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August 18, 2000

Mr. Michael Halpin
Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Indiantown Cogeneration, L.P. Air Permit Modifications
Permit No.: PSD-FL-168, 0850102-001-AV

Dear Mr. Halpin:

Per your recent discussions with David Burrage of Indiantown Cogeneration, we are submitting the attached revisions to the request to modify the PSD permit for the PC boiler.

This is a revision to the December 1999 PSD permit application for the megawatt increase. The revision includes the revised BACT analysis and proposed emission rates as discussed with Mr. Burrage. It also requests language to allow the use of alternative fuel. We are currently preparing submissions related to air quality modeling and carbon monoxide monitoring, and will be submitting them under separate cover.

Telephone

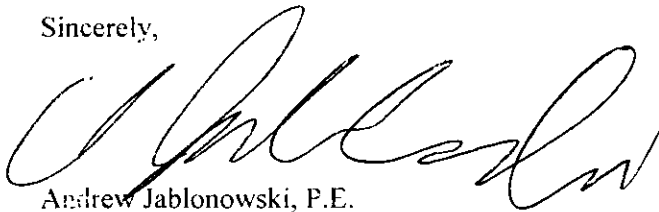
978.371.4000

Facsimile

Thank you for your time and consideration. Please contact me at 978-371-4339 or David Burrage at 561-597-6500 ext. 19 with any questions or comments.

978.371.2468

Sincerely,



Andrew Jablonowski, P.E.
Senior Air Quality Engineer

cc: S. Sorrentino, C. Allen, D. Burrage, D. Bullock, Indiantown Cogeneration LP
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EPA
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INDIANTOWN COGENERATION, L.P. PSD PERMIT APPLICATION TO MODIFY PULVERIZED COAL BOILER

earthtech for the planet.
engineering and technology

Submitted By:

Indiantown Cogeneration, L.P.
19140 SW Warfield Blvd.
Indiantown, FL 34956

Prepared by:

Earth Tech, Inc.
196 Baker Avenue
Concord, MA

December 1999

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1.0 INTRODUCTION/PROJECT SUMMARY

The Indiantown Cogeneration L.P. (ICLP) facility is proposing to modify the operations at its site located along Highway 710 approximately three miles northwest of the community of Indiantown and 9 miles east of Lake Okeechobee, Florida. The facility is southwest of and abuts the Caulkins Citrus Processing facility and the Florida Steel Corporation Indiantown steel mill property. The site occupies the central portion of Section 35, Township 39 South, Range 38 East, Martin County, Florida.

ICLP received authorization to construct the 330 megawatt (MW) electric and the 225,000 pound per hour process steam cogeneration facility on March 26, 1992, Permit Number PSD-FL-168. The Power Plant site certification number for the project is PA 90-13. ICLP is proposing to modify the operation of the pulverized-coal-fired boiler to increase the electrical generation output to 390 MW. To achieve this output, ICLP is applying to modify the existing heat input permit limitation from 3,422 million British Thermal Units per hour (MMBtu/hr) to 4,100 MMBtu/hr.

In addition, ICLP is requesting an amendment to the language of PSD permit PSD-FL-168 to allow the combustion of alternative fuels, and to establish a procedure for Florida Department of Environmental Protection (Department) approval of alternative fuels.

The U.S. Environmental Protection Agency (EPA) has promulgated Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21) which require a permit review and approval for new or modified existing sources which emit criteria pollutants in amounts greater than the significant emission levels. Although ICLP is

not proposing any increase in the existing pollutant emission limitations for the facility, a comparison of baseline actual emissions to the allowable maximum emissions in the future shows a net increase in annual emissions. Since the net emission increase will exceed the significant levels, the proposed modification at the ICLP plant is subject to PSD review. Based on Florida Administration Code (FAC) Rule 62-212.400, the State of Florida has delegated authority to review and issue PSD construction permits.

The following sections include:

- A detailed description of the facility and proposed modifications (Section 2.0).
- A discussion of the regulatory rationale as it applies to the project (Section 3.0).
- A discussion of the project emissions and Best Available Control Technology (BACT) Evaluation (Section 4.0); and
- Proposed PSD permit condition modifications (Section 5.0)

Air quality impact analyses for this modification are being submitted under separate cover.

2.0 PROJECT DESCRIPTION

This section provides an overview of the project and summarizes the basis for identifying the air quality regulations with which the project must comply.

The proposed modification will be an increase from 330 MW net to 390 MW net for the existing pulverized-coal-fired facility. Presently, the ICLP facility includes one main pulverized-coal-fired boiler and one steam generator, two auxiliary boilers operated during lightoff and startup of the main boiler or if the main boiler is down and process steam is required for Caulkins Indiantown Citrus Company, and material handling/conveying equipment. The main primary source of air emissions is the main boiler, firing pulverized coal. Exhaust gas from the main boiler is vented through a series of pollution control devices (PCDs) which include: a selective catalytic reduction (SCR) system for the control of NO_x emissions, spray dryer absorbers for SO₂ removal, and a multi-compartment fabric filter (baghouse) to remove particulates. Secondary air emission sources include the auxiliary boilers firing natural gas or No. 2 fuel oil and the material handling systems for coal, ash and lime. Bin vent filters are provided for material handling equipment to control visible particulate emissions. The exhaust stack is slightly below good engineering practice (GEP) stack height specifications at a height of 495 feet above grade.

Ash is removed by rail or truck for off-site disposal. Cooling at the plant is achieved by means of a mechanical draft-cooling tower.

The primary fuel is eastern bituminous coal having a maximum sulfur content of 2.0 percent. Typical sulfur content is under 1 percent. Natural gas and propane is used for lightoff and startup.

Coal is delivered by rail, unloaded, and stored in an enclosed storage facility on site. An emergency coal pile, sized for 30 days storage at full load, is also provided. Lime used for sulfur capture in the flue gas cleanup system is delivered by train or in enclosed, self-unloading trucks and stored in an enclosed structure. Fugitive emissions from coal storage and material handling are controlled by enclosing most of these operations and venting through fabric filters. No modifications to the material handling equipment are being proposed.

Propane is stored in aboveground tanks, and is delivered by truck.

Presently, the main boiler heat input at full load is 3,422 MMBtu/hr. The heat input of the auxiliary boilers firing #2 fuel oil is 342 MMBtu/hr (358 MMBtu/hr firing natural gas). ICLP is proposing to increase the heat input for the main pulverized-coal-fired boiler to 4,100 MMBtu/hr.

As described in Section 4.2.5 there are currently new fuels (e.g., coal agglomerated with a binder) available which could be fired in ICLP's pulverized-coal-fired boiler. These fuels should behave very similarly to the coal currently being combusted, and should have very similar air emissions. ICLP is requesting this amendment to gain the flexibility to use alternative fuels, subject to the emission limits and other conditions contained in this permit.

3.0 REGULATORY APPLICABILITY EVALUATION

3.1 Chapter 62-210 Stationary Sources -General Requirements

3.1.1 62-210.300 Permits Required

The owner or operator of any emissions unit which emits or can reasonably be expected to emit any air pollutant must obtain an appropriate permit from the Department of Environmental Protection (Department) prior to beginning construction, modification, or initial or continued operation of the emissions unit unless exempted pursuant to Department rule or statute. Since the proposed modification to ICLP's facility can not meet the categorical exemptions provided in Rule 62-210.300 (3)(a) or the generic exemptions provided in Rule 62-210.300 (3)(b), ICLP must obtain a preconstruction permit prior to increasing the heat input.

3.2 Chapter 62-212 Stationary Sources - Preconstruction Review

3.2.1 62-212.300 General.

The proposed modification will take place at an existing major source. If a proposed modification at a facility results in a net emissions increase that exceeds the significant emission rate for a regulated pollutant, the project is subject to major new source preconstruction review regulation. As discussed in Section 4.0 of this application, the net emissions increases at ICLP's facility will exceed the significance levels for most regulated pollutants and, therefore, ICLP is applying for a modification to its PSD air construction permit pursuant to Rule 62-212.400.

3.2.2 62-212.400 Prevention of Significant Deterioration (PSD)

The U.S. Environmental Protection Agency (EPA) has promulgated Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21) which require a permit review and approval for new or modified existing sources which have the potential to emit criteria pollutants in amounts greater than the significant emission levels. Similarly, the Department has promulgated PSD preconstruction review regulations in Rule 62-212.400.

Pursuant to these requirements, the Facility was issued a Permit to Construct and PSD Permit (PSD Permit/Permit to Construct) dated March 26, 1992, with revisions dated July 16, 1992 (PSD-FL-168). This permit was amended to remove the H₂SO₄ testing requirement in December, 1996. It was further amended in April, 1998 to allow opacity levels for one six minute period per hour of not more than 27 percent opacity, and in May, 2000 to allow construction of a carbon dioxide recovery plant and to clarify auxiliary boiler operating requirements.

“Major stationary sources” and “major modifications” located in areas designated as attainment or unclassifiable for national Ambient Air Quality Standards (NAAQS) are subject to the PSD regulations. Martin County and the surrounding counties are designated as “in attainment or cannot be classified” for all criteria pollutants.

A “major stationary source” is defined as any one of 28 specified sources which has a potential to emit 100 tons per year or more, or any other stationary source which has the potential to emit 250 tons per year or more of any regulated pollutant (40 CFR 52.21). ICLP’s facility is listed as a 100-ton per year source (fossil-fuel-fired steam electric plants of more than 250 million Btu/hr heat input) having the potential to emit more than 100-tons of a criteria pollutant. Since the proposed

modification to ICLP's facility will result in a net emission increase above significance levels ("past actual to future potential"), the modification is subject to PSD review.

Under PSD, each pollutant emitted from a major source in significant quantities, as defined in Table 3-1, and for which the area is designated as "in attainment" for the pollutant, must undergo a PSD analysis. The PSD analysis involves the following:

- BACT analysis
- PSD Increment Consumption Analysis, including other increment-consuming sources in the area (if applicable)
- NAAQS impact analysis, including other significant sources in the area (if applicable)

Impacts on Class 1 PSD Areas. The facility is approximately 142 kilometers north of the Everglades National Park (the nearest Class 1 area). Based on discussions with John Notar of the National Park Service, an analysis of the impacts on this Class I area will be required. The analysis will be submitted under separate cover.

Additional Impacts Analysis. Any source subject to the PSD regulations must also provide an analysis of any adverse air quality-related impacts to:

- Visibility
- Soils
- Vegetation
- Commercial, residential, and industrial growth that the project might cause

**TABLE 3-1
TOTAL FACILITY EMISSION**

	Baseline (1997-1998) <u>Annual Tons</u>	Allowable* <u>Annual Tons</u>	PSD <u>Significance</u>	PSD <u>Applies?</u>
Nitrogen Oxides	1992	2245	40	Yes
Carbon Monoxide	90	1649	100	Yes
Volatile Organic Compounds	0	54	40	Yes
Particulate Matter	82	270	25	Yes
Sulfur Dioxide	1436	2549	40	Yes
Lead	0.02	0.28	0.6	No
Beryllium	0.0007	0.041	0.0004	Yes
Mercury	0.01	0.17	0.1	Yes
Fluorides	1.1	13.4	3	Yes
Sulfuric Acid Mist	0.6	6.51	7	No
Arsenic	0.01	0.765	0	Yes

*Based on proposed BACT levels in Section 4.

3.2.3 62-212.500 Non-Attainment

The proposed modification will take place at an existing facility located in Martin County which has been designated as "in attainment or cannot be classified" for all criteria pollutants. Therefore, non-attainment new source review is not applicable to the proposed project.

3.3 Chapter 62-204 Air Pollution Control: General

3.3.1 62-204.800 Federal Regulations Adopted by Reference

Emission standards contained in 40 CFR 60, 61, 63, 64, 72, 73, 75, 76, 77, and 78 have been adopted by reference pursuant to Rule 62-204.800

The New Source Performance Standards (NSPS) apply to new, modified, and reconstructed sources of emissions for which the U.S. EPA has promulgated

standards. The EPA promulgated NSPS for fossil-fuel-fired steam generators (40 CFR 60, Subpart D) with a heat input greater than 250 MMBtu per hour in 1971. Since its promulgation, the EPA has proposed revisions and amendments to Subpart D a number of times. One of the amendments, Subpart Da, applies to the ICLP plant. Subpart Da was proposed in 1978 and promulgated in 1979 and specifically applies to electric utility steam generating units.

Electric utility steam generating units are subject to NSPS Subpart Da provided they meet all three of the following criteria. If the plant does not meet any one of the criteria, it may still be subject to NSPS (e.g., the promulgated and proposed emission limits in Subpart Db). Subpart Da is applicable to electric steam generating units that:

- Are capable of combusting more than 73 MW (250 MMBtu/hr) heat input of fossil fuel either alone or in combination with any other fuel
- Supply more than 25 MW electricity to any utility power distribution system for sale
- Supply more than one-third of their potential electric output capacity to any utility power distribution system for sale

Table 3-4 provides a summary of the performance standards that apply to the ICLP facility.

TABLE 3-4
NSPS FOR ELECTRIC UTILITY STEAM GENERATING UNITS

Affected Facility	Pollutant	Emission Level	Requirement
Coal-fired boilers (and coal-derived fuels)	Particulate	0.03 lb/million Btu	Average of three 1-hr test runs
	Opacity	<20% except for one six-minute period/hr <27%	6-minute block average
	SO ₂	0.6 lb/million Btu and 70% reduction	30-day rolling average
	NO _x	0.60 lb/million Btu	30-day rolling average

Source: 40 CFR 60, Subpart Da.

Under 40 CFR 60, Subpart Da, a lower nitrogen oxide requirement applies to facilities where “modification or reconstruction commenced after July 9, 1997.” The lower NO_x emission limit under 40 CFR 60.44a(d)(2) (0.15 lb/MMBtu NO_x, 30-day rolling average), does *not* apply to the ICLP facility because the operational changes being requested do not meet the definition of “modification or reconstruction” in the NSPS. The NSPS defines modification (in 40 CFR 60.2) as follows:

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollution (to which a standard applies) into the atmosphere not previously emitted.

The proposed operational change at ICLP’s facility will not increase the permitted emissions rate for any air pollutant, nor will it result in any new pollutant being emitted. The proposed changes also do not constitute a reconstruction because there

will not be any significant capital expenditures associated with the proposed change in operations.

3.3.2 Acid Rain - Title IV of CAAA

Pursuant to Title IV of the CAAA of 1990 and EPA's implementing regulations regarding acid rain requirements (40 CFR Part 72), the Facility does not have any "affected" units. The PC boiler is exempt from Title IV acid rain requirements because the Facility is a qualifying cogeneration facility that had as of 11/15/90 a qualifying power purchase agreement for at least 15% of the total output capacity. This specific exemption is authorized in 40 CFR 72.6(b)(5).

The proposed increase in operations at ICLP's facility does not affect the exemption from the acid rain requirements. The proposed net output is not more than 130% of the original net planned output, so the exemption in 40 CFR 72.6(b)(5) still applies.

3.4 Chapter 62-296 Stationary Sources-Emission Standards

3.4.1 62-296.405 Fossil Fuel Steam Generators with more than 250 million Btu per Hour Heat Input.

This DEP regulation limits emissions from the PC boiler. Emission limits listed in this requirement are less stringent than the existing limits in the PSD permit and the Title V operating permit. The facility will continue to comply with the existing limits in the PSD permit and the Title V operating permit.

3.4.2 62-296.711 *Materials Handling, Sizing, Screening, Crushing and Grinding Operations*

These regulations address solid material handling operations at ICLP. There are no changes to the capacity or operating method of the solid material handling operations at ICLP. ICLP will continue to comply with this regulation through its PSD and Title V operating permits.

4.0 PROJECT EMISSIONS AND CONTROL TECHNOLOGY REVIEW

4.1 Project Emissions

4.1.1 Existing Emissions

As mentioned previously, ICLP is not requesting an increase in the existing emission limits for the facility.

Table 4-1 provides a summary of the existing emission limits for the pulverized-coal-fired boiler .

**TABLE 4-1
PC BOILER EXISTING EMISSION RATES**

<u>Pollutant</u>	<u>(lb/hr)</u>	<u>(ton/yr)</u>
Nitrogen Oxides	582	2549
Carbon Monoxide	376	1647
Hydrocarbons	12.3	54
Particulate Matter	61.6	270
Sulfur Dioxide	582	2549
Lead	0.064	0.28
Beryllium	0.0093	0.041
Mercury	0.039	0.172
Arsenic	0.175	0.765
H ₂ SO ₄	0.0093	0.0041
Fluorides	5.08	22.3

Ammonia: slip shall not exceed 50 ppmv

4.1.1 Proposed Emissions

As part of the Best Available Control Technology (BACT) evaluation, discussed below, and informal discussions with the Department, ICLP is proposing changes to its permit limits as part of this application. The changes provide a rate-based emission limit for all pollutants, and reduce the permitted emission rate for NO_x,

fluorides, and ammonia slip. Proposed emissions are summarized in Table 4-2, below:

**TABLE 4-2
PC BOILER PROPOSED EMISSION RATES**

<u>Pollutant</u>	<u>(lb/MMBtu)</u>	<u>(ton/yr)</u>
Nitrogen Oxides	0.125*	2245
Carbon Monoxide	0.092	1647
Hydrocarbons	0.003	54
Particulate Matter	0.015	270
Sulfur Dioxide	0.142*	2549
Lead	0.000016	0.28
Beryllium	0.0000023	0.041
Mercury	0.00001	0.172
Arsenic	0.000044	0.765
H ₂ SO ₄	0.00035	0.0041
Fluorides	0.000744	13.4

Ammonia: slip shall not exceed 10 ppmv

* or 480 lb/hr, whichever is less stringent

The proposed emission rates are the same as or lower than the existing permitted emission rates on a mass-emissions basis, and are lower for all pollutants on a rate basis. The documentation for each pollutant level chosen is provided in the BACT analysis, below. The proposed PSD permit conditions reflecting the proposed limits are included in Section 5.

Any alternative fuel approved through the permit language requested in Section 5 will behave similarly to the existing coal, and will meet the proposed permit limits above.

4.2 Best Available Control Technology Evaluation

The BACT analysis shown below is repeated in bulk from the initial air permit application for the PC boiler, and updated where appropriate. For all pollutants, the

facility proposes to use the same emissions controls to meet *at least* the existing pound-per-hour and ton-per-year emission limits. This will correspond to a decrease in the emission rate on a pound-per-million-Btu basis. For three pollutants (nitrogen oxides, fluorine, and ammonia slip) a further reduction is proposed.

Since the facility was permitted based on 100% capacity (8,760 hours per year), additional electricity will be made available without any increase in permitted emission rates.

4.2.1 Control Technology

The air pollution control system for the PC boiler consists of SCR, spray dryer absorbers (SDAs) for desulfurization and acid gas control, and a baghouse for particulate matter (including trace metals) controls.

Flue gas from the air heater enters the two 50-percent capacity SDAs, where it is humidified and cooled by spraying with lime slurry. Simultaneously, the flue gas provides drying energy to the atomized slurry. The cooled gas, along with the entrained reaction products and fly ash, flows to the fabric filter where solids are separated from the gas.

The system uses lime (calcium hydroxide) slurry as the absorbing medium. Pebble lime is slaked in the lime preparation system, diluted and stored in the lime feed tanks. Lime slurry is pumped from the feed tank to the agitated atomizer head tank, from which the slurry is pumped to the absorbers.

Lime is delivered to the site by rail or self-unloading truck and stored in a totally enclosed structure to eliminate fugitive emissions.

Flue gas from the FGD system enters the baghouse through an inlet manifold, which distributes the gas to the bag filter compartments. Gas passes through the fabric of the bags from the inside to the outside; collected particulate is retained on the inside surface of the bags. When the particulate buildup on the surface of the bags produces a preset flue gas pressure drop, an automatic reverse-air cleaning cycle is initiated.

Hoppers below the bags collect the particulate released from the bags during the cleaning cycle. A pneumatic transfer system transports the particulate ash from the hoppers to the ash storage silo, in preparation for off-site disposal.

The facility is an emission source of nitrogen oxides, sulfur dioxide (SO₂), particulate matter (PM), carbon monoxide (CO), Volatile Organic Compounds (VOCs) and other regulated pollutants.

ICLP expects that the only physical modifications that may be needed to meet the new proposed permit limits will be enhancements to the NO_x control system. All other permit limits can be met using the existing equipment (spray dryer absorber system and fabric filter baghouse).

4.2.2 Emission Rate: Nitrogen Oxides

For the pulverized coal boiler, the original proposed BACT level for NO_x was on the basis of 0.17 lb/MMBtu, achieved through the use of Selective Non-Catalytic Reduction (SNCR) and advanced combustion controls. Subsequent documentation allowed compliance with the NO_x limit on the basis of SNCR, Selective Catalytic Reduction (SCR), advanced combustion controls, or any combination. An SCR system was installed.

ICLP now proposes a full-load emission limit of 0.125 lb/MMBtu, on a 24-hour block average basis. This reduction keeps the ICLP emission rate on par with permitted emission rates for new facilities firing coal (including facilities using circulating fluidized bed technology).

Because of system design characteristics, it is difficult to document and maintain compliance with a rate based emission limit at low or variable load. ICLP therefore proposes a minimum pound-per-hour NO_x limit as the simplest way to allow for low-load operation. Using a mass emission limit at reduced loads has three advantages. First, it is more straightforward and accurate during periods when load is shifting. Second, it avoids the need to clearly define conditions that qualify as "reduced load," and the need to carefully monitor parameters to document when the "reduced load" permit conditions apply. Third, it avoids the need to request multiple stepped-off emission limits at different operating conditions.

ICLP proposes a NO_x mass emission limit of 480 pounds per hour on a 24-hour block average basis. This limit would become effective at reduced loads (*i.e.* below 3840 MMBtu/hr), and would still represent a significant reduction from the current permitted limit.

ICLP will continue to monitor and document compliance with the NO_x emission limits using continuous emissions monitoring systems.

Specific Condition 6 of the PSD permit allows the Facility "to use any technology (e.g. SNCR, SCR, or combustion controls) to achieve the NO_x limitation" for the PC boiler. To comply with the proposed NO_x limit, ICLP may wish to enhance the facility's NO_x control system. Per existing Condition of Certification (1).A.2., ICLP will provide details of the enhanced NO_x reduction system upon completion of final

design, and at least 90 days prior to commencing on-site construction for the modification.

While final system design is still in progress, ICLP is considering the use of an SNCR system to augment the existing SCR system. The supplemental SNCR system would ensure compliance with the NO_x limitation at increased loads.

4.2.2 Emission Rate: Sulfur Dioxide

The original proposed BACT level of SO₂ was on the basis of 0.17 lb/MMBtu, achieved through the use of lime spray drying. The current proposed emission rate is 0.142 lb/MMBtu, on a 24-hour block average basis. As discussed for NO_x, above, ICLP is proposing a minimum pound-per-hour emission rate to allow for system fluctuations at reduced or variable loads. ICLP proposes an SO₂ mass emission limit of 480 pounds per hour, on a 24 hour block average basis. This limit would become effective at reduced loads (*i.e.*, below 3380 MMBtu/hr), and would still represent a significant reduction from the current permitted limit.

ICLP will continue to monitor and document compliance with the SO₂ emission limits using continuous emissions monitoring systems.

4.2.3 Emission Rate: Carbon Monoxide

For CO, the original proposed BACT levels were on the basis of 0.11 lb/MMBtu, achieved through advanced combustion controls. ICLP now proposes a rate-based emission limit of 0.092 lb/MMBtu.

ICLP will continue to monitor and document compliance with the CO emission limits using periodic stack testing. ICLP believes that a CO CEMS is prohibitively costly.

A detailed analysis of the cost effectiveness of the CEMS will be provided under separate cover.

4.2.4 Emission Rate: Other Pollutants

For each pollutant with a permit limit, ICLP proposes a rate-based emission limit that corresponds to zero increase in full-load emissions for the PC boiler. This results in a reduction of the rate equivalent emission rate for all pollutants. This also reflects current BACT for all pollutants, with the exception of fluorides and ammonia slip. ICLP proposes a further reduction in the fluoride emission rate to 0.000744 lb/MMBtu; this limit corresponds with over a 50% reduction in the rate-based emission rate from the original permit, and provides the same emission rate as recently approved by the Department for the Cedar Bay Generating Plant.

ICLP proposes a reduction in the allowable ammonia slip from 50 ppmv to 10 ppmv. This limit corresponds with a five-fold reduction in the emission rate, and provides the same emission rate as recently approved by the Department for the Cedar Bay Generating Plant.

4.2.5 Alternative Fuel Use

The alternative fuel currently being reviewed is coal agglomerated with an adhesive binder. This material will behave similarly to coal. Therefore, emissions and emission control options are essentially the same, and BACT for combustion of alternative fuels is the same as BACT for coal combustion.

5.0 PROPOSED CHANGES TO PSD PERMIT

The proposed changes to the facility's operations will require changes in PSD Permit PSD-FL-168 as follows.

The first sentence of Specific Condition 3 needs to be revised to read;

The maximum heat input to the PC boiler shall not exceed 4100 MMBtu/hr while firing coal.

The first sentence of Specific Condition 5 needs to be revised to read;

Based on a permitted heat input of 4100 MMBTU/hr heat input, the stack emissions from the main boiler shall not exceed any of the following limitations:

The table in Specific Condition 5 needs to change to the following:

<u>Pollutant</u>	<u>Emission Limitation</u>	
	<u>(lb/MMBtu)</u>	<u>(ton/yr)</u>
SO ₂	0.142 ^{1,2}	2549
NO _x	0.125 ^{1,3}	2245
PM	0.015	270
PM ₁₀	0.015	270
CO	0.092 ¹	1647
VOC	0.003	54
H ₂ SO ₄	0.00035	0.0041
Beryllium	0.0000023	0.041
Mercury	0.00001	0.172
Lead	0.000016	0.28
Fluorides	0.000744	13.4
Arsenic	0.000044	0.765

1: 24 hour daily block average (midnight to midnight)

2: or 480 lb/hr (24-hr daily block average), whichever is less stringent

3: or 480 lb/hr (24-hr daily block average), whichever is less stringent

The first sentence of Specific Condition 6 should be removed, so that the condition reads;

~~6. The 0.170 lb/MMBtu NO_x emission rate is the basis for the above maximum emission limitation. The permittee is allowed to use any combustion technology...~~

Specific Condition 7 needs to be revised to read;

NH₃ (Ammonia) – Slip from exhaust gases shall not exceed 10 ppmv.

Finally, we request the addition of a new Specific Condition (Specific Condition 31) as follows:

Subject to the emission limits and other conditions in this permit, and subject to the following, the permittee may burn an alternative fuel in the PC boiler. At least ninety (90) days prior to burning the alternative fuel, the permittee shall submit documentation to the Department including at least:

- a. A thorough description of the fuel and proposed process;*
- b. A complete chemical analysis of the fuel; and*
- c. A Professional Engineer-certified stoichiometric calculation of the predicted emissions.*

The permittee shall notify the Department at least thirty (30) days prior to burning the alternative fuel. The Department may require stack testing to document actual emissions firing alternative fuels. In that event, the results of the stack testing and the permittee's analysis shall be reported to the Department within forty-five (45) days of completion of the testing.

Appendix I

Permit Application Forms

26109/l-halpin3.doc

August 18, 2000

Mr. Michael Halpin
Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Indiantown Cogeneration, L.P. Air Permit Modifications
Permit No.: PSD-FL-168, 0850102-001-AV

Dear Mr. Halpin:

Per your recent discussions with David Burrage of Indiantown Cogeneration, we are submitting the attached revisions to the request to modify the PSD permit for the PC boiler.

This is a revision to the December 1999 PSD permit application for the megawatt increase. The revision includes the revised BACT analysis and proposed emission rates as discussed with Mr. Burrage. It also requests language to allow the use of alternative fuel. We are currently preparing submissions related to air quality modeling and carbon monoxide monitoring, and will be submitting them under separate cover.

Telephone

978.371.4000

Facsimile

Thank you for your time and consideration. Please contact me at 978-371-4339 or David Burrage at 561-597-6500 ext. 19 with any questions or comments.

978.371.2468

Sincerely,



Andrew Jablonowski, P.E.
Senior Air Quality Engineer

cc: S. Sorrentino, C. Allen, D. Burrage, D. Bullock, Indiantown Cogeneration LP
R. DeHart, PG&E Generating

E A R T H  T E C H

A **tyco** INTERNATIONAL LTD. COMPANY



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Indiantown Cogeneration, L.P.	
2. Site Name: Indiantown Cogeneration Plant	
3. Facility Identification Number: 0850102	<input type="checkbox"/> Unknown
4. Facility Location: Street Address or Other Locator: 19140 SW Warfield Blvd City: Indiantown County: Martin Zip Code: 34956	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Application Contact

1. Name and Title of Application Contact: David Burrage, Environmental Manager	
2. Application Contact Mailing Address: Organization/Firm: Indiantown Cogeneration, L.P. Street Address: PO Box 1620 City: Indiantown State: FL Zip Code: 34956	
3. Application Contact Telephone Numbers: Telephone: (561) 597-6500 Fax: (561) 597-6520	

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

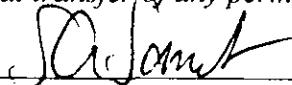
- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.
Current construction permit number: _____
- Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.
Current construction permit number: _____
Operation permit number to be revised: _____
- Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)
Operation permit number to be revised/corrected: _____
- Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.
Operation permit number to be revised: _____
Reason for revision: _____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Stephen Sorrentino, General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Indiantown Cogeneration, L.P. Street Address: PO Box 1620 City: Indiantown State: FL Zip Code: 34956
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (561) 597- 6500 Fax: (561) 597 - 6210
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [✓], 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.</i>  <u>12/22/99</u> Signature Date

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: George S. Lipka Registration Number: 0050359
2. Professional Engineer Mailing Address: Organization/Firm: Earth Tech Street Address: 196 Baker Avenue City: Concord State: MA Zip Code: 01742
3. Professional Engineer Telephone Numbers: Telephone: (978)371- 4000 Fax: (978)371- 2468

4. 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.

If the purpose of this application is to obtain a Title V source 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 schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit 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.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision 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 George D. Lyle

Date December 22, 1999

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Pulverized Coal Fired Main Boiler	ACMI	

Application Processing Fee

Check one: [] Attached - Amount: \$ _____ [] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Modify PC Boiler to increase MW output to 390 MW.

2. Projected or Actual Date of Commencement of Construction: ~~about April, 2000~~

3. Projected Date of Completion of Construction: ~~about May, 2000~~

Application Comment

No construction required. ICLEP will increase MW output upon approval (about December, 2000).

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates:			
Zone:	East (km):	North (km):	
2. Facility Latitude/Longitude:			
Latitude (DD/MM/SS): 27/2/20		Longitude (DD/MM/SS): 80/30/45	
3. Governmental Facility Code:	4. Facility Status Code:	5. Facility Major Group SIC Code:	6. Facility SIC(s):
0	A	49	4911, 4961
7. Facility Comment (limit to 500 characters):			

Facility Contact

1. Name and Title of Facility Contact: David Burrage, Environmental Manager			
2. Facility Contact Mailing Address:			
Organization/Firm: Indiantown Cogeneration, L.P.			
Street Address: PO Box 1620			
City: Indiantown	State: FL	Zip Code: 34956	
3. Facility Contact Telephone Numbers:			
Telephone: (561)597 - 6500		Fax: (561)597 - 6210	

Facility Regulatory Classifications

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input checked="" type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	
Major source of HAPs based on current estimates of HCL emissions.	

List of Applicable Regulations

62-210.300	62-213
62-210.350	62-273.300
62-210.370	62-297
62-210.500	62-296.405
62-210.550	62-204.800
62-210.700	40 CFR 60,Subpart Da
62-212.300	40 CFR 60,Subpart Db
62-212.400 (PSD-FL-168)	40 CFR 60,Subpart Y
62-212.410	
62-296.711	

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
CO	A				
PB	B				
NOX	A				
PM	A				
PM10	A				
S02	A				
VOC	B				
SAM	B				
H021	B				
H114	B				
FL	B				
H015	B				
H106	A				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: <input checked="" type="checkbox"/> Attached, Document ID: <u>1</u> [<input type="checkbox"/> Not Applicable [<input type="checkbox"/> Waiver Requested
2. Facility Plot Plan: <input checked="" type="checkbox"/> Attached, Document ID: <u>2</u> [<input type="checkbox"/> Not Applicable [<input type="checkbox"/> Waiver Requested
3. Process Flow Diagram(s): <input checked="" type="checkbox"/> Attached, Document ID: <u>3</u> [<input type="checkbox"/> Not Applicable [<input type="checkbox"/> Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [<input type="checkbox"/> Attached, Document ID: _____ [<input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Fugitive Emissions Identification: [<input type="checkbox"/> Attached, Document ID: _____ [<input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
6. Supplemental Information for Construction Permit Application: <input checked="" type="checkbox"/> Attached, Document ID: <u>4</u> [<input type="checkbox"/> Not Applicable
7. Supplemental Requirements Comment: Document I.D. 1,2,3 found in Appendix II Document I.D. 4 is addressed as the main body of text.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: _____) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input checked="" type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> 			
<p>4. Emissions Unit Identification Number: <input type="checkbox"/> No ID</p> <p>ID: 001 <input type="checkbox"/> ID Unknown</p>			
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date: July 1, 1995</p>	<p>7. Emissions Unit Major Group SIC Code: 49</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> 			

Emissions Unit Control Equipment

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Air preheater, Low NOx burner, overfire air. Combustion control/O2 control, ammonia injection and catalytic reduction SCR system, spray dryer absorber, and fabric filter baghouse.

2. Control Device or Method Code(s): 027

Emissions Unit Details

1. Package Unit:		
Manufacturer:	NA	Model Number:
2. Generator Nameplate Rating: 390		MW
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	4100	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

**C. EMISSIONS UNIT REGULATIONS
(Regulated Emissions Units Only)**

List of Applicable Regulations

40 CFR 60.1 – 60.15	
40 CFR 60.17	
40 CFR 60.19	
40 CFR 60.40a	
40 CFR 60.41a	
40 CFR 60.42a (a), (b)	
40 CFR 60.43a (a)(2), (b)(2), (g), (h)(2)	
40 CFR 60.44a (a), (c)	
40 CFR 60.46a (a-c, e-h)	
40 CFR 60.46a (a), (b)(3), (c-j)	
40 CFR 60.48a (a-e)	
40 CFR 60.49a (a-c, f-I)	

D. EMISSION POINT (STACK/VENT) INFORMATION
(Regulated Emissions Units Only)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Main Stack		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Main Stack			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: PC boiler (001), Proposed CO2 Plant (007)			
5. Discharge Type Code: V	6. Stack Height: 495 feet	7. Exit Diameter: 16 feet	
8. Exit Temperature: 140 180 °F	9. Actual Volumetric Flow Rate: 1123700 1181774 acfm	10. Water Vapor: 15.00 %	
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 Comment (limit to 200 characters): Airflow in dscfm not listed because the PC boiler has no emission limits in grains/dscfm. Acfm listed are approximate.			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Coal firing		
2. Source Classification Code (SCC): 1-01-001-01		3. SCC Units: Tons burned (all solid fuels)
4. Maximum Hourly Rate: 145.00	5. Maximum Annual Rate: 1,270,200.00	6. Estimated Annual Activity Factor: 0.00
7. Maximum % Sulfur: 2.00	8. Maximum % Ash: 12.00	9. Million Btu per SCC Unit: 24
10. Segment Comment (limit to 200 characters):		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): No.2 Oil firing		
2. Source Classification Code (SCC): 1-01-005-01		3. SCC Units: Thousands Gallons Burned (all liquid fuels)
4. Maximum Hourly Rate: 12.70	5. Maximum Annual Rate: 111,135.00	6. Estimated Annual Activity Factor: 0.00
7. Maximum % Sulfur: 0.05	8. Maximum % Ash:	9. Million Btu per SCC Unit: 135
10. Segment Comment (limit to 200 characters): PC Boiler does not currently fire No. 2 oil. No.2 oil would be fired during startup, shutdown and load changes. Firing capacity no more than 50% rated boiler heat input.		

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural Gas firing		
2. Source Classification Code (SCC): 1-01-006-01		3. SCC Units: Million cubic feet burned (all gaseous fuels)
4. Maximum Hourly Rate: 1.80	5. Maximum Annual Rate: 15,777.00	6. Estimated Annual Activity Factor: 0.00
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 950
10. Segment Comment (limit to 200 characters): Fired during stratup, shutdown and load changes. No more than 50% rated boiler heat input.		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Propane (LPG) Firing		
2. Source Classification Code (SCC): 1-01-010-02		3. SCC Units: Thousands Gallons Burned (all liquid fuels)
4. Maximum Hourly Rate: 18.90	5. Maximum Annual Rate: 165,617.00	6. Estimated Annual Activity Factor: 0.00
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 90
10. Segment Comment (limit to 200 characters): Burned during startup, shutdown and load changes. No more than 50% rated boiler heat input.		

**F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO	025	033	EL
PB	017		EL
NOX	032	065	EL
PM	017		EL
PM10	017		EL
SO2	067	017	EL
VOC	025	033	EL
SAM	067	017	EL
H021	017		EL
H114		042	EL
FL	067	017	EL
H015	017		EL
H106	067	017	EL

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 376.00 lb/hour 1,649.00 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 ____ to ____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: PB		2. Total Percent Efficiency of Control: 99.00%	
3. Potential Emissions: 0.03 lb/hour 0.15 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions			
10. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: NOX		2. Total Percent Efficiency of Control: 37.00 %	
3. Potential Emissions: 582.00 lb/hour ^{2,245} 512.5 ^{2,549.00} tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions			
11. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: PM	2. Total Percent Efficiency of Control: 99.70
3. Potential Emissions: 61.60 lb/hour 270.00 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 3
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions	
12. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: PM10		2. Total Percent Efficiency of Control: 99.70	
3. Potential Emissions: 61.60 lb/hour 270.00 tons/year			4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 to tons/year			
6. Emission Factor: Reference:			7. Emissions Method Code: 3
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions			
13. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: SO ₂	2. Total Percent Efficiency of Control: 95.00
3. Potential Emissions: 582.00 lb/hour 2,549.00 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 3
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit	
14. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**(Regulated Emissions Units -****Emissions-Limited and Preconstruction Review Pollutants Only)****Potential/Fugitive Emissions**

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: 12.32 lb/hour 54.00 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 to tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 3
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit	
15. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**(Regulated Emissions Units -****Emissions-Limited and Preconstruction Review Pollutants Only)****Potential/Fugitive Emissions**

1. Pollutant Emitted: SAM	2. Total Percent Efficiency of Control: 95.00
3. Potential Emissions: 1.45 lb/hour 6.51 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 ____ to ____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 3
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions	
16. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: H021		2. Total Percent Efficiency of Control: 99.00	
3. Potential Emissions: 0.01 lb/hour 0.04 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions			
17. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: H114		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.04 lb/hour 0.17 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 ____ to ____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit			
18. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: FL		2. Total Percent Efficiency of Control: 95.00	
3. Potential Emissions: 5.08 lb/hour ^{3.05} 22.30 ^{13.4} tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions			
19. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: H015		2. Total Percent Efficiency of Control: 99.00	
3. Potential Emissions: 0.18 lb/hour 0.77 tons/year		4. Synthetically Limited? []	
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 3	
8. Calculation of Emissions (limit to 600 characters): Limit per PSD permit Control efficiency not used to calculate potential emissions			
20. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Limit per PSD permit			

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions: lb/hour tons/year	
5. Method of Compliance (limit to 60 characters):			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: H106	2. Total Percent Efficiency of Control: 95.00
3. Potential Emissions: 10.70 lb/hour 47.00 tons/year	4. Synthetically Limited? []
5. Range of Estimated Fugitive Emissions: [] 1 [] 2 [] 3 ____ to ____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code: 2
8. Calculation of Emissions (limit to 600 characters): Mass balance on 2/96 grab sample test for chlorine content in coal. Chlorine weight fraction times maximum expected coal firing rate, assume all chlorine becomes HCl, assume 97% control in spray dryer/baghouse.	
21. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

H. VISIBLE EMISSIONS INFORMATION
(Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [] Rule [] Other
3. Requested Allowable Opacity: Normal Conditions: _____ % Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

I. CONTINUOUS MONITOR INFORMATION
(Only Regulated Emissions Units Subject to Continuous Monitoring)

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 (limit to 200 characters):	

J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
(Regulated Emissions Units Only)

Supplemental Requirements

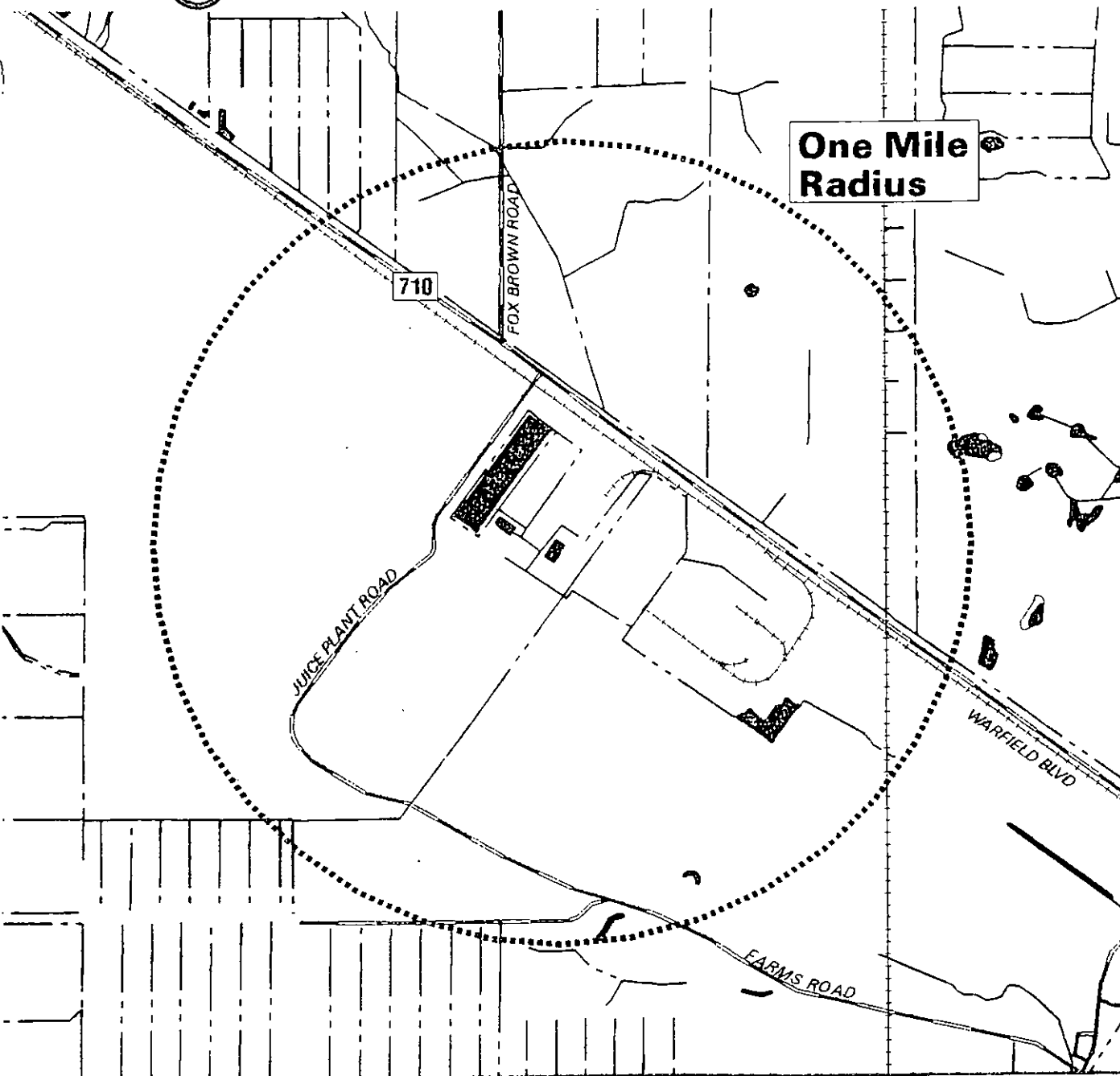
1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>3</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>4</u> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously submitted, Date: <u>March, 1996</u> <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input checked="" type="checkbox"/> Attached, Document ID: <u>4</u> <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment: Document I.D. 3 is located in appendix II Document I.D. 4 is addressed as the main body of text.

Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

Appendix II

Drawings



One Mile Radius

710





FOX BROWN ROAD

JUICE PLANT ROAD

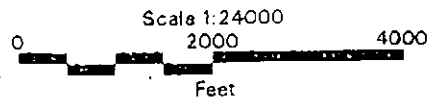
WARFIELD BLVD

FARMS ROAD

Date: 10 Nov 99 11:44:45 Tuesday
Aspor/home/mike/marlinec/1mile.map

-  Road or Highway
-  Railroad
-  River or Stream
-  Ditch or Canal

Area Within One Mile of Site



PC Boiler Plant
Simplified Process Diagram

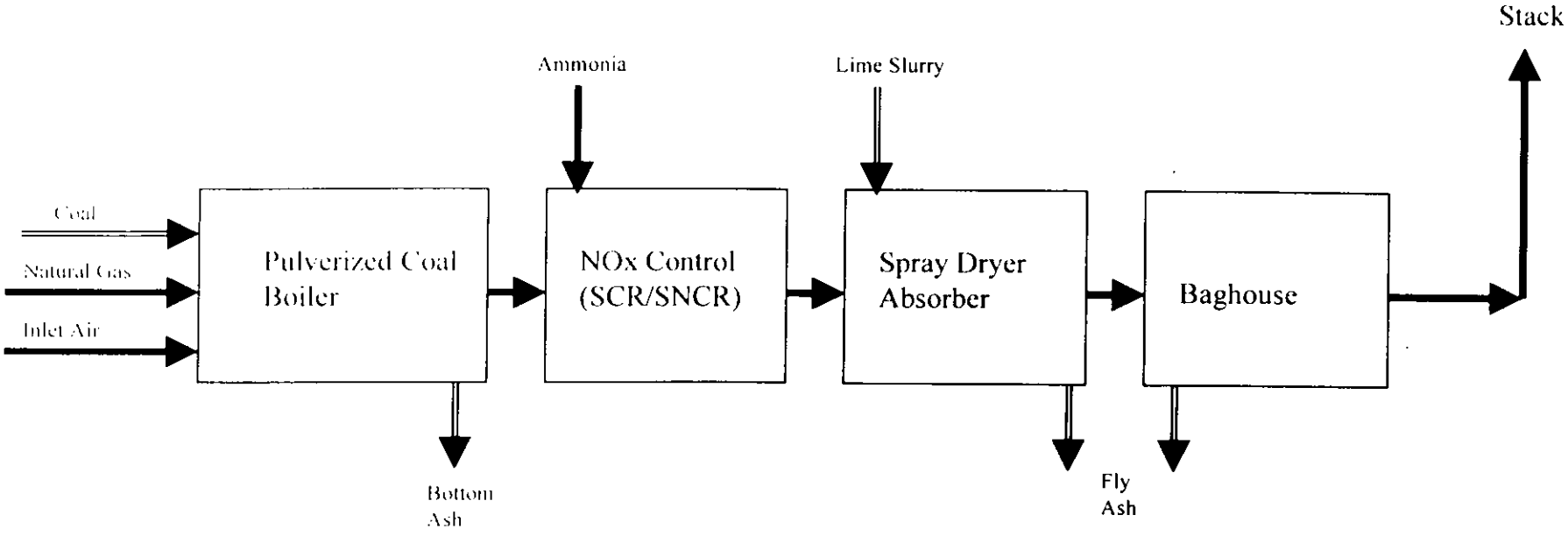


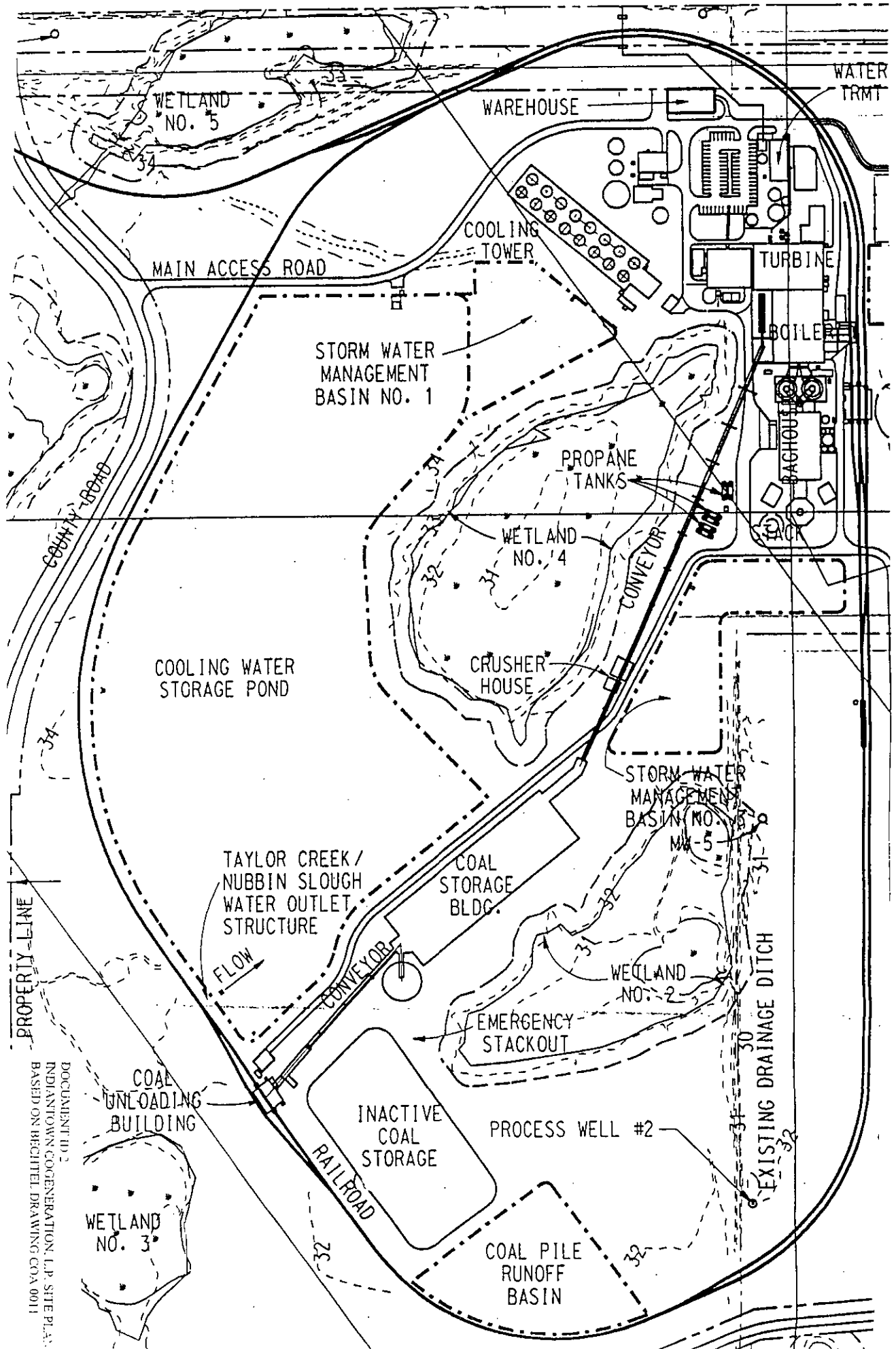
A Jablonowski 12/23/99

Vapor Streams



Liquid/Solid Streams





DOCUMENT NO. 2
 INDIANTOWN COGENERATION L.P. SITE PLAN
 BASED ON RECHTEL DRAWING COA 0011

Appendix III

Supporting Calculations and Emission Data

Indiantown Cogeneration Facility
 Review of PSD Applicability

future potential versus current actual (1997 and 1998 annual emissions)

Pollutant	Permit Limits			Emissions		Comparison			Significant Emission Rates	
	Max. Emissions lb/MMBtu	Emission Limitation lb/hr	tpy	1998 tpy	1997 tpy	future PTE to 1998 tpy	future PTE to 1997 tpy	future PTE to ave actual tpy	PSD tpy	PSD needed?
Sulfur Dioxide	0.142 *	582	2549	1436.4	1385.94	1112.6	1163.06	1137.83	40	YES
Nitrogen Oxide	0.125 *	512.5	2245	1992	1959.01	252.75	285.74	269.245	40	YES
Particulate Matter	0.015	61.6	270	81.77	89.07	188.23	180.93	184.58	25	YES
PM10	0.015	61.6	270	81.77	89.07	188.23	180.93	184.58	15	YES
Carbon Monoxide	0.092	376	1649	89.94	97.98	1559.06	1551.02	1555.04	100	YES
Volatile Organic Compounds	0.0030	12.32	54	0	0	54	54	54	40	YES
Sulfuric Acid Mist	0.00035	1.45	6.51	0.5711	0.6235	5.9389	5.8865	5.9127	7	no
Beryllium	0.0000023	0.0094	0.041	0.0007132	0.000787	0.0402868	0.040213	0.0402499	0	YES
Mercury	0.000010	0.039	0.17	0.010203	0.01122	0.159797	0.15878	0.1592885	0.1	YES
Lead	0.000016	0.064	0.28	0.020406	0.02405	0.259594	0.25595	0.257772	0.6	no
Fluorides	0.000744		13.4	1.06027	1.16	12.300482	12.200752	12.250617	3	YES
Arsenic	0.000044	0.18	0.77	0.010203	0.01139	0.759797	0.75861	0.7592035	0	YES