

1/26/07

Date

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

January 26, 2007

063-7630

Lakeland Electric
501 E. Lemon Street
Lakeland, Florida 33801-5079

Attention: Ms. Farzie Shelton, Associate General Manger Technical Support

RE: C.D. MCINTOSH, JR. POWER PLANT
DEP FILE NO. 1050004-018-AC
ADDITION OF LOW-NO_X BURNERS, OVERFIRE AIR, AND SELECTIVE CATALYTIC REDUCTION TO UNIT NO. 3
REQUEST FOR ADDITIONAL INFORMATION

Dear Farzie:

Presented below is the additional information requested by the Florida Department of Environmental Protection (FDEP) in the letter dated January 23, 2007. The information is provided in the same order as requested.

Comment 1. On page 19 of Part I of the Application, we note that sulfur dioxide (SO_2), nitrogen oxides (NO_x), and volatile organic compounds (VOC) are not listed as pollutants emitted by the emissions units. Was this an oversight?

Response: The emission unit pages for SO_2, NO_x, and VOCs were not included in the application since there are no changes in the emission of these air pollutants as a result of the addition of low-NO_x burners and over-fire air (LNB/OFA), and selective catalytic reduction (SCR). For completeness, the emission unit pages for these pollutants have been completed and are attached. The emissions are based on those currently authorized in the Title V Permit (1050004-016-AV). While the LNB/OFA and SCR will substantially reduce NO_x emissions to comply with the FDEP's requirements in 62-296.470 Florida Administrative Code (F.A.C.) for allowances, there are no specific emissions limiting standards. Lakeland Electric's decision to install these pollution controls has been based on economic factors associated with the availability and cost of NO_x allowances. Therefore, this project will provide Lakeland an option and flexibility of utilizing these pollution controls or purchase allowances.

Comment 2. On page 1-1 of Part II of the Application, you state that "there is the potential for collateral increases in ... sulfuric acid mist (SAM) and particulate matter (PM)." Please provide quantitative estimates of these expected increases. Do you propose pounds per hour and tons per year limits in addition to pounds per million Btu heat input limits? What testing methodology and averaging times do you suggest?

Response: Tables RAI-2A and RAI-2B provide emission estimates for SAM and PM, respectively. As shown in Table RAI-2A the projected increase for SAM is 3 tons/year, while the projected increase for PM is 4.94 tons/year. The proposed condition for SAM and PM was included on pages 3-2 and 3-3 of Part II of the Application and is repeated herein:

The applicant shall maintain and submit to the FDEP on an annual basis for a period of 5 years from the date the SCR systems are initially operated, information demonstrating in accordance with 62-212.300(1)(e) F.A.C. that the installation of LNB, OFA and SCR did not result in emission increases of PM and SAM. The future emissions shall be compared with the baseline actual emissions for the period 2002-2001 for SAM and 2003-2002 for PM as reported in the AORs using EPA Method 5B for PM and Method 8A (controlled condensate) for SAM.

Comment 3: **On page 2-1 of Part II of the Application, you state "average NO_x emissions levels are expected to be in the 0.30 lb/MMBtu range following the installation of the LNB and OFA system." Please provide a basis for this conclusion with quantitative estimates if possible.**

Response: The letter from the LNB/OFA vendor, Advanced Burner Technologies (A Siemens Company) is attached. The NO_x emissions are provided as 0.3 lb/MMBtu. The vendor letter also includes schematic descriptions of the system.

Comment 4: **On page 2-1 of Part II of the Application, you state "VOC emission levels ... are not expected to change from current emission levels." Please justify this conclusion with quantitative estimates if possible. Do you propose VOC emission limits and testing?**

Response: The burner supplier, Advanced Burner Technologies, has indicated that the VOC and PM levels from the Low-NO_x Burner (LNB)/Over Fire Air (OFA) system are not expected to change (see attached letter). VOC emissions, as indicated in AP-42, are a result of boiler efficiency. The installation of the LNB systems includes Computational Fluid Dynamic (CFD) modeling of the new LNB/OFA system to insure that combustion efficiency is optimized and minimize VOC emissions. Please note that VOC emissions from coal-fired units like McIntosh Unit 3 are typically very low and the EPA AP-42 emission factor does not distinguish any difference with the application of LNB/OFA systems.

Comment 5: **Are the pollutant emissions reported in Table 3-2 based on stack test data?**

Response: Yes. The information in Table 3-2 was taken from the AORs, which were developed from the latest test data.

Comment 6: **On page 4-1 of Part II of the Application, you state that "for the Project, the emissions of CO are expected to exceed the significant emission rate." Please provide a quantitative estimate of this expected increase. Do you propose pounds per hour and tons per year limits in addition to the pounds per million Btu heat input limit? Do you propose the use of CO CEMs as the method of compliance? What averaging times do you suggest?**

Response: The potential CO emissions after the installation of LNB/OFA were included in the application and are 728 pounds per hour (lb/hr) and 3,188.6 tons per year (TPY). The projected actual emissions on the same basis as the SAM and PM emissions are 2,487 TPY. The baseline actual emissions are 176.6 TPY (Table 3-2) of the application. The net emissions increase for CO is 2,310.5 TPY (i.e., using the 78 percent capacity factor 2-year average of historical heat input). It should be noted that the baseline actual emissions are based on a single stack test taken in 2001. CO emission can be highly variable in a pulverized coal-fired unit.

The emission limit proposed for CO emissions is 0.2 pound per million British thermal units (lb/MMBtu). The proposed compliance method is EPA Method 10 performed initially and annually.

Comment 7: Do you expect any change in the quality and composition of the unit's fly ash as a result of the installation of the low NO_x burners, overfire air and SCR system?

Response: The LNB/OFA system is not expected to change the quality and composition of fly ash. This is primarily dictated by the fuels.

Comment 8: Have you considered imposing an ammonia slip limit in the construction permit? What method of testing and test frequency do you recommend?

Response: Ammonia slip as presented in the Part II of the Application is 2 parts per million by volume, dry (ppmvd) at 4-percent oxygen. A portion of the unreacted ammonia leaving the SCR catalyst will react with SO_3 and be removed in the electrostatic precipitator (ESP) as particulate matter. Any remaining ammonia will be captured in the flue gas desulfurization (FGD) system since ammonia is extremely soluble in water. There will be virtually no ammonia slip leaving the stack. An ammonia slip condition is unnecessary and unwarranted.

Comment 9: It appears that the Process Flow Diagram does not include the ammonia injection subsystem to control sulfur trioxide production. Please update this diagram. Please also provide more details regarding the operating parameters of this subsystem.

Response: The flow diagram has been updated to show the potential location of sorbent injection. The actual type of sorbent injection system has not been selected. A dry sorbent, sorbent slurry or gas (e.g., ammonia) may be used. In an effort to provide the Department reasonable assurance that a sorbent injection can remove SO_3, a description of potential technologies is summarized below.

Post-combustion Injection Technologies

The post-combustion injection SAM-control technologies involve injection of reactants downstream of the SCR and air heater and upstream of a PM control device for removal of SO_3. The injection technologies include sodium bicarbonate ($NaHCO_3$) injection, calcium hydroxide – hydrated lime [$Ca(OH)_2$] injection, Trona injection, dry magnesium oxide (MgO) injection, sodium bisulfite ($NaHSO_3$ or SBS) injection, calcium carbonate ($CaCO_3$) injection, micronized limestone injection, and ammonia (NH_3) injection.

Dry sodium bicarbonate is an alkaline compound that can react with and remove SO_3 from the flue gas. Sodium bicarbonate is injected as a dry fine powder and forms a water-soluble particulate. The overall chemical reaction can be summarized as:

$$NaHCO_3 + SO_3 \rightarrow Na2SO_4 + NaHSO_4 + H_2O + CO_2$$

Hydrated lime or calcium hydroxide is a reactive alkaline compound that can be used to mitigate SO_3 emissions. This sorbent is injected as a dry powder with SO removal in the gas stream and the particulate control device. This technology is similar to that used in spray-dryer absorber systems, when combined with an ESP or fabric filter for SO_2 and SO_3 control using low-sulfur coals. The overall chemical reaction with the SO_3 can be summarized as:

$$Ca(OH)_2 + SO_3 \rightarrow CaSO_4 + H_2O$$

Trona, or hydrated sodium bicarbonate carbonate, is a reactive alkaline compound that can be used to mitigate SO_3 emissions. The overall chemical reaction involving SO_3 can be summarized as:

$$aNaHCO_3\ Na2CO_3{\cdot}2H_2O + bSO_3 \rightarrow cNaHSO_4 + dNa2SO_4 + cCO_2 + fH_2O$$

$Mg(OH)_3$ is a very reactive alkaline compound that can be used to mitigate SO_3 emissions. The overall chemical reaction can be summarized as:

$$MgO_3 + SO_3 \rightarrow MgSO_4$$

$NaHSO_3$ can react with SO_3 in the flue gas to form sodium sulfate and sodium bisulfate. The overall chemical reaction is:

$$2NaHSO_3 + SO_3 \rightarrow Na2SO_4 + 2SO_2 + H_2O$$

Since commercially available $NaHSO_3$ has up to 10 percent by weight of sodium sulfite, the following side reaction occurs:

$$Na2\ SO_3 + SO_2 + H_2O \rightarrow 2NaHSO_3$$

The $NaHSO_3$ generated by the side reaction can react and remove SO_3 in the flue gas. Alternately, it can react directly with SO_3 and remove it as sodium sulfate:

$$Na2SO_3 + SO_3 + O_2 \rightarrow Na2SO_4$$

Micronized dry limestone is an alkaline compound that can provide a large amount of surface area to allow deposition (condensation and adsorption) and removal of the SO_3 on the small limestone particles (large surface area). The adsorption removal mechanism (adsorption of SO_3 on the micronized limestone particles) for SO_3 follows the overall chemical reaction:

$$CaCO_3 + SO_3 + H_2O \rightarrow CaSO_4 + H_2O + CO_2$$

NH_3 injected in the flue gas reacts with SO_3 to form ammonium sulfate and ammonium bisulfate salts. The overall reaction is:

$$NH_3 + H2SO_4 \rightarrow (NH_4)_2SO_4$$

$$2NH_3 + H2SO_4 \rightarrow (NH_4)HSO_4$$

$NaHCO_3$, $NaHSO_3$, and magnesium hydroxide have high reactivities with SO_3 and are predicted to achieve 80- to 90-percent removal of SO_3. $NaHSO_3$ technology is commercially available, and has been installed in over a dozen units for SO_3 control. An advantage of $NaHSO_3$ injection is that a reaction with SO_2 does not occur, as with other alkaline sorbents (e.g., calcium- or magnesium-based compounds). $Ca(OH)_2$ and limestone are not as reactive with SO_3, and would have removal efficiencies of less than 80 percent. Ammonia injection can from ammonium bisulfate or ammonium sulfate depending upon the molar ratio for injection. Ammonia sulfate is desired since it is a solid particle. Ammonia injection has shown removal efficiencies of 90 percent prior to particulate control devices.

Comment 1: **On page 4-1 of Part II of the application, you indicate that recent CO BACT determinations for new units range from 0.1 to 0.2 lb/MMBtu. Because the project includes the installation of new burners, please explain why new burners cannot be selected to achieve CO emission levels comparable to the lower range of the recent BACT determinations.**

Response: The 0.2 lb/MMBtu is equivalent to 200 ppm provided by the LBN/OFA vendor. Lower levels established for new units involve completely new boiler system including pulverizers, burner positions, air handling systems and many other factors that can influence CO emissions. McIntosh Unit 3 is an existing late 1970's vintage boiler with associated combustion technology. Due to the existing character of the unit and the requirement to reduce NO_x emission levels using LNB and OFA, an emission limit of 0.2 lb/MMBtu is appropriate. It should be noted that the Department recently established for Seminole Electric Cooperative, Inc. Seminole Generating Station Units 1 and 2 a CO emission rate of 0.2 lb/MMBtu. Seminole Generating Station Units 1 and 2 are of the same boiler vintage as McIntosh Unit 3. In fact, the in-service date for Unit 3 was in 1982 while the in-service dates for SGS Units 1 and 2 were in 1984.

Comment 2: **Rule 62-212.400(3)(h)(5), F.A.C., states that an application must include information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect. Please satisfy this rule.**

Response: Rule 62-212.400(4)(e), F.A.C., states that an application must include information relating to the air quality impacts of, and the nature and extent of all general, residential, commercial, industrial, and other growth that has occurred since August 7, 1977, in the area the facility or modification would affect. An analysis of growth would consider air quality impacts due to emissions resulting from the industrial, commercial, and residential growth associated with the construction and operation of the addition of LNB/OFA and SCR. The proposed project would have minimal effect resulting from associated growth. The installation of LNB/OFA and SCR is much limited in scope than the existing McIntosh Unit 3. Since McIntosh Unit 3 has been operating since 1982, the addition of LNB/OFA and SCR will have minor influence on the area. The areas surrounding the McIntosh have already been developed and growth associated with the project will not be discernable. The construction of the project may have several dozens of construction workers for a limited period of time. Within the region there are thousands of construction workers from which the project can draw. In addition, any workers required to be brought in due to their special skills can easily find accommodations in the areas. The central Florida region has tens of thousands of temporary accommodations. Operation will require minimal staff since the systems will be automated. Maintenance activities, such as catalyst change-out may require small number of workers but over very short timeframes. Overall, the proposed LNB/OFA and SCR installation will have minimal influence on the air quality impacts due to associated growth in the area.

Comment 3: **Please address any additional impacts from CO regarding vegetation, soils and wildlife in the surrounding Class II area.**

Response: Presented below is information related to the additional impacts of CO regarding vegetation, soils and wildlife.

The foundation for protecting the air quality including impacts to soils, vegetation and wildlife is the Ambient Air Quality Standards (AAQS) established under the federal Clean Air Act (CAA). The CAA clearly establishes the requirements of the AAQS as stated by EPA (2005):

"The Clean Air Act, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (NAAQS) for wide-spread pollutants from numerous and diverse sources considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings. The Clean Air Act requires periodic review of the science upon which the standards are based and the standards themselves." http://www.epa.gov/ttn/naaqs/ Florida has adopted both the Primary and Secondary NAAQS. The maximum projected CO impacts associated with the installation of LNB/OFA are 165.2 and 62.8 $\mu g/m^3$ for the 1-hour and 8-hour averaging times, respectively. These values are about 10 times less than the significant impact levels and several orders of magnitude less than the AAQS for CO of 40,000 $\mu g/m^3$ for the 1-hour averaging time and 10,000 $\mu g/m^3$ for the 8-hour averaging time. The low CO concentrations relative to the AAQS demonstrate that CO emissions from McIntosh Unit 3 would not impact vegetation or wildlife. Moreover, unlike acid gases, CO does not deposit in the soils.

The main effect on vegetation of high concentrations of CO is the inhibition of cytochrome *c* oxidase, the terminal oxidase in the mitochondrial electron transfer chain. Inhibition of cytochrome *c* oxidase depletes the supply of adenosine triphosphate (ATP), the principal donor of free energy required for cell functions. However, this inhibition only occurs at extremely high concentrations of CO. Pollok *et al.* (1989) reported that exposure to $CO:O_2$ ratio of 25 (equivalent to an ambient CO concentration of $6.85 \times 10^6 \mu g/m^3$) resulted in stomatal closure in the leaves of the sunflower (*Helianthus annuus*). Naik *et al.* (1992) reported cytochrome *c* oxidase inhibition in corn, sorghum, millet, and Guinea grass at $CO:O_2$ ratios of 2.5 (equivalent to an ambient CO concentration of $6.85 \times 10^5 \mu g/m^3$). These plants were considered the species most sensitive to CO-induced inhibition of cytochrome *c* oxidase. The maximum CO impacts at 0.2 lb/MMBtu for McIntosh Unit 3 are orders of magnitude less than any level where effects to vegetation would occur.

Please contact me if there are any questions related to the information contained in this evaluation. A certification has been provided.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.
Principal

Enclosures

KFK/nav

0637630/4.1/RAI012607/R012607.doc

TABLE RAI-2A

CULATIONS OF SULFURIC ACID MIST (SAM) EMISSIONS FOR THE LAKELAND ELECTRIC MCINTOSH UNIT 3 SCR PROJ

Category	Units	Baseline	Projected	Mass Maximum (lb/hr)	Mass Maximum (lb/hr)	Pollutant
Coal Sulfur Content	%	2.04	2.04			
Coal Heat Content	Btu/lb	12,731	12,731			
Uncontrolled SO_2 Emissions[a]	lb/MMBtu	3.20	3.20	11,651.99	11,651.99	SO_2
Combustion Factor[b]		0.010	0.010			
SAM from Combustion	lb/MMBtu	0.047	0.047	169.50	169.50	SAM
SCR Factor[c]		0.000	0.008			
SAM produced by SCR	lb/MMBtu	0.000	0.039			
SAM Leaving SCR[d]	lb/MMBtu	0.047	0.086	169.50	311.35	SAM
Air Heater Factor[e]		0.850	0.850			
SAM Leaving Air Heater	lb/MMBtu	0.040	0.073	144.08	264.65	SAM
ESP and Sorbent Injection[f]		0.630	0.350		120.574	SAM Reduction
SAM Leaving ESP	lb/MMBtu	0.025	0.025	90.77	92.63	SAM
FGD System Factor[g]		0.470	0.470			
SAM Leaving FGD	lb/MMBtu	0.012	0.012	42.66	43.53	SAM
Maximum Heat Input	MMBtu/hr	3,640	3,640			
Capacity Factor (heat Input basis)		78%	78%			
Annual Heat Input (maximum 2-year average)	MMBtu/yr	24,999,083	24,999,083			
SAM Emissions	lb/MMBtu	0.012	0.012			
	ppm (est.)	2.660	2.715			
	lb/hr	42.66	43.53			
	tons/year	146.494	149.496	3	tons/year increase	

Note: Baseline and Projected based on 2001-2002 data, which represents the maximum sulfur and heat input.

[a] Assumes 100 percent of sulfur converted to SO_2 for calculating the amount of SAM produced; actual SO_2 emissions are 95 percent.

[b] Average of high and low sulfur eastern bituminous factors (Southern Company, 2005).

[c] 1 percent SO_3 produced from SO_2 oxidation; average of low and high sulfur fuel factors (Southern Company, 2005).

[d] Excess ammonia slip will scavenge SAM. This is included in the ESP removal.

[e] 15% recommended in Table 4-1 (0.85 factor) for high/medium sulfur eastern bituminous (Southern Company, 2005)

[f] 0.63 based on average of high- and low-sulfur coals (Southern Company, 2005); 0.35 for 65-percet removal with sorbent injection.

[g] 0.47 representative of 53 percent removal in FGD system (Southern Company, 2005).

TABLE RAI-2B
PM CALCULATIONS LAKELAND ELECTRIC MCINTOSH UNIT 3

Category	Data	Units/Basis
Heat Input	3,640	MMBtu/hr (Title V Permit)
Heat Content	12,731	Btu/lb (Actual 2-Year Average)
Coal Usage	285,923	lb/hr (Calculated)
Ash Content	9%	(Actual)
Fly Ash	80%	(Typical)
Fly Ash	20,586.5	lb/hr
SAM Removed	120.6	lb/hr (Table RAI-2A)
SAM PM (est.)	159.9	lb/hr (Ca sorbent assumed as a maximum)
SAM PM (est.)	0.78%	of PM (Calculated)
ESP Removal	99.10%	based on Title V Application
PM Increase	1.44	lb/hr
Capacity Factor	78%	(Projected Actual)
PM Increase	4.94	tons/year

LAKELAND ELECTRIC

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official:

   Timothy Bachand, Manager of Engineering

2. Owner/Authorized Representative or Responsible Official Mailing Address:

   Organization/Firm: **Lakeland Electric**
   Street Address: **501 East Lemon Street**
   City: **Lakeland** State: **FL** Zip Code: **33801-5079**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

   Telephone: **(863) 834-6633** Fax: **(863) 834-6373**

4. Owner/Authorized Representative or Responsible Official Statement:

   I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.*

   Item(s) Certified: Response to Department RAI letter dated January 23, 2007 regarding DEP File 1050004-AC for C.D. McIntosh Jr., Power Plant

   Signature

   1/26/07
   Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **Kennard F. Kosky**
   Registration Number: **14996**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Golder Associates Inc.****
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 336-5600** ext. **516** Fax: **(352) 336-6603**
4. Professional Engineer Email Address: **kkosky@golder.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 ☐, 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 _____ Date 1/26/07

(seal)

* Attach any exception to certification statement.

** Board of Professional Engineers Certificate of Authorization #00001670

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
PM	010		EL
SAM	032	010	NS
CO			EL
SO_2	067		EL
NO_x	139	205, 204	EL
VOC			NS

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4,368** lb/hour **11,447.2** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **1.2 lb/MMBtu** Reference: **Title V Permit; Subpart Da**	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if Required): Tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Potential Actual Emissions (if Required): Tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
1.2 lb/mmBtu x 3,640 mmBtu/hr = 4,368 lb/hr (maximum)
0.718 lb/MMBtu x 3,640 MMBtu/hr = 2,613.5 lb/hr (annual)
2,618 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 11,447.2 ton/yr

11. Pollutant Potential/Estimated Fugitive Emissions Comment:
Title V Permit 1050004-016-AV; based on co-firing of petcoke.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

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

Allowable Emissions Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: **1.2 lb/MMBtu**	4. Equivalent Allowable Emissions: **4,368** lb/hour **11,447.2** tons/year
5. Method of Compliance: **CEMS**	
6. Allowable Emissions Comment (Description of Operating Method): **Annual based on co-firing of petcoke.**	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NOx**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **2,548** lb/hour **11,160** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.7 lb/MMBtu** Reference: **Title V Permit**	7. Emissions Method Code: **0**
8.a. Baseline Actual Emissions (if Required): Tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Potential Actual Emissions (if Required): Tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
0.7 lb/mmBtu x 3,640 mmBtu/hr = 2,548 lb/hr
2548 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 11,160 ton/yr

11. Pollutant Potential/Estimated Fugitive Emissions Comment:
Title V Permit 1050004-016-AV; based on Subpart Da requirements.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.7 lb/MMBtu	4. Equivalent Allowable Emissions: 2548 lb/hour 11,160 tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete 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 permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **9.5** lb/hour **41.6** tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: **0.06 lb/ton** Reference: **AP-42**	7. Emissions Method Code: **3**
8.a. Baseline Actual Emissions (if Required): Tons/year	8.b. Baseline 24-month Period: From: To:
9.a. Potential Actual Emissions (if Required): Tons/year	9.b. Projected Monitoring Period: ☐ 5 years ☐ 10 years

10. Calculation of Emissions:
0.0026 lb/mmBtu x 3,640 mmBtu/hr = 9.5 lb/hr
728.0 lb/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 3,188.6 ton/yr

Note: 0.06 lb/ton equivalent to 0.0026 lb/MMBtu.

11. Pollutant Potential/Estimated Fugitive Emissions Comment:
Based on AP-42

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

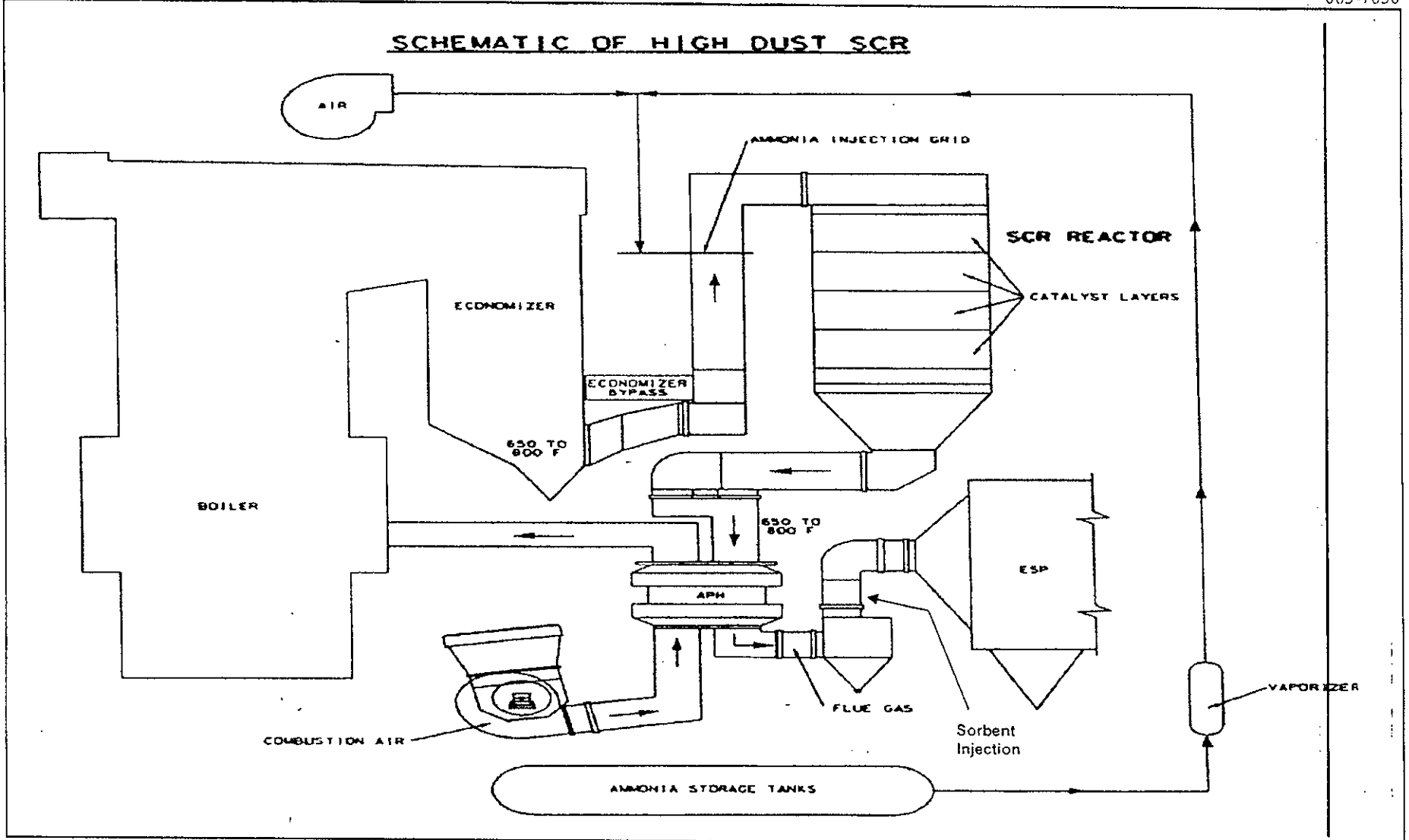


Figure 2-1
Process Flow Diagram
0637630/4.2/Figure 2-1
Source: Golder, 2006.

Golder Associates

ADVANCED BURNER TECHNOLOGIES
A Siemens Company

Advanced Burner Technologies (ABT)
Permit Support Summary

For

City of Lakeland
McIntosh Station Unit 3
Lakeland, Florida

1.0 Introduction

The City of Lakeland has contracted with Siemens Power Group, Inc. (SPG) to design and furnish new low NOx burners and overfire air (OFA) equipment for City's McIntosh Unit 3 boiler. Advanced Burner Technologies, Inc. (ABT) is a wholly owned subsidiary of SPG, and will be providing the design, fabrication, delivery, and field testing services for the new low NO_x system.

2.0 Background

The McIntosh Power Plant Unit 3 has a nominal base load gross electrical capacity of 360 MW. The steam generator is a balanced draft design operating at sub-critical pressure originally supplied by Babcock and Wilcox. The furnace is a front and rear wall fired design, to deliver steam at a nominal rating of 2,476,952 lb/hr at 2458 psia and 1005 F superheat and 1005 reheat steam temperature. The firing walls are arranged with 16 burners on the front wall fed by two MPS-75 pulverizers, and 16 burners on the rear wall, also fed by two MPS-75 pulverizers.

3.0 System Description

ABT will provide a complete Low NOx burner system including new low NOx burners and new OFA system. The following major components are part of the Low NO_x system and will be installed at McIntosh Unit 3 in April 2007:

- Thirty-two (32) complete new Opti-Flow™ low NO_x burner assemblies, with features to accommodate the existing igniter and flame scanner assemblies. These will be installed in the existing burner locations on both the front and rear furnace walls.
- Complete new OFA system including new OFA windboxes mounted on the boiler front and rear walls. Interconnecting ductwork to the existing secondary air ducts will be required.
- Eight (8) complete new OFA register assemblies, four (4) each to be located within the new front and rear OFA windboxes.
- Computational Fluid Dynamic (CFD) modeling of the existing secondary air and newly supplied OFA system.
- Testing and Field Advisory Services.

Please refer to Section 7 of this document for system drawings of the ABT low NO_x burner and OFA system.

4.0 Emissions Levels

Average NOx emissions levels are expected to be in the 0.30 lb/MMBtu range following the installation of the low NOx burners and OFA system.

In addition, average CO emission levels are not expected to exceed 200 ppm, or 50 ppm greater than the current operating level, whichever is greater.

VOC emission levels and particulate levels are not expected to change from current emission levels following the installation of the new low NOx burner and OFA system.

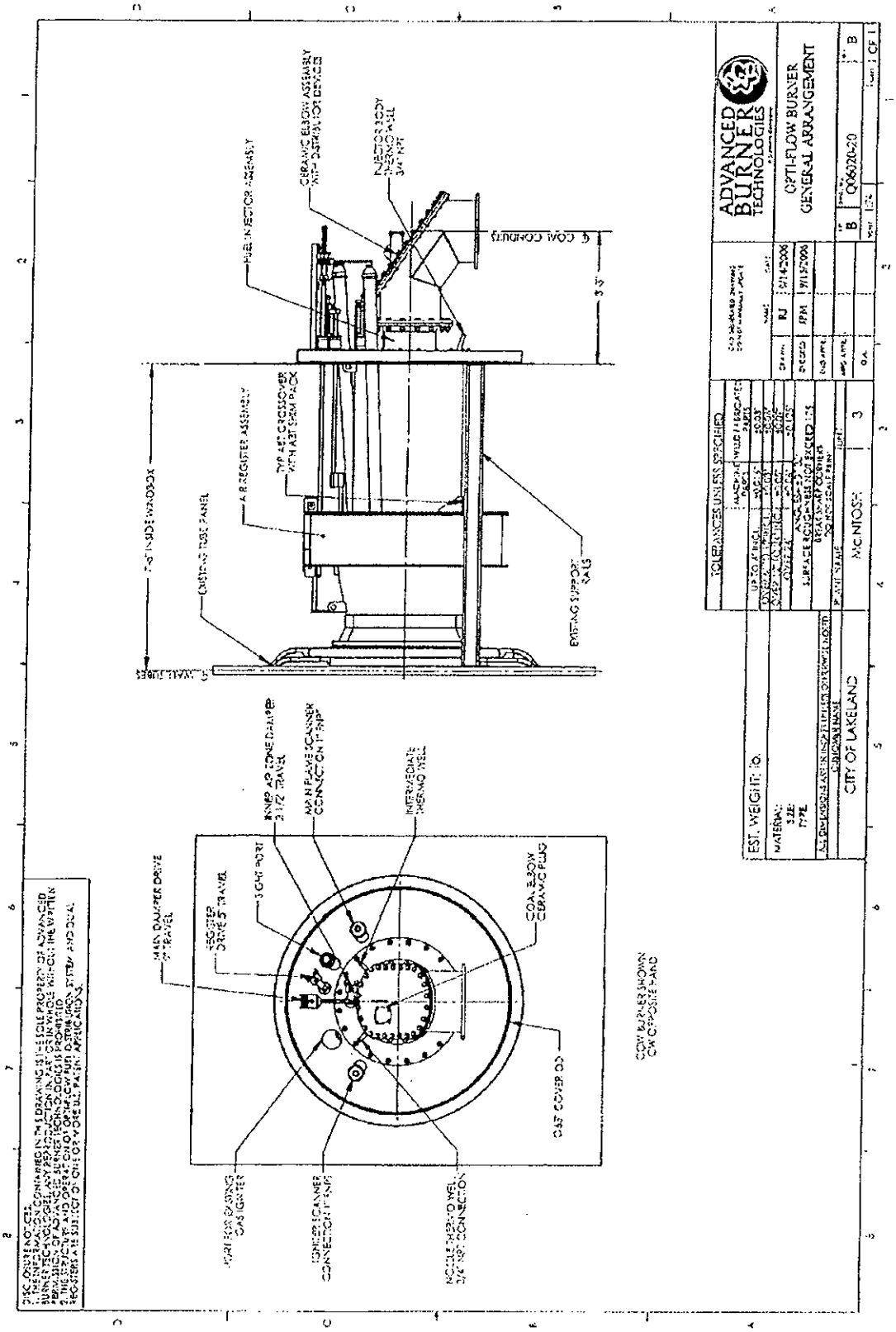
5.0 Project Schedule

The low NOx burner and OFA equipment will be delivered to the McIntosh site starting the first week of March 2007. Deliveries will be completed by the first week of April 2007. The power plant outage is scheduled to start April 3, 2007 and will last approximately thirty-six (36) days. Upon completion of the outage, the unit will be started up and burner tuning will take place to optimize the newly installed low NOx system. Optimization and testing efforts are expected to take thirty (30) days to complete.

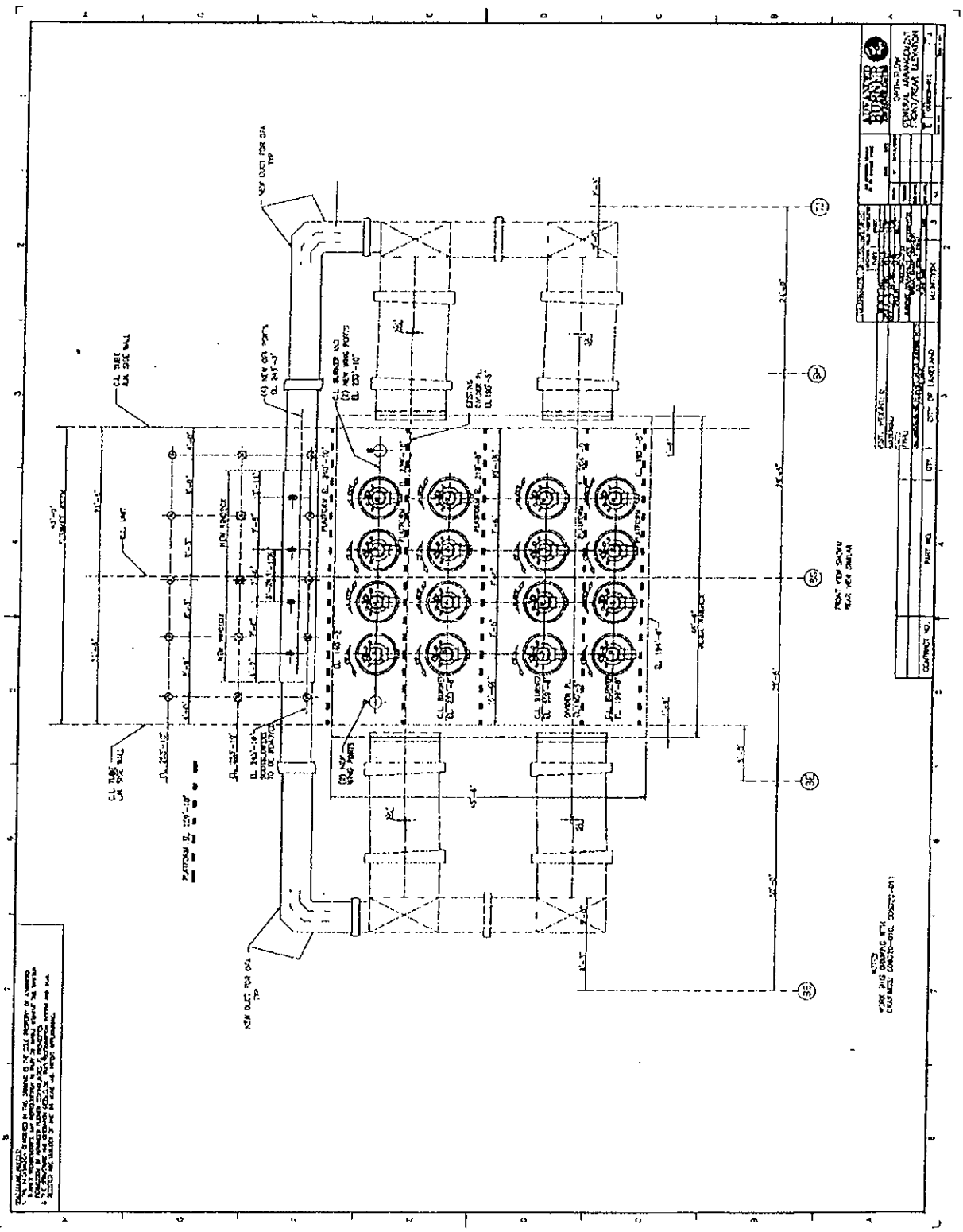
6.0 System Information (See Attached)

- Burner General Arrangement
- Boiler General Arrangement (Front / Rear Elevation)
- Boiler General Arrangement (Side Elevation)
- General Arrangement (Section A-A)
- OFA Register Assembly General Arrangement
- Secondary Air System Schematic

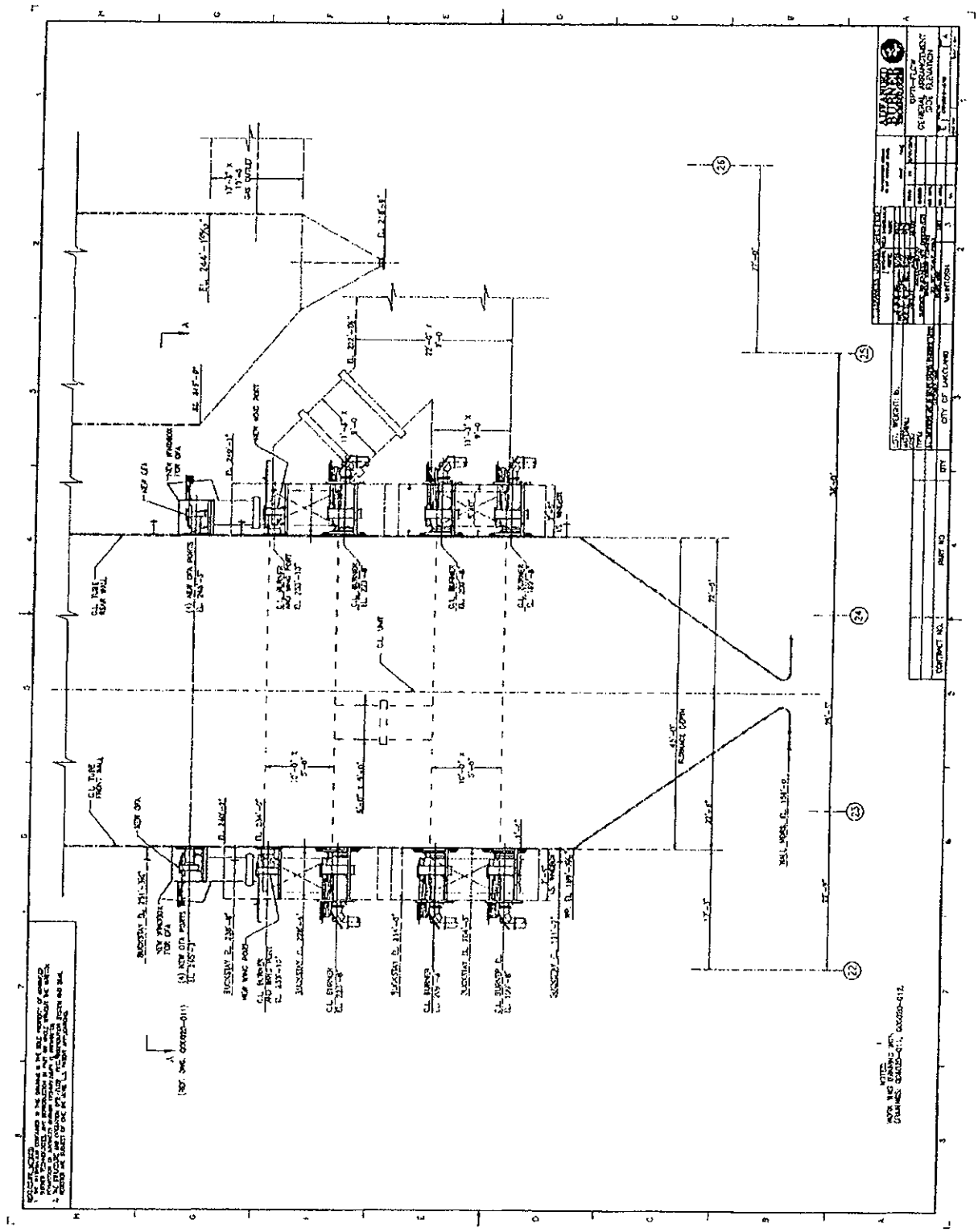
ADVANCED BURNER TECHNOLOGIES
A Siemens Company



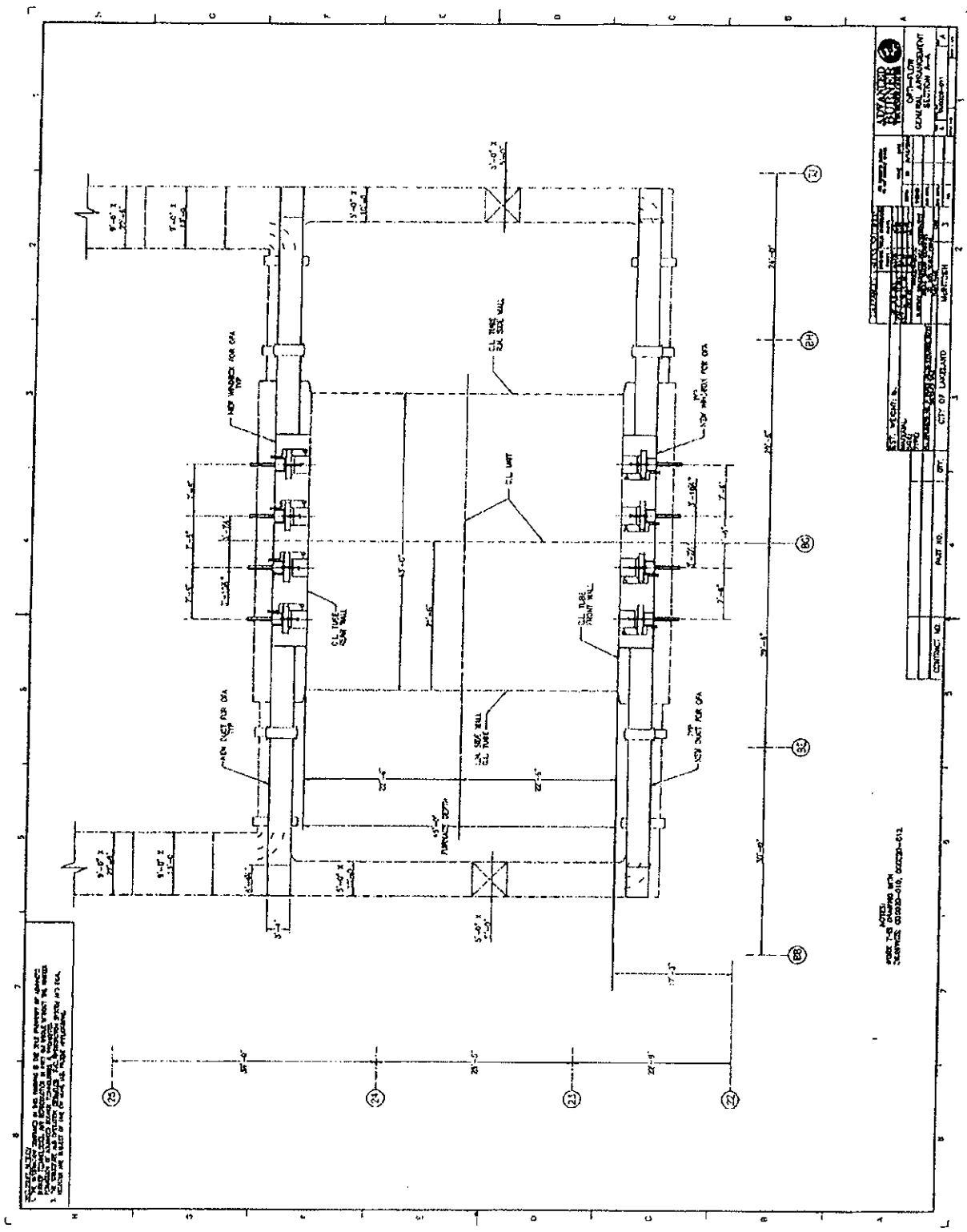
ADVANCED BURNER TECHNOLOGIES
A Siemens Company



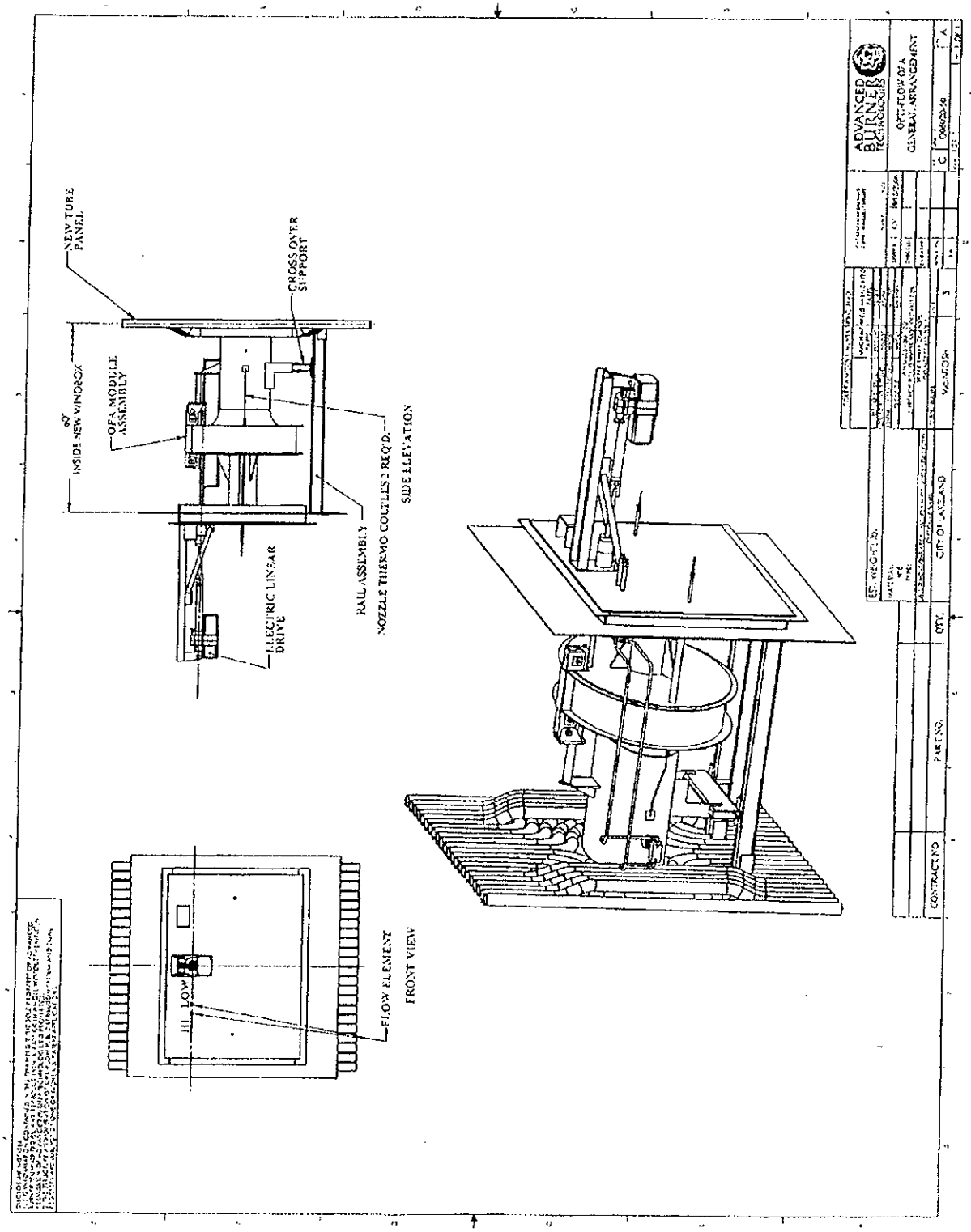
ADVANCED BURNER TECHNOLOGIES
A Siemens Company



ADVANCED BURNER TECHNOLOGIES
A Siemens Company



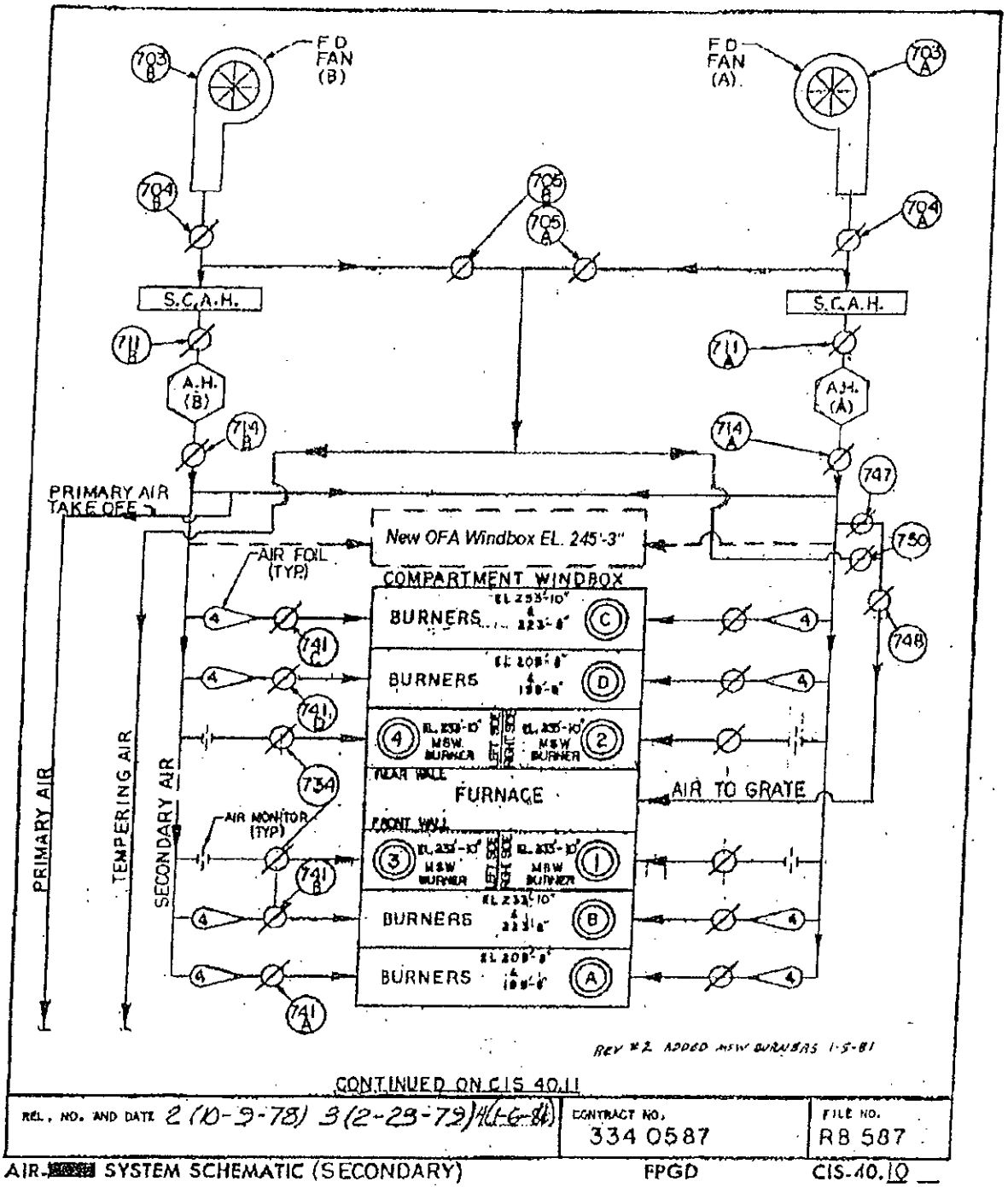
ADVANCED BURNER TECHNOLOGIES
A Siemens Company



ADVANCED BURNER TECHNOLOGIES
A Siemens Company

Secondary Air System Schematic

(modified to show new OFA system)



CONTINUED ON CIS 40.11

REL. NO. AND DATE 2 (10-9-78) 3 (2-23-79) 4 (1-6-84)	CONTRACT NO. 334 0587	FILE NO. RB 587

AIR-[redacted] SYSTEM SCHEMATIC (SECONDARY) FPGD CIS-40.10

Key: - - - - - - New OFA Equipment

Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor

Jeff Kottkamp
Lt. Governor

Michael W. Sole
Secretary

January 23, 2007

Electronic Mail – Received Receipt Requested

Mr. Timothy Bachand, Authorized Representative (timothy.bachand@lakelandelectric.com)
Lakeland Electric
501 East Lemon Street, MS-M01
Lakeland, Florida 33801

Re: C.D. McIntosh, Jr. Power Plant
DEP File No. 1050004-018-AC
Addition of Low NOx Burners, Overfire Air, and Selective Catalytic Reduction to Unit No. 3
Request for Additional Information

Dear Mr. Bachand:

Thank you for your air construction permit application and fee received on December 29, 2006, requesting a modification to add low NO_x burners (LNB), overfire air (OFA), and selective catalytic reduction (SCR) to Unit No. 3 at the C.D. McIntosh, Jr. Power Plant. However, we have deemed your application incomplete, due to the following items needing further clarification:

1. On page 19 of Part I of the Application, we note that sulfur dioxide (SO_2), nitrogen oxides (NO_x), and volatile organic compounds (VOC) are not listed as pollutants emitted by the emissions units. Was this an oversight?

2. On page 1-1 of Part II of the Application, you state that "there is the potential for collateral increases in ... sulfuric acid mist (SAM) and particulate matter (PM)." Please provide quantitative estimates of these expected increases. Do you propose pounds per hour and tons per year limits in addition to pounds per million Btu heat input limits? What testing methodology and averaging times do you suggest?

3. On page 2-1 of Part II of the Application, you state "average NO_x emissions levels are expected to be in the 0.30 lb/MMBtu range following the installation of the LNB and OFA system." Please provide a basis for this conclusion with quantitative estimates if possible.

4. On page 2-1 of Part II of the Application, you state "VOC emission levels ... are not expected to change from current emission levels." Please justify this conclusion with quantitative estimates if possible. Do you propose VOC emission limits and testing?

5. Are the pollutant emissions reported in Table 3-2 based on stack test data?

6. On page 4-1 of Part II of the Application, you state that "for the Project, the emissions of CO are expected to exceed the significant emission rate." Please provide a quantitative estimate of this

expected increase. Do you propose pounds per hour and tons per year limits in addition to the pounds per million Btu heat input limit? Do you propose the use of CO CEMs as the method of compliance? What averaging times do you suggest?

7. Do you expect any change in the quality and composition of the unit's fly ash as a result of the installation of the low NO_x burners, overfire air and SCR system?

8. Have you considered imposing an ammonia slip limit in the construction permit? What method of testing and test frequency do you recommend?

9. It appears that the Process Flow Diagram does not include the ammonia injection subsystem to control sulfur trioxide production. Please update this diagram. Please also provide more details regarding the operating parameters of this subsystem.

10. On page 4-1 of Part II of the application, you indicate that recent CO BACT determinations for new units range from 0.1 to 0.2 lb/MMBtu. Because the project includes the installation of new burners, please explain why new burners cannot be selected to achieve CO emission levels comparable to the lower range of the recent BACT determinations.

11. Rule 62-212.400(3)(h)(5), F.A.C., states that an application must include information relating to the air quality impacts of, and the nature and extent of, all general commercial, residential, industrial and other growth which has occurred since August 7, 1977, in the area the facility or modification would affect. Please satisfy this rule.

12. Please address any additional impacts from CO regarding vegetation, soils and wildlife in the surrounding Class II area.

When we receive this information, we will continue processing your application. We are available to discuss the details of our request for additional information. Rule 62-4.050(3), F.A.C., requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Permit applicants are advised that Rule 62-213.420(1)(b), F.A.C., requires applicants to respond to requests for information within 90 days, unless the applicant has requested in writing, and has been granted, additional time within 90 days. If you have any questions, please contact Tom Cascio at 850-921-9526.

Sincerely,

A. A. Linero, P.E.
Program Administrator
Permitting South Section

AAL/tbc

Cc: Farzie Shelton, Lakeland Electric (farzie.shelton@lakelandelectric.com)
Mara Nasca, Southwest District Office (mara.nasca@dep.state.fl.us)
Kennard F. Kosky, P.E., Golder Associates, Inc. (kkosky@golder.com)
Debbie Nelson, Bureau of Air Regulation (deborah.nelson@dep.state.fl.us)

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:02 PM
To: Adams, Patty
Subject: FW: Delivery Status Notification (Relay)

Attachments: ATT172494.txt; DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant


ATT172494.txt
(297 B)


DEP File No.
1050004-018-AC - ..

-----Original Message-----
From: Exchange Administrator
Sent: Tuesday, January 23, 2007 3:02 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

farzie.shelton@lakelandgov.net

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:02 PM
To: Adams, Patty
Subject: FW: Delivery Status Notification (Relay)

Attachments: ATT172490.txt; DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant


ATT172490.txt
(303 B)


DEP File No.
1050004-018-AC - ..

-----Original Message-----
From: Exchange Administrator
Sent: Tuesday, January 23, 2007 3:01 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

timothy.bachand@lakelandelectric.com

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:02 PM
To: Adams, Patty
Subject: FW: Delivery Status Notification (Relay)

Attachments: ATT172494.txt; DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant


ATT172494.txt
(297 B)


DEP File No.
!050004-018-AC - ..

-----Original Message-----
From: Exchange Administrator
Sent: Tuesday, January 23, 2007 3:02 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

farzie.shelton@lakelandgov.net

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:02 PM
To: Adams, Patty
Subject: FW: Delivery Status Notification (Relay)

Attachments: ATT172487.txt; DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant


ATT172487.txt
(284 B)


DEP File No.
!050004-018-AC - ..

-----Original Message-----
From: Exchange Administrator
Sent: Tuesday, January 23, 2007 3:01 PM
To: Friday, Barbara
Subject: Delivery Status Notification (Relay)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

KKosky@Golder.com

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:01 PM
To: Adams, Patty
Subject: FW: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant

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From: System Administrator
Sent: Tuesday, January 23, 2007 3:01 PM
To: Friday, Barbara
Subject: Delivered:DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant

Your message

To: 'timothy.bachand@lakelandelectric.com'; 'farzie.shelton@lakelandgov.net'; Nasca, Mara; 'KKosky@Golder.com'; Nelson, Deborah
Cc: Linero, Alvaro; Cascio, Tom
Subject: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant
Sent: 1/23/2007 3:01 PM

was delivered to the following recipient(s):

Nasca, Mara on 1/23/2007 3:01 PM

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:02 PM
To: Adams, Patty
Subject: FW: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant

---

From: System Administrator
Sent: Tuesday, January 23, 2007 3:01 PM
To: Friday, Barbara
Subject: Delivered:DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant

Your message

To: 'timothy.bachand@lakelandelectric.com'; 'farzie.shelton@lakelandgov.net'; Nasca, Mara; 'KKosky@Golder.com'; Nelson, Deborah
Cc: Linero, Alvaro; Cascio, Tom
Subject: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant
Sent: 1/23/2007 3:01 PM

was delivered to the following recipient(s):

Nelson, Deborah on 1/23/2007 3:01 PM
Cascio, Tom on 1/23/2007 3:01 PM

Adams, Patty

From: Friday, Barbara
Sent: Tuesday, January 23, 2007 3:12 PM
To: Adams, Patty
Subject: FW: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant

---

From: Nelson, Deborah
Sent: Tuesday, January 23, 2007 3:08 PM
To: Friday, Barbara
Subject: Read: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant

Your message

To: 'timothy.bachand@lakelandelectric.com'; 'farzie.shelton@lakelandgov.net'; Nasca, Mara; 'KKosky@Golder.com'; Nelson, Deborah
Cc: Linero, Alvaro; Cascio, Tom
Subject: DEP File No. 1050004-018-AC - C.D. McIntosh Jr., Power Plant
Sent: 1/23/2007 3:01 PM

was read on 1/23/2007 3:08 PM.

Friday, Barbara

From: Kozlov, Leonard
To: Friday, Barbara
Sent: Tuesday, January 23, 2007 8:35 AM
Subject: Read: DRAFT AC Permit No.: 0090069-004-AC(PSD-FL-378)

Your message

To:	'scott.salisbury@landfillenergy.com'; 'euripides.rodriguez@brevardcounty.us'; 'worley.gregg@epa.gov'; 'John_Bunyak@nps.gov'; Kozlov, Leonard; 'jeff.pope@us.bureauveritas.com'; 'dderenzo@derenzo.com'
Cc:	Koerner, Jeff
Subject:	DRAFT AC Permit No.: 0090069-004-AC(PSD-FL-378)
Sent:	1/19/2007 1:40 PM

was read on 1/23/2007 8:35 AM.

LAKELAND ELECTRIC

Farzie Shelton, chE; REM

Associate GM Technical Support

CERTIFIED MAIL

December 27, 2006

Ms. Patty Adams
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
MS 5505
Tallahassee, Florida 32399-2400

RE: PSD Application C.D. McIntosh Plant
1050004-018-AC

Dear Ms. Adams:

This letter is to confirm the receipt of your email dated December 22, 2006, regarding the processing fee of $7,500 that is required pursuant to Chapter 62-4.050(4)(a), F.A.C. I apologize for not getting back to you sooner; but I am on vacation until the first of the year.

In our zealous effort to meet our internal deadline, the processing fee was inadvertently omitted; however we have received approval to cut the check before the new year. The check No. 595636, in the amount of $7,500 is enclosed with this submittal.

We hope we can still get the permit issued before March 2007 and your Department's help will be greatly appreciated.

Sincerely,

For Farzie Shelton
Associate GM of Technical Support

Enc.

cc: Tom Cascio
EP Box File
Ken Kosky

City of Lakeland · Department of Electric Utilities

501 East Lemon Street · Lakeland, Fl 33801-5050 · 863. 834.6603 · Fax 863. 834.8187 · Cell 863.860.5998

farzie.shelton@lakelandelectric.com

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

December 21, 2006

SENT VIA ELECTRONIC MAIL – RECEIPT REQUESTED

Ms. Farzie Shelton
Associate General Manager – Technical Support
Lakeland Electric
501 East Lemon Street
Lakeland, Florida 33801

RE: PSD Application, C.D. McIntosh Plant
1050004-018-AC

Dear Ms. Shelton:

The Bureau of Air Regulation received your December, 2006, construction permit application for the addition of low Nox burners, overfire air, and selective catalytic reduction in McIntosh Unit 3. Since this is a PSD application, a $7,500 processing fee pursuant to Chapter 62-4.050(4)(a), F.A.C., will be required before we can begin reviewing your application. If you have any questions, please call Tom Cascio, review engineer, at (850)921-9526.

Sincerely,

Patty Adams
Bureau of Air Regulation

/pa

cc: Tom Cascio