

TITLE V OPERATING PERMIT APPLICATION  
FOR THE  
SAM O. PURDOM  
GENERATING STATION

CITY OF TALLAHASSEE  
ELECTRIC UTILITY

June 14, 1996

Prepared by



FOSTER WHEELER ENVIRONMENTAL CORPORATION



CITY OF TALLAHASSEE

CITY HALL:  
300 S. ADAMS ST.  
TALLAHASSEE, FL  
32301-1731  
904/891-8100  
TCD 1-800/955-8771

RON WEAVER  
Mayor  
SCOTT MADDOX  
Mayor Pro Tem

JOHN PAUL BAILEY  
Commissioner  
DEBBIE LIGHTSEY  
Commissioner  
STEVE MEISBURG  
Commissioner

STEVEN C. BURKETT  
City Manager  
ROBERT B. INZER  
City Treasurer-Clerk

JAMES R. ENGLISH  
City Attorney  
RICARDO FERNANDEZ  
City Auditor

June 14, 1996

Mr. John C. Brown, P.E.  
Professional Engineering Administrator  
Division of Air Resources Management  
Air Permitting and Standards  
Florida Department of Environmental Protection  
160 Governmental Center  
Pensacola, Florida 32501-5794

**RECEIVED**

JUN 14 1996

BUREAU OF  
AIR REGULATION

Re: Title V Permit Applications for the Arvah B. Hopkins (Facility ID 0730003) and  
Sam O. Purdom (Facility ID 1290001) Generating Stations

Dear Mr. Brown:

Please find enclosed four (4) copies each of the Title V operating permit applications for the City of Tallahassee Arvah B. Hopkins and Sam O. Purdom generating stations. Each copy per facility contains my original signature on the Responsible Official Statement located on page two (2) of Section I, Application Information and the Compliance Certification Statement contained in Attachment HGS-08 of the Arvah B. Hopkins Generating Station Application and Attachment PGS-08 of the Sam O. Purdom Generating Station Application. In addition, each copy per facility contains an original signature and Professional Engineer Seal on the Professional Engineer Statement located on page seven (7) of Section I, Application Information.

If you have any questions regarding the attached applications, please feel free to contact either myself at (904) 891-5534 or Ms. Jennette Curtis at (904) 891-8850.

Yours Truly,

R. E. McGarrah  
Superintendent, Production  
Responsible Official

Enclosures

cc: K. G. Wailes, w/o enclosures  
J. D. Curtis, w/ enclosures  
T. Singh, w/ enclosures  
G. King, w/ enclosures

TITLE V OPERATING PERMIT APPLICATION  
FOR THE  
SAM O. PURDOM  
GENERATING STATION

CITY OF TALLAHASSEE  
ELECTRIC UTILITY

June 14, 1996

Prepared by



FOSTER WHEELER ENVIRONMENTAL CORPORATION

# Department of Environmental Protection

## DIVISION OF AIR RESOURCES MANAGEMENT

### APPLICATION FOR AIR PERMIT - LONG FORM

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

#### I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

#### Identification of Facility Addressed in This Application

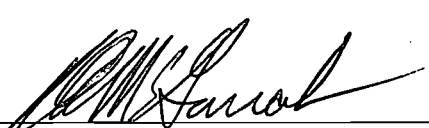
Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

1. Facility Owner/Company Name: <b>City of Tallahassee</b>	
2. Site Name: <b>Sam O. Purdom Generating Station</b>	
3. Facility Identification Number: <b>1290001</b> <span style="float: right;"><input type="checkbox"/> Unknown</span>	
4. Facility Location: Street Address or Other Locator: <b>667 Port Leon Drive</b> City: <b>St. Marks</b> County: <b>Wakulla</b> Zip Code: <b>32355</b>	
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 Processing Information (DEP Use)

1. Date of Receipt of Application:	6/15/96
2. Permit Number:	1290001-001-AV
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: <b>Robert E. McGarrah, Production Superintendent</b>
2. Owner/Authorized Representative or Responsible Official Mailing Address:  Organization/Firm: <b>City of Tallahassee, Electric Utility</b> Street Address: <b>2602 Jackson Bluff Road</b> City: <b>Tallahassee</b> State: <b>Florida</b> Zip Code: <b>32304</b>
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: <b>(904) 891 - 5534</b> Fax: <b>(904) 891 - 5162</b>
4. Owner/Authorized Representative or Responsible Official Statement:  <i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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>   _____ Signature  _____ Date <i>6-14-96</i>

\* Attach letter of authorization if not currently on file.

**Scope of Application**

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

<b>Emissions Unit ID</b>	<b>Description of Emissions Unit</b>	<b>Permit Type</b>
<b>EU01</b>	<b>Fugitive Dust Sources</b>	
<b>EU02</b>	<b>Fugitive VOC Sources</b>	
<b>EU03</b>	<b>Combustion Turbine No. 1</b>	
<b>EU04</b>	<b>Combustion Turbine No. 2</b>	
<b>EU09</b>	<b>Boiler No. 5</b>	
<b>EU10</b>	<b>Boiler No. 6</b>	
<b>EU11</b>	<b>Boiler No. 7</b>	

**Purpose of Application and Category**

Check one (except as otherwise indicated):

**Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.**

This Application for Air Permit is submitted to obtain:

- Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.
  
- Initial air operation permit under Chapter 62-213, F.A.C., 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: \_\_\_\_\_

- Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: \_\_\_\_\_

- Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: \_\_\_\_\_

Operation permit to be revised: \_\_\_\_\_

- Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: \_\_\_\_\_

- Air operation permit revision for a Title V source 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 to be revised: \_\_\_\_\_

Reason for revision: \_\_\_\_\_

\_\_\_\_\_

**Category II: All Air Operation Permit Applications Subject to Processing Under Rule 62-210.300(2)(b), F.A.C.**

This Application for Air Permit is submitted to obtain:

- Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): \_\_\_\_\_

- Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: \_\_\_\_\_

- Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit to be revised: \_\_\_\_\_

Reason for revision: \_\_\_\_\_

**Category III: All Air Construction Permit Applications for All Facilities and Emissions Units**

This Application for Air Permit is submitted to obtain:

- Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: \_\_\_\_\_

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

Current operation permit number(s): \_\_\_\_\_

- Air construction permit for one or more existing, but unpermitted, emissions units.



**Application Processing Fee**

Check one:

Attached - Amount: \$ \_\_\_\_\_

Not Applicable.

**Construction/Modification Information**

1. Description of Proposed Project or Alterations:
2. Projected or Actual Date of Commencement of Construction:
3. Projected Date of Completion of Construction:

**Professional Engineer Certification**

1. Professional Engineer Name: <b>Darrel J. Graziani</b> Registration Number: <b>44685</b>
2. Professional Engineer Mailing Address:  Organization/Firm: <b>Foster Wheeler Environmental Corporation</b> Street Address: <b>759 South Federal Highway, Suite 100</b> City: <b>Stuart</b> State: <b>Florida</b> Zip Code: <b>34994</b>
3. Professional Engineer Telephone Numbers: Telephone: <b>( 561 ) 781-3434</b> Fax: <b>( 561 ) 781-3411</b>

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 [ X ] 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.*



*David M. [Signature]*  
Signature \_\_\_\_\_ Date \_\_\_\_\_

6-10-96  
\_\_\_\_\_

Attach any exception to certification statement.

**Application Contact**

1. Name and Title of Application Contact:

**Jennette Curtis  
Environmental Administrator**

2. Application Contact Mailing Address:

**Organization/Firm: City of Tallahassee, Utility Services  
Street Address: 3rd Floor, 300 South Adams Street  
City: Tallahassee State: Florida Zip Code: 32301**

3. Application Contact Telephone Numbers:

**Telephone: (904) 891 -8850 Fax: (904) 891 -8277**

**Application Comment**

[Empty box for Application Comment]

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility Location and Type

1. Facility UTM Coordinates: Zone: <b>16</b> East (km): <b>769.50</b> North (km): <b>3339.97</b>			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): <b>30/09/47</b> Longitude (DD/MM/SS): <b>84/12/10</b>			
3. Governmental Facility Code:  <b>4</b>	4. Facility Status Code:  <b>A</b>	5. Facility Major Group SIC Code:  <b>49</b>	6. Facility SIC(s):  <b>4911</b>
7. Facility Comment (limit to 500 characters):                     			

#### Facility Contact

1. Name and Title of Facility Contact: <b>Jennette Curtis</b> <b>Environmental Administrator</b>		
2. Facility Contact Mailing Address Organization/Firm: <b>City of Tallahassee, Utility Services</b> Street Address: <b>3rd Floor, 300 South Adams Street</b> City: <b>Tallahassee</b> State: <b>Florida</b> Zip Code: <b>32301</b>		
3. Facility Contact Telephone Numbers: Telephone: <b>(904) 891-8850</b> Fax: <b>(904) 891-8277</b>		

**Facility Regulatory Classifications**

1. Small Business Stationary Source? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No <input type="checkbox"/> Unknown
2. Title V Source? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
3. Synthetic Non-Title V Source? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No
4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
5. Synthetic Minor Source of Pollutants Other than HAPs? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No
6. Major Source of Hazardous Air Pollutants (HAPs)? <input checked="checked" type="checkbox"/> Yes <input type="checkbox"/> No
7. Synthetic Minor Source of HAPs? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No
8. One or More Emissions Units Subject to NSPS? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No
9. One or More Emission Units Subject to NESHAP? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No
10. Title V Source by EPA Designation? <input type="checkbox"/> Yes <input checked="checked" type="checkbox"/> No
11. Facility Regulatory Classifications Comment (limit to 200 characters):

**B. FACILITY REGULATIONS**

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the user to provide a Rule Applicability Analysis for Category II and III applications involving non Title-V sources.

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

<b>Rule 62-4.030 F.A.C.</b>	<b>Rule 62-256.500 F.A.C. *</b>
<b>Rule 62-4.040(1) F.A.C.</b>	<b>Rule 62-256.700 F.A.C. *</b>
<b>Rule 62-4.100 F.A.C.</b>	<b>Rule 62-257.301 F.A.C. *.</b>
<b>Rule 62-4.130 F.A.C.</b>	<b>Rule 62-257.400 F.A.C. *</b>
<b>Rule 62-204.800(8)(b)8,(d) F.A.C.</b>	<b>Rule 62-257.900 F.A.C. *.</b>
<b>Rule 62-210.300(2)[except (b)] F.A.C.</b>	<b>Rule 62-296.320(2),(4)(b)(c) F.A.C.</b>
<b>Rule 62-210.300(3)(a) F.A.C.</b>	<b>Rule 62-297.310(7)a10 F.A.C.</b>
<b>Rule 62-210.300(3)(b) F.A.C.</b>	<b>40 CFR 61.05 (b),(c),(d)</b>
<b>Rule 62-210.350(1)(a)3,(b);(3) F.A.C.</b>	<b>40 CFR 61.12(b),(c)</b>
<b>Rule 62-210.370(3) F.A.C.</b>	<b>40 CFR 61.19</b>
<b>Rule 62-210.900(5) F.A.C.</b>	<b>40 CFR 61.145</b>
<b>Rule 62-213.205(1)[except (d)],(4),(5) F.A.C.</b>	<b>40 CFR 61.148</b>
<b>Rule 62-213.400 F.A.C.</b>	<b>40 CFR 61.150</b>
<b>Rule 62-213.410 F.A.C.</b>	
<b>Rule 62-213.420(1)(a)1a,(b)1-4,(2)-(4)F.A.C.</b>	<b>* Indicates State Rule ( not federally enforceable)</b>
<b>Rule 62-213.460 F.A.C.</b>	
<b>Rule 62-213.900(1) F.A.C.</b>	
<b>Rule 62-256.300 F.A.C. *</b>	

### C. FACILITY POLLUTANTS

#### Facility Pollutant Information

1. Pollutant Emitted	2. Pollutant Classification
CO	A
NOx	A
PM10	A
SO2	A
H106	A
H107	A
H133	A
HAPs	A



**D. FACILITY POLLUTANT DETAIL INFORMATION**

**Facility Pollutant Detail Information:** Pollutant \_\_\_\_\_ of \_\_\_\_\_

1. Pollutant Emitted:
2. Requested Emissions Cap: (lb/hour) (tons/year)
3. Basis for Emissions Cap Code:
4. Facility Pollutant Comment (limit to 400 characters):

**Facility Pollutant Detail Information:** Pollutant \_\_\_\_\_ of \_\_\_\_\_

1. Pollutant Emitted:
2. Requested Emissions Cap: (lb/hour) (tons/year)
3. Basis for Emissions Cap Code:
4. Facility Pollutant Comment (limit to 400 characters):

**E. FACILITY SUPPLEMENTAL INFORMATION**

**Supplemental Requirements for All Applications**

1. Area Map Showing Facility Location: <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-01</b> [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-02</b> [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-03</b> [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-04</b> [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-05</b> [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable

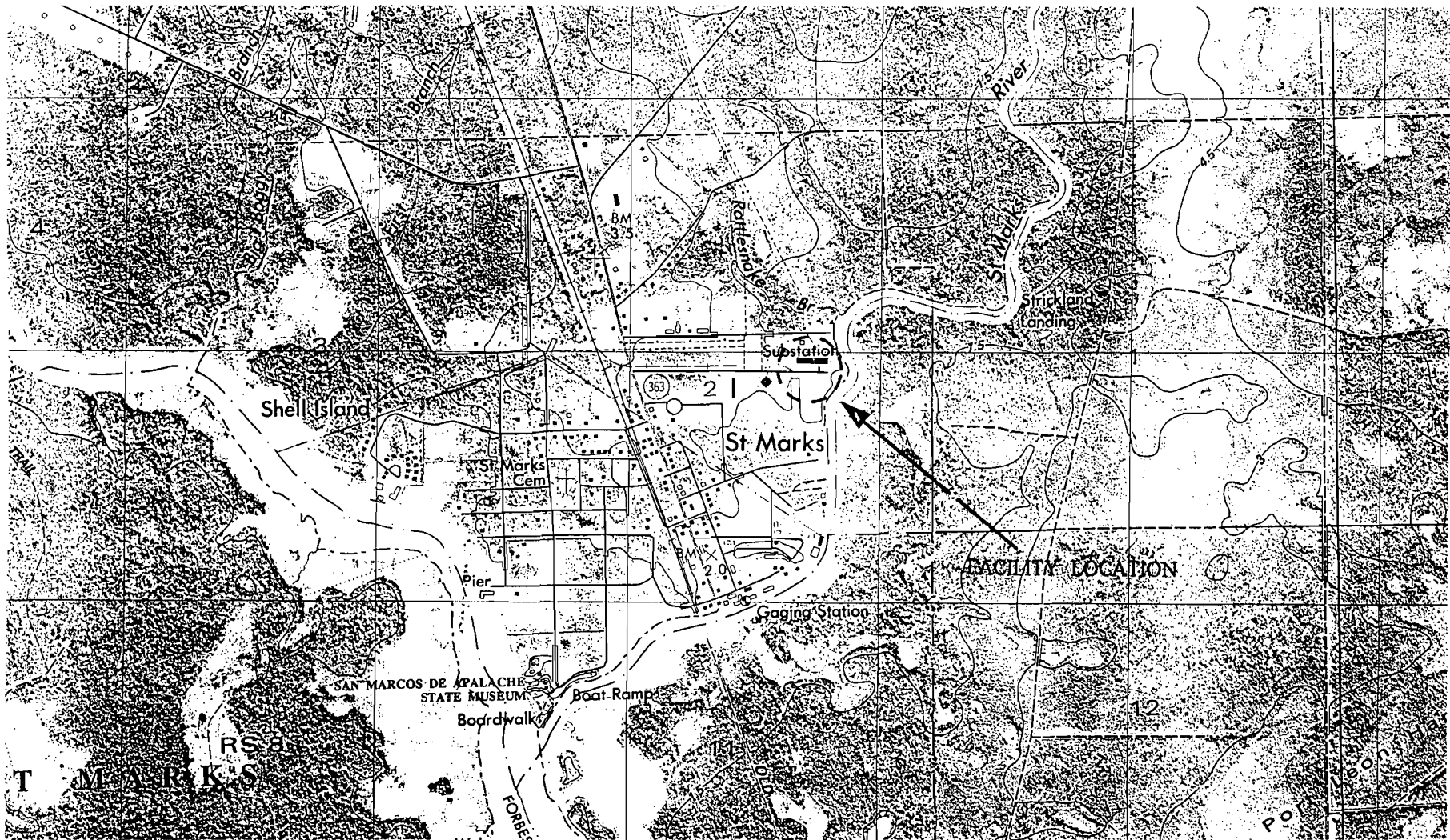
**Additional Supplemental Requirements for Category I Applications Only**

7. List of Proposed Exempt Activities: <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-06</b> [ ] Not Applicable
8. List of Equipment/Activities Regulated under Title VI:  [ ] Attached, Document ID: _____  <input checked="" type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed  [ ] Not Applicable
9. Alternative Methods of Operation: [ ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
10. Alternative Modes of Operation (Emissions Trading): [ ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable

11. Identification of Additional Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Compliance Assurance Monitoring Plan: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
13. Risk Management Plan Verification:  <input type="checkbox"/> Plan Submitted to Implementing Agency - Verification Attached, Document ID: _____  <input type="checkbox"/> Plan to be Submitted to Implementing Agency by Required Date  <input checked="" type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-07</b> <input type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input checked="" type="checkbox"/> Attached, Document ID: <b>PGS-08</b> <input type="checkbox"/> Not Applicable

**ATTACHMENT PGS-01**

---



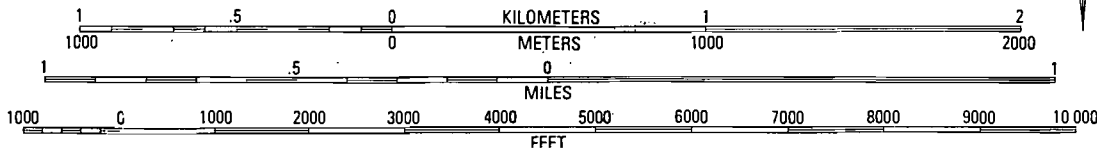
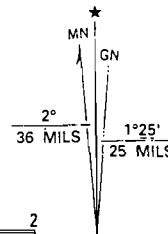
CITY OF TALLAHASSEE, FLORIDA  
 TITLE V: PERMIT APPLICATION  
 PURDOM GENERATING STATION  
 FACILITY LOCATION MAP

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A  
 DATE: 4/24/96

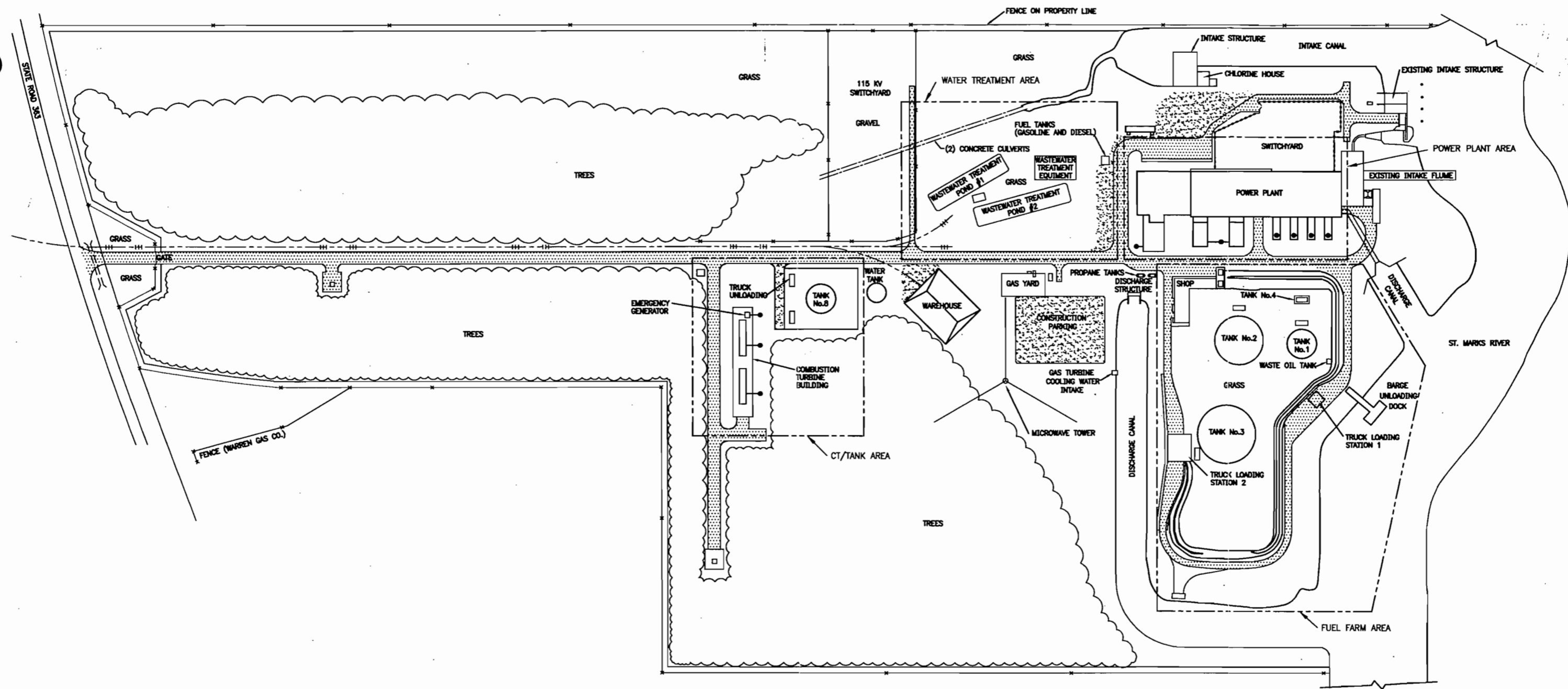
BY: MAB  
 CKD' BY: CJT  
 REV. BY:

USGS 7.5' QUAD  
 ST. MARKS, FL  
 FIGURE NO. PCS-01



**ATTACHMENT PGS-02**

---

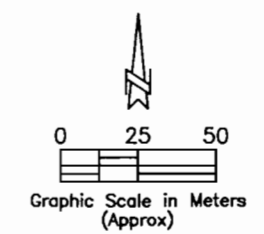


**LEGEND**

- TREELINE
- FENCE
- RAILROAD
- PAVED AREA
- UNPAVED AREA
- EMISSION POINT

**NOTES**

THIS DRAWING WAS DERIVED FROM EBASCO DRAWING  
CTAL-PDMO-C-V-00004.



PURDOM GENERATING STATION  
CITY OF TALLAHASSEE, FLORIDA

SITE  
SITE LAYOUT MAP

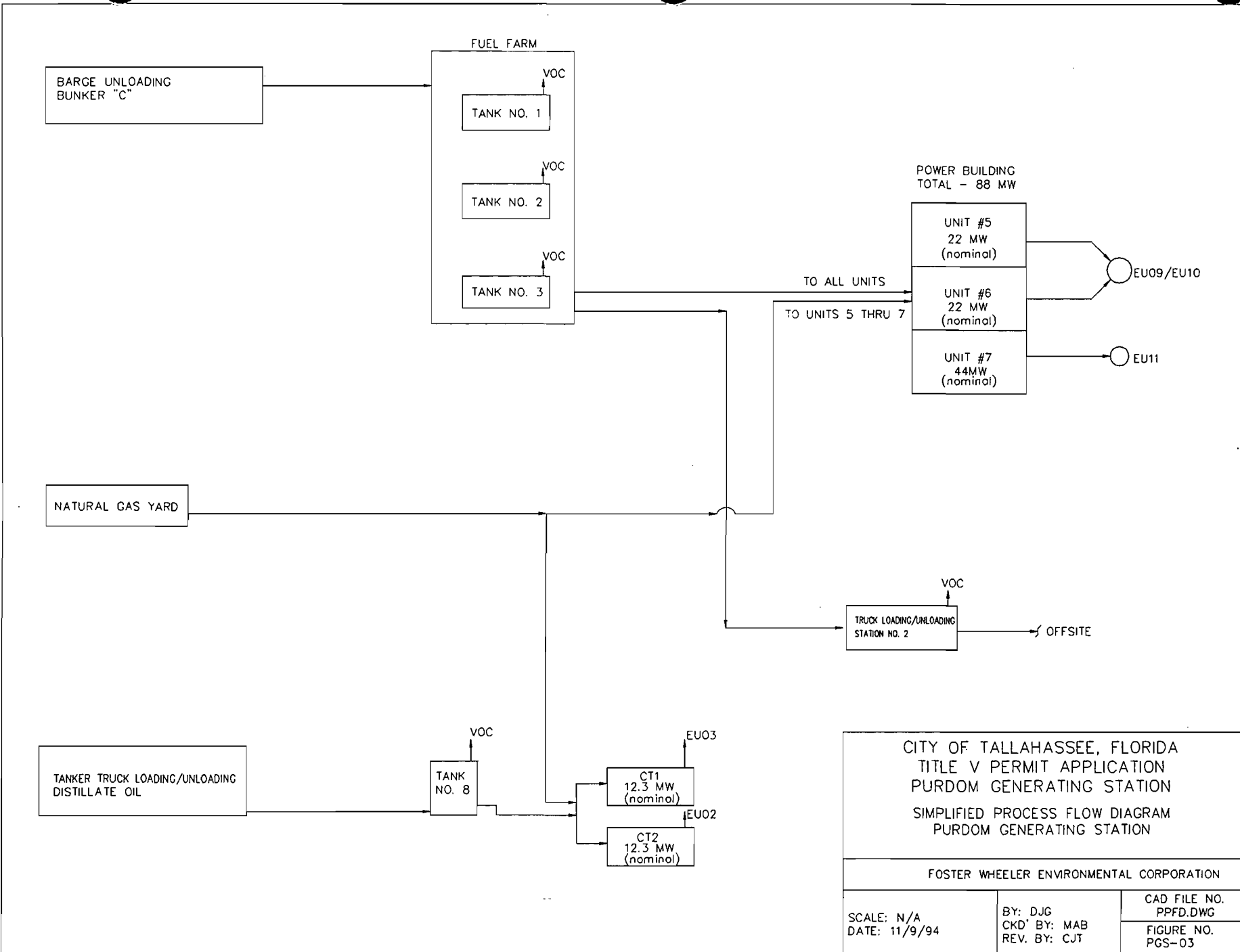
FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE AS SHOWN	PREPARED R.PAV	CAD FILE NO. CTAIRPM
DIV. ENV.	CHECKED	
DATE	APPROVED	FIGURE No. PGS-02

**ATTACHMENT PGS-03**

---





CITY OF TALLAHASSEE, FLORIDA  
 TITLE V PERMIT APPLICATION  
 PURDOM GENERATING STATION  
 SIMPLIFIED PROCESS FLOW DIAGRAM  
 PURDOM GENERATING STATION

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A  
 DATE: 11/9/94

BY: DJG  
 CKD BY: MAB  
 REV. BY: CJT

CAD FILE NO.  
 PPF.DWG  
 FIGURE NO.  
 PGS-03

**ATTACHMENT PGS-04**

---

As part of the Title V application development, the City of Tallahassee reviewed the potential sources of unconfined particulate emissions at its Purdom Generating Station. The intent of the review was to ensure that reasonable precautions were in place to prevent and/or control these potential particulate emissions. The potential sources which were identified included the following:

1. Concrete mixing;
2. Abrasive blasting
3. Aggregate handling and storage;
4. Heavy construction activities;
5. Driving on paved/unpaved roads; and
6. Spray application of surface coatings.

Based on the City of Tallahassee's review of these potential sources, the following reasonable precautions have been established to control unconfined emissions of particulate matter:

- The portable concrete mixer is operated on an as-needed basis. Reasonable precautions include enclosing the activity wherever practical.
- The abrasive blasting activities are associated with normal maintenance and corrosion control activities. These activities are also enclosed wherever practical.
- The aggregate storage piles occur on a temporary basis and are associated with miscellaneous construction activities. Water is applied on an as-needed basis to control unconfined emissions from the handling and storage of aggregate materials and the related construction activities.
- Unconfined emissions associated with the limited on-site traffic are controlled through limiting vehicle speeds and unnecessary traffic within the plant grounds, and application of water as needed by the use of hoses (manual operation).

The spray applications of surface coatings are associated with normal maintenance and corrosion activities. These activities are enclosed whenever practical

**ATTACHMENT PGS-05**

---

Fugitive emissions resulting from the operation of the Purdom Generating Station are addressed in Attachment PGS-06 of this application form, Exempt Activities. Fugitive emissions that exceed the emissions threshold amount set forth in Section III (G) of this application form have been assigned an Emissions Unit Identification Number, and an Emissions Unit Information Section has been completed for those units.

**ATTACHMENT PGS-06**

---

In developing the Title V application, the City of Tallahassee's consultant, Foster Wheeler Environmental Corporation, conducted a comprehensive emissions unit inventory of the Purdom Generating Station. The attached inventory (File: PUREI.XLS) represents a comprehensive examination of the facility, its operations, and potential emissions units. The inventory identified fifteen emissions unit areas. These areas included the following:

1. Steam Generator (Boiler) Operations;
2. Combustion Turbine Operations;
3. Emergency Generator;
4. Fuel Farm (Organic Liquid Storage);
5. Fuel Dispensing Operations;
6. Space Heating;
7. Evaporative Loss Sources;
8. Cooling Towers;
9. Water Treatment;
10. Laboratory;
11. Central Vacuum System;
12. Maintenance Activities;
13. Plant Operations;
14. Fugitive Dust; and
15. Gasoline Engines.

The inventory attempted to identify every emissions unit at the facility. The attached inventory provides descriptions of each emissions unit noted at the facility and lists its regulatory classification. The regulatory classifications encompass four categories. These categories include: 1) Regulated (with or without emissions limitations); 2) Unregulated; 3) Proposed to be exempt under criteria listed in Rule 62-213.430(6), F.A.C.; and 4) Trivial - per FDEP guidance dated March 15, 1996. All trivial emissions units and activities have been omitted from the inventory list per FDEP guidance dated March 15, 1996.

The Title V application includes all regulated emissions units, and the unregulated fugitive dust and VOC sources. The regulated emissions units have specific emission limitations. The fugitive dust and VOC sources are considered unregulated emissions units with no specific emission limited pollutants.

The list of emissions units also includes those which meet either the specific exemption criteria of Rule 62-210.300 and 62-213.430(6), F.A.C. The City of Tallahassee bases its exemption request for these units on the regulations and requirements of the Title V Operating Permit Programs.

The list of emissions units also contains several unpermitted emissions units which have been in operation since the facility started-up. These activities are currently operating under the temporary exemption of Rule 62-210.300(3)(b), F.A.C. The City of Tallahassee requests that

all of the existing unpermitted activities at the Purdom Generating Station be exempted from the permit requirements of Rule 62-210.300, F.A.C. under the authority provided to the FDEP in Rule 62-4.040(1)(b), F.A.C. The emissions units include the following:

- Fugitive Dust - Exemption is requested for the heavy construction activities listed under this category. Emissions from these activities are of the Fugitive Area type generated by the operation of heavy equipment on site. This activity has also been included in the Title V application within Emissions Unit No. 1 (EU01). The request is based on the fugitive nature of the emissions and the low quantities associated with these activities.
- Evaporative Loss Sources - Exemption is requested for surface coating operations at the facility based on the fugitive nature of the emissions and low quantities of surface coating material. Surface coating activities have been included in the Title V application within EU02.

The attached list and the above comments are intended to meet the requirements of Rule 62-213.420(3)(m), F.A.C. and to serve as an official request for the exemption of all the units listed as unregulated from the requirements of Rule 62-210.300, F.A.C.



CITY OF TALLAHASSEE ELECTRIC DEPARTMENT EMISSIONS UNIT INVENTORY SOURCE - PURDOM GENERATING STATION			
Unit No.	Emissions Unit	Emissions Unit-Description	Regulatory <sup>(1)(2)</sup> Classification
1	CT #1	Combustion Turbine - 228 mmBtu/hr	Regulated -Permit # AO37-242825
1a	Oil Vapor Extractor	Oil Vapor Extractor	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
1b	Fuel Oil Piping	Fuel Oil Piping	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
1c	Lube Oil Tank	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
2	CT #2	Combustion Turbine - 228 mmBtu/hr	Regulated -Permit # AO37-242825
2a	Oil Vapor Extractor	Oil Vapor Extractor	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
2b	Fuel Oil Piping	Fuel Oil Piping	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
2c	Lube Oil Tank	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3	Steam Generator No. 5	Steam Generator - 300 mmBtu/hr	Regulated -Permit # AO37-242831
3a	Fuel Oil Piping	Fuel Oil Piping	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3b	Hydrogen Gas Vents	Hydrogen Gas Vents	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3c	Deareator Tank Vents	Deareator Tank Vents	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3d	Oil Vapor Extractors	Oil Vapor Extractors	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3e	Lube Oil Tank ( storage)	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3f	Lube/Fuel Oil Drip Pans	Lube/Fuel Oil Drip Pans	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
3g	Noncondensable Gas	Noncondensable Gas Extractor	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4	Steam Generator No. 6	Steam Generator - 300 mmBtu/hr	Regulated -Permit # AO37-242831
4a	Fuel Oil Piping	Fuel Oil Piping	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4b	Hydrogen Gas Vents	Hydrogen Gas Vents	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4c	Deareator Tank Vents	Deareator Tank Vents	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4d	Oil Vapor Extractors	Oil Vapor Extractors	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4e	Lube Oil Tank ( storage)	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4f	Lube/Fuel Oil Drip Pans	Lube/Fuel Oil Drip Pans	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
4g	Noncondensable Gas	Noncondensable Gas Extractor	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5	Steam Generator No. 7	Steam Generator - 621 mmBtu/hr	Regulated -Permit # AO37-242831
5a	Fuel Oil Piping	Fuel Oil Piping	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5b	Hydrogen Gas Vents	Hydrogen Gas Vents	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5c	Deareator Tank Vents	Deareator Tank Vents	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5d	Oil Vapor Extractors	Oil Vapor Extractors	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5e	Lube Oil Tank ( storage)	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5f	Lube/Fuel Oil Drip Pans	Lube/Fuel Oil Drip Pans	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
5g	Noncondensable Gas	Noncondensable Gas Extractor	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
6	Emergency Generator	Diesel Engine <400 hrs/yr	Unregulated - Exempt per Rule 62-210.300(3)(a)21
7	Fuel Farm	Fuel Oil Tank No. 1	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
7a	Fuel Farm	Fuel Oil Tank No. 2	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)

CITY OF TALLAHASSEE ELECTRIC DEPARTMENT			
EMISSIONS UNIT INVENTORY			
SOURCE - PURDOM GENERATING STATION			
Unit No.	Emissions Unit	Emissions Unit Description	Regulatory <sup>(1) (2)</sup> Classification
7b	Fuel Farm	Fuel Oil Tank No. 3	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
7c	Fuel Farm	Kerosene Tank	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
7d	Fuel Farm	Waste Oil Tank	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
7e	Truck Loading/Unloading	Fuel Dispensing Operation	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
8	Distillate Oil Tank	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
8a	Truck Loading/Unloading	Fuel Dispensing Operation	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
9	Gasoline Tank	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
9a	Fuel Dispensing Operation	Fuel Dispensing Operation	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
10	Diesel Tank	Organic Liquid Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
10a	Fuel Dispensing Operation	Fuel Dispensing Operation	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
11	Barge Unloading Station	Fuel Dispensing Operation	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
12	Fuel Dispensing Operation	Truck Loading/Unloading Rack 1	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
12a	Fuel Dispensing Operation	Truck Loading/Unloading Rack 2	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13a	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13b	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13c	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13d	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13e	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13f	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13g	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13h	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13i	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13j	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13k	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13l	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13m	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
13n	Solvent Cleaning	Parts Washer - Nonhalogenated	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
14	Fugitive Dust	Paved Roads	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
14a	Fugitive Dust	Unpaved Roads	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
14b	Fugitive Dust	Heavy Construction Activities	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
14c	Fugitive Dust	Aggregate Handling & Storage	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
15	Laboratory	Laboratory Fume Hoods	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
16	Central Vacuum System	Central Vacuum System	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)

CITY OF TALLAHASSEE ELECTRIC DEPARTMENT EMISSIONS UNIT INVENTORY SOURCE - PURDOM GENERATING STATION			
Unit No.	Emissions Unit	Emissions Unit Description	Regulatory <sup>(1)(2)</sup> Classification
17	Maintenance Activities	Welding	Unregulated - Exempt per Rule 62-210.300(3)(a)16
18	Plant Operations	Lube Oil Storage Tanks	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
18a	Plant Operations	Propane Storage Tanks	Unregulated - Propose exemption under criteria in Rule 62-213.430(6)
19	Gasoline Engine	Welding Generator	Unregulated - Exempt per Rule 62-210.300(3)(a)21
19a	Gasoline Engine	Welding Generator	Unregulated - Exempt per Rule 62-210.300(3)(a)21
19b	Gasoline Engine	Emergency Generator	Unregulated - Exempt per Rule 62-210.300(3)(a)21
19c	Gasoline Engine	Emergency Generator	Unregulated - Exempt per Rule 62-210.300(3)(a)21
19d	Gasoline Engine	Emergency Generator	Unregulated - Exempt per Rule 62-210.300(3)(a)21
<sup>(1)</sup> Note: The designation "proposed exemption under criteria in Rule 62-213.430(6)" indicates that an exemption is requested for this unit pursuant to Rule 62-213.420(3), F.A.C., in accordance with the provisions of Rule 62-213.430(6), F.A.C. <sup>(2)</sup> Note: All trivial emissions units and activities are omitted per FDEP 3/15/96 guidance memo. In addition, all mobil sources are omitted as outside the scope of Title V stationary source permitting.			

**ATTACHMENT PGS-07**

---

### **Compliance Report and Plan**

The List of Applicable Regulations contained in the Emissions Unit Information Section of each regulated emissions unit identifies the requirements which are applicable to each of these units that comprise this Title V source. Each emissions unit is in compliance with the respective applicable requirements identified in this application as of the date of application submittal.

### **Proposed Schedule for the Submission of Periodic Compliance Statements Throughout the Permit Term**

Periodic compliance statements are proposed to be submitted on an annual basis consistent with FDEP Rule 62-213.440(3)(b), F.A.C. once the Title V permit is issued.

**ATTACHMENT PGS-08**

---

COMPLIANCE CERTIFICATION

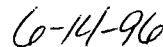
In accordance with the instructions for the Florida Department of Environmental Protection's Form No. 62-210.900(1), F.A.C., and Rule 62-213.420(3)(j), F.A.C., a compliance statement must be included in each application for an air pollution permit (i.e., Construction, Modification, State Operating or Title V Operating Permit). This Compliance Certification is intended to meet the requirements of the instructions and the regulation.

CERTIFICATION STATEMENT

"I, the undersigned, am the responsible official as defined in Chapter 62-210.200, F.A.C., of the Title V Source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate and complete.



Signed



Date

EU - 01



**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

**A. TYPE OF EMISSIONS UNIT  
(Regulated and Unregulated Emissions Units)**

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

[ X ] 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.

Emissions Unit Information Section 1 of 7

**B. GENERAL EMISSIONS UNIT INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Emissions Unit Description and Status**

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):  <b>Fugitive Dust Sources</b>		
2. Emissions Unit Identification Number: [ <b>X</b> ] No Corresponding ID [ ] Unknown		
3. Emissions Unit Status Code: <b>A</b>	4. Acid Rain Unit? [ ] Yes [ <b>X</b> ] No	5. Emissions Unit Major Group SIC Code: <b>49</b>
6. Emissions Unit Comment (limit to 500 characters):  <b>This emissions unit includes fugitive dust associated with heavy construction activities.</b>		

**Emissions Unit Control Equipment**

**A.**

1. Description (limit to 200 characters):  <b>Reasonable precautions as described in Attachment PGS-04.</b>
2. Control Device or Method Code: <b>061</b>

**Emissions Unit Information Section 1 of 7**

**B.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer:		Model Number:
4. Generator Nameplate Rating:		MW
5. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

**Emissions Unit Operating Capacity**

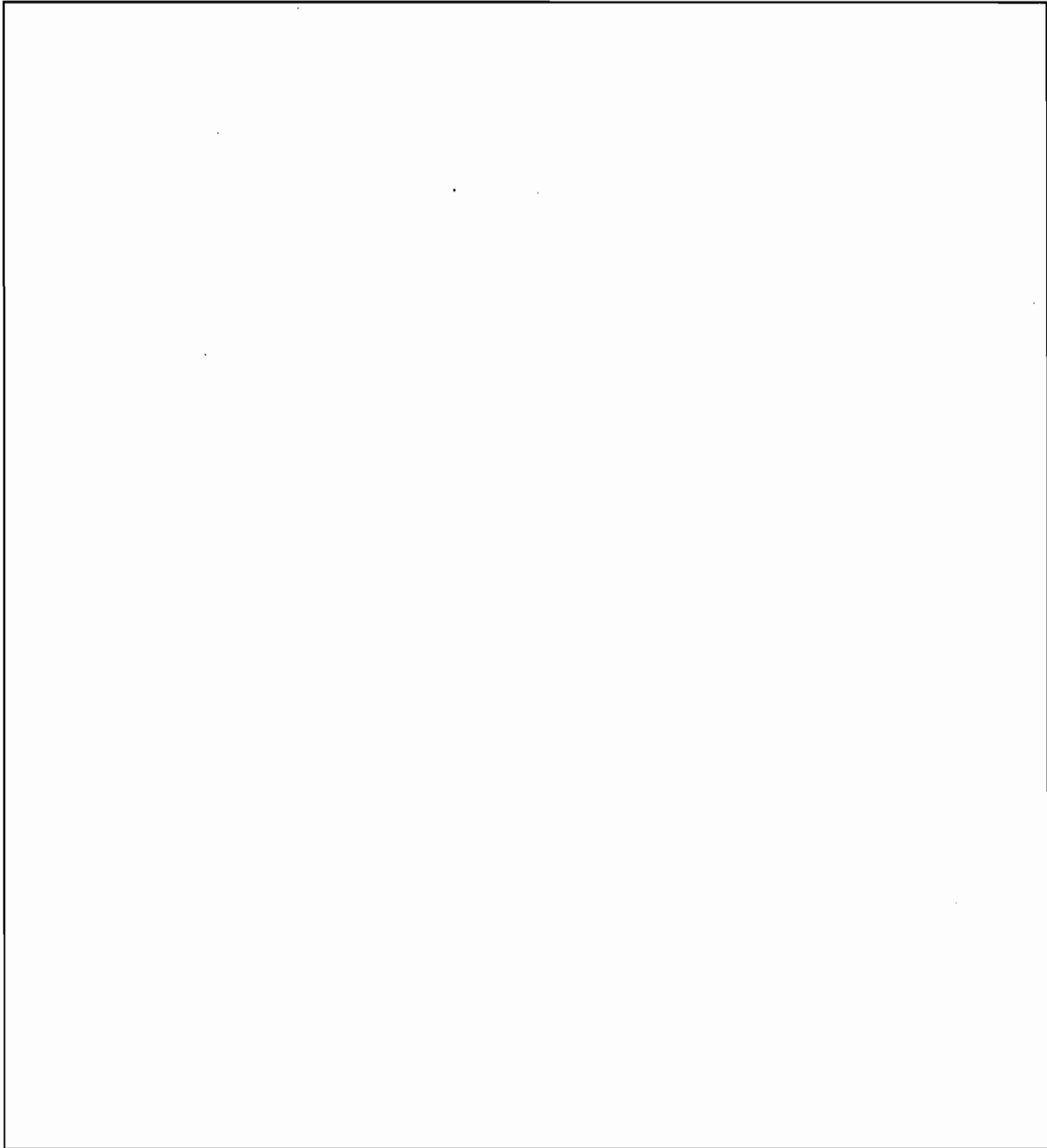
1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year		hours/year

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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)



**Emissions Unit Information Section 1 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)


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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram:	
2. Emission Point Type Code: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input type="checkbox"/> V <input type="checkbox"/> W	
6. Stack Height:	feet
7. Exit Diameter:	feet
8. Exit Temperature:	°F

**Emissions Unit Information Section 1 of 7**

9. Actual Volumetric Flow Rate:	acfm
10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	



Emissions Unit Information Section 1 of 7

**F. SEGMENT (PROCESS/FUEL) INFORMATION**  
**(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate:** Segment: 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Heavy Construction Activities</b>	
2. Source Classification Code (SCC):	
3. SCC Units: <b>Acre-Year</b>	
4. Maximum Hourly Rate: <b>0</b>	5. Maximum Annual Rate: <b>0</b>
6. Estimated Annual Activity Factor: <b>5</b>	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): <b>Heavy construction includes such activities as ground excavation and building construction and demolition. Annual construction activities may either fall short of or exceed the esimated annual activity factor above. However, this estimated annual activity factor is reflective of ordinary construction activity at the Purdom Plant.</b>	

**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	061		NS

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information:**

1. Pollutant Emitted:		
2. Total Percent Efficiency of Control:	%	
3. Potential Emissions:	lb/hour	tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year		
6. Emission Factor: Reference:		
7. Emissions Method Code: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters):		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

**Emissions Unit Information Section 1 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

**B.**

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

**Emissions Unit Information Section 1 of 7**

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> 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):

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:
2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> 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):

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):          	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):          	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 1 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
SO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input type="checkbox"/> ] Unknown
NO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input type="checkbox"/> ] Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			



**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <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 type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**Emissions Unit Information Section 1 of 7**

**Additional Supplemental Requirements for Category I Applications Only**

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. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Acid Rain 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"/> Not Applicable

EU - 02

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

**A. TYPE OF EMISSIONS UNIT  
(Regulated and Unregulated Emissions Units)**

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

**B. GENERAL EMISSIONS UNIT INFORMATION**  
**(Regulated and Unregulated Emissions Units)**

**Emissions Unit Description and Status**

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):  <b>Fugitive VOC Sources</b>		
2. Emissions Unit Identification Number: <input checked="" type="checkbox"/> No Corresponding ID <input type="checkbox"/> Unknown		
3. Emissions Unit Status Code: <b>A</b>	4. Acid Rain Unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Emissions Unit Major Group SIC Code: <b>49</b>
6. Emissions Unit Comment (limit to 500 characters):  <b>Fugitive VOC sources include organic liquid storage, barge unloading, truck loading / unloading, parts washing and surface coating activities. ONLY surface coating is listed all other activities are exempt.</b>		

**Emissions Unit Control Equipment**

**A.**

1. Description (limit to 200 characters):  <b>None</b>
2. Control Device or Method Code: <b>0</b>

**Emissions Unit Information Section 2 of 7**

**B.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

Emissions Unit Information Section 2 of 7

**C. EMISSIONS UNIT DETAIL INFORMATION**  
**(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit:		
Manufacturer:	Model Number:	
4. Generator Nameplate Rating:	MW	
5. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	hours/year

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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

[Empty box for Rule Applicability Analysis]



Emissions Unit Information Section 2 of 7

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)


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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram:	
2. Emission Point Type Code: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:	
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input type="checkbox"/> V <input type="checkbox"/> W	
6. Stack Height:	feet
7. Exit Diameter:	feet
8. Exit Temperature:	°F

**Emissions Unit Information Section 2 of 7**

9. Actual Volumetric Flow Rate:	acfm
10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:                                  East (km):                                  North (km):	
14. Emission Point Comment (limit to 200 characters):	

**F. SEGMENT (PROCESS/FUEL) INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate:** Segment: 1 of 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Surface Coating</b>	
2. Source Classification Code (SCC):	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>0</b>	5. Maximum Annual Rate: <b>0</b>
6. Estimated Annual Activity Factor: <b>5065</b>	
7. Maximum Percent Sulfur:	8. Maximum Percent Ash:
9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters):  <b>Annual Activity Factor is based on maximum surface area coated.</b>	

**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
VOC,			NS
HAPS			NS
H120			NS
H169			NS
H186			NS
H123			NS
H085			NS

Emissions Unit Information Section 2 of 7

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information:**

1. Pollutant Emitted:		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	lb/hour	tons/year
4. Synthetically Limited? <input type="checkbox"/> Yes <input type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year		
6. Emission Factor: Reference:		
7. Emissions Method Code: <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters):		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):		

**Emissions Unit Information Section 2 of 7**

**Allowable Emissions (Pollutant identified on front of page)**

**A.**

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. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):		

**B.**

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

Emissions Unit Information Section 2 of 7

I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:			
2. Basis for Allowable Opacity:		<input type="checkbox"/> Rule	<input type="checkbox"/> 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):			

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:			
2. Basis for Allowable Opacity:		<input type="checkbox"/> Rule	<input type="checkbox"/> 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):			



**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):          	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):          	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 2 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input type="checkbox"/> ] Unknown
SO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input type="checkbox"/> ] Unknown
NO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input type="checkbox"/> ] Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			

**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <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 type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____  <input type="checkbox"/> Previously submitted, Date: _____  <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**Additional Supplemental Requirements for Category I Applications Only**

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. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Acid Rain 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"/> Not Applicable

EU - 03

### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

#### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

##### Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

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





**Emissions Unit Information Section 3 of 7**

**B.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer: <b>Westinghouse</b> Model Number <b>W171G</b> :		
4. Generator Nameplate Rating: <b>12.3</b> MW		
5. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate: <b>228</b> mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):  <b>The maximum heat input rate is based on the lower heating value at an ambient temperature of 80 degrees fahrenheit.</b>		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	<b>6993</b> hours/year

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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the user to provide a Rule Applicability Analysis for Category II and Category III applications involving non Title-V sources.

**Emissions Unit Information Section 3 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

<b>Rule 62-210.700(1),(4),(6) F.A.C.</b>	
<b>Rule 62-296.320(4),(b) F.A.C.</b>	
<b>Rule 62-297.310(2)(a) F.A.C.</b>	
<b>Rule 62-297.310(4)(a)2 (except a-c) F.A.C.</b>	
<b>Rule 62-297.310(7)(a)3,4a,8,9 F.A.C.</b>	
<b>Rule 62-297.310(8) F.A.C.</b>	
<b>40 CFR 72.6(b)(1)</b>	

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EU03</b>
2. Emission Point Type Code: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <p><b>This emission point, EU03, represents the exhaust for Combustion Turbine No. 1.</b></p>
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W
6. Stack Height: <b>38</b> feet
7. Exit Diameter: <b>10</b> feet
8. Exit Temperature: <b>880</b> °F
9. Actual Volumetric Flow Rate: <b>395,080</b> acfm

**Emissions Unit Information Section 3 of 7**

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:                      East (km):                      North (km):	
14. Emission Point Comment (limit to 200 characters):	

Emissions Unit Information Section 3 of 7

**F. SEGMENT (PROCESS/FUEL) INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate: Segment 1 of 2**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Natural Gas</b>	
2. Source Classification Code (SCC): <b>20100201</b>	
3. SCC Units: <b>mmSCF</b>	
4. Maximum Hourly Rate: <b>0.228</b>	5. Maximum Annual Rate: <b>1594</b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>0.1 (grains/cf)</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>1000</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 6993 hours per year operation.</b>	

**Emissions Unit Information Section 3 of 7**

**Segment Description and Rate: Segment 2 of 2**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Fuel Oil No. 2</b>	
2. Source Classification Code (SCC): <b>20100101</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>1727</b>	5. Maximum Annual Rate: <b>1.21 x 10<sup>7</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>0.4</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.132</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 6993 hours per year operation.</b>	



**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>CO</b>			<b>NS</b>
<b>NOX</b>			<b>NS</b>
<b>PM</b>			<b>NS</b>
<b>PM10</b>			<b>NS</b>
<b>SO2</b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>H106</b>			<b>NS</b>
<b>H107</b>			<b>NS</b>
<b>H133</b>			<b>NS</b>

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information:**

1. Pollutant Emitted: <b>SO2</b>		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	<b>97.4 lb/hour,</b>	<b>340.6 tons/year</b>
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year		
6. Emission Factor: Reference:		
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters):  <b>Fuel Oil Sulfur Content: 0.4 % (wt)</b> <b>Fuel Oil Usage Rate: 1.22 x 10<sup>4</sup> lb/hr</b> <b>MW SO<sub>2</sub>: 64, MW O<sub>2</sub>: 32</b>  <b>lb/hr = (1.22 x 10<sup>4</sup> lb/hr) x (0.4/100) x (64/32) = 97.4 lb/hr</b>  <b>TPY = (97.6 lb/hr) x (6993 hrs/yr) x (ton/2000 lb) = 340.6 TPY</b>  <b>See Attachment EU03-01</b>		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <b>The current maximum permitted fuel sulfur content is 0.4 % and the maximum hours of operation are 6993 hours per year. Potential emissions are set equal to the equivalent allowable emissions.</b>		

**Emissions Unit Information Section 3 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>OTHER</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.4 % sulfur (wt)</b>
4. Equivalent Allowable Emissions: <b>97.4 lb/hour 340.6 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>Records of fuel oil sulfur content as received from vendor are maintained and kept available for Department Inspections.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitation entered in Field 1 is Specific Condition No. 6 in current operating Permit No. AO65-242827. This condition requires that, if fueled 100% by oil, the sulfur content of the oil shall not exceed 0.4% sulfur by weight.</b>

**B.**

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

Emissions Unit Information Section 3 of 7

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	
2. Basis for Allowable Opacity:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>&lt; 20 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>60 min/hour</b>	
4. Method of Compliance: <b>EPA Method 9 in any fiscal year in which the turbine operates greater than 400 hours.</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>In accordance with Rule 62-210.700(1),F.A.C., excess emissions resulting from startup, shutdown, or malfunction are permitted providing that the duration of excess emissions be minimized but in no case to exceed two hours in any 24 hour period unless authorized by the Department for longer duration.</b>	

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	
2. Basis for Allowable Opacity:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**Emissions Unit Information Section 3 of 7**

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_ of \_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
  
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
  
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
  
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
  
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 3 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	[ X ] Unknown
SO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	[ X ] Unknown
NO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	[ X ] Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			

**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>EU03-02</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>EU03-03</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <u>EU03-04</u> [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____  <input checked="" type="checkbox"/> Previously submitted, Date: <u>January 17, 1996</u>  [ ] Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>EU03-05</u> [ ] Not Applicable
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable



**Emissions Unit Information Section 3 of 7**

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation [ X ] Attached, Document ID: <u>EU03-06</u> [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Identification of Additional Applicable Requirements [ X ] Attached, Document ID: <u>EU03-07</u> [ ] Not Applicable
13. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
14. Acid Rain Application (Hard-copy Required)  [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____  [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____  [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____  [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____  [ X ] Not Applicable

**ATTACHMENT EU03-01**

---

# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 1 of 2  
Calc. No.: 940819DH01

Rv'd: 03/15/95

**Emission Unit Description:**

The emissions unit is a Westinghouse combustion turbine designated CT 1. The unit is currently operating under a nonfederally enforceable permit (AO65-242827) issued by the FDEP. The unit is capable of firing No. 2 fuel oil and natural gas. The unit is currently rated for a maximum heat input rate of 228 mmBtu/hr when firing fuel oil or natural gas and a nominal production capacity of 12.3 MW. The unit operates as a peaking or emergency unit in a simple cycle mode. The existing permit limits visible emissions (VE) and the sulfur content of the fuel oil (0.4% by weight). Annual operating hours are continuous. The emission limitation established through the SIP is the same VE limit of 20%.

**References:**

- No. 1 - FDEP Permit No. AO65-242827, Spec. Condition Nos. 3, 4, and 6.
- No. 2 - FDEP Rule 62-296.320.(4)(b)1

**Operating Parameters**

Annual Hours Of Operation (hrs/yr)	AHOP := 6993
Maximum Heat Input Rate on fuel oil (mmBtu/hr) (lower heating value)	MHR1 := 228
Maximum Heat Input Rate on Natural Gas (mmBtu/hr) (lower heating value)	MHR2 := 228
Fuel Oil Heat Content (Btu/Gal)	FOHC := 132000
Fuel Oil Density (lb/gal)	FOD := 7.05
Natural Gas Heat Content (Btu/CF)	NGHC := 1000
Fuel Oil Sulfur Content (%wt)	FOSC := 0.4

Calculated Fuel Oil Usage Rate (lb/hr)

$$FOUR1 := MHR1 \cdot \frac{10^6}{FOHC} \cdot FOD \quad FOUR1 = 1.22 \cdot 10^4$$

Calculated Fuel Oil Usage Rate (kgal/hr)

$$FOUR2 := \frac{FOUR1}{FOD \cdot 1000} \quad FOUR2 = 1.727$$

**FOSTER WHEELER ENVIRONMENTAL CORPORATION**  
**CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Rv'd: 03/15/95

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Sheet No.: 2 of 2  
Calc. No.: 940819DH01

**Emission Estimates**

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimate is based on allowable emission limitations as specified by Rule or permit condition. The emissions estimates provide hourly rates (lbs/hr) denoted with an "H" and annual emission rates (tons/year) denoted with an "A".

**Emission Estimates - Segment No. 1 Fuel Oil Firing**

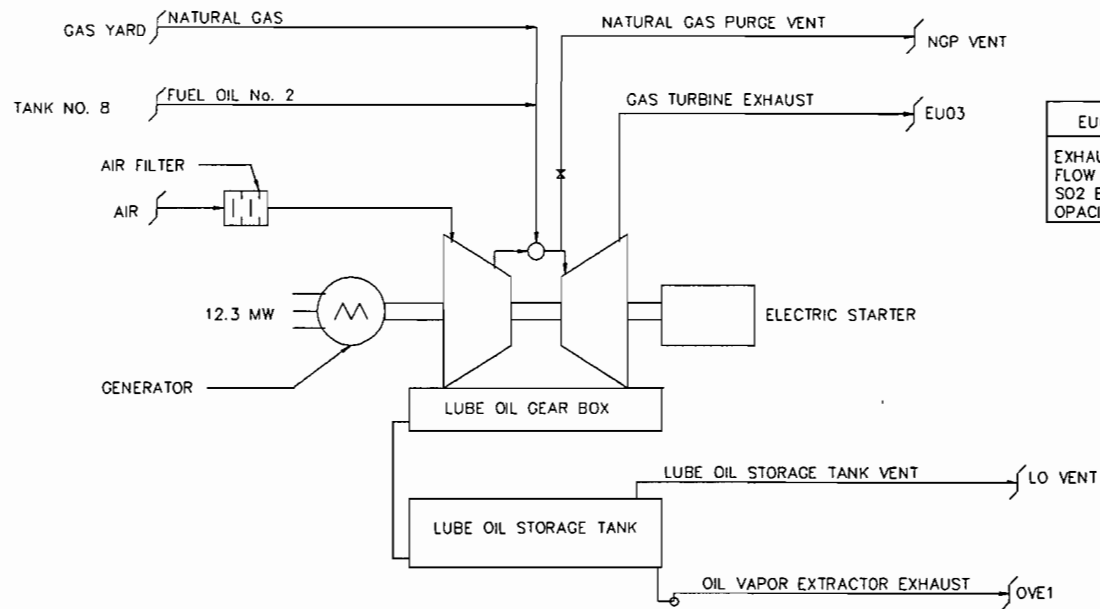
Sulfur Dioxide - Existing Operating Permit (Reference No. 1)

$$\text{HSO2} := \text{FOUR1} \cdot \frac{\text{FOSC}}{100} \cdot \frac{64}{32} \quad \text{HSO2} = 97.4$$

$$\text{ASO2} := \text{HSO2} \cdot \frac{\text{AHOP}}{2000} \quad \text{ASO2} = 340.6$$

**ATTACHMENT EU03-02**

---



EU03 - EXHAUST PARAMETERS
EXHAUST TEMP. - 880 F
FLOW RATE - 395,080 ACFM
SO2 EMISSIONS - 97.4 LBS/HR
OPACITY- <20% EXCEPT AS ALLOWED

OPERATING DATA		
PARAMETER	NATURAL GAS	NO. 2 FUEL OIL
HEAT RATE (MMBTU/HR)	228	228
FEED RATE (MMCF/HR)	0.228	N/A
FEED RATE (KGAL/HR)	N/A	1.73
FEED RATE (LB/HR)	N/A	12,175

CITY OF TALLAHASSEE, FLORIDA  
 TITLE V PERMIT APPLICATION  
 PURDOM GENERATING STATION

SIMPLIFIED PROCESS FLOW DIAGRAM  
 COMBUSTION TURBINE NO. 1

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A  
 DATE 3/15/95

BY: DJG  
 CKD' BY: DF  
 REV. BY: CJT

CAD FILE NO.  
 PGT1.DWG  
 FIGURE NO. EU03-02

**ATTACHMENT EU03-03**

---

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU03, Combustion Turbine No.1. Maximum values could be higher. The fuels represented in the analyses are natural gas and #2 fuel oil.



TYPICAL ANALYSIS - NATURAL GAS

DATE: 05/13/86  
 TIME: 08:09  
 ANALYZER#: 362007

ANALYSIS TIME: 225  
 CYCLE TIME: 240  
 MODE: RUN

STREAM SEQUENCE: 12  
 STREAM#: 2  
 CYCLE START TIME: 08:05

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
C 6 +	108	0.080	0.0357	4.23	0.0027
PROPANE	102	0.331	0.0912	8.35	0.0050
I-BUTANE	103	0.085	0.0278	2.77	0.0017
N-BUTANE	104	0.076	0.0240	2.49	0.0015
NEO C5	107	.000000	0.0000	0.00	0.0000
IPENTANE	105	0.039	0.0143	1.56	0.0010
NPENTANE	106	0.027	0.0098	1.08	0.0007
NITROGEN	114	0.424	0.0000	0.00	0.0041
METHANE	100	95.837	0.0000	970.16	0.5308
C O 2	117	0.728	0.0000	0.00	0.0111
ETHANE	101	2.373	0.6348	42.09	0.0246
TOTALS		100.000	0.8375	1032.73	0.5832

@ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

\* 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0022  
 DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1035.0  
 REAL RELATIVE DENSITY = 0.5842  
 UNNORMALIZED TOTAL = 100.66  
 ANALOG INPUT CHANNEL 1 = H 2 S 140 = 1.5356  
 ANALOG INPUT CHANNEL 2 = WATER 144 = 2.7465

ACTIVE ALARMS

NONE

**BETZ**

## Petroleum Analysis Report

TALLAHASSEE, CITY OF  
 SAM PURDOM GEN. STA.  
 C/o Harold Burcham  
 C/o Henry Crum  
 St Marks, FL 32304

Laboratory ID: 7759.2 - Page 2

Date Sampled: 26-JUL-1994  
 Date Reported: 05-AUG-1994

Engineer: Wright, C. S.  
 Sample Name: Tank 4 Bottom No.2 Fuel Oil

<u>Test</u>	<u>Value</u>	<u>Units</u>
API Gravity	34.9	
BS&W - Sediment	trace	vol%
BS&W - Water	trace	vol%
Gross Heat of Combustion	19100	BTU/lb
Cetane Index	53	
Cloud Point	6	deg F
Color	*	
D86 Distillation		
Initial Boiling Point	367	deg F
5% Recovered	421	deg F
10% Recovered	437	deg F
20% Recovered	468	deg F
30% Recovered	491	deg F
40% Recovered	509	deg F
50% Recovered	526	deg F
60% Recovered	543	deg F
70% Recovered	559	deg F
80% Recovered	579	deg F
90% Recovered	605	deg F
95% Recovered	626	deg F
End Point	650	deg F
Volume at End Point	98	mls
Recovery	98.0	vol %
Residue	1.0	vol %
Total Recovery	99.0	vol%
Flash Point	185	deg F
Pour Point	-10	deg F
Total Sulfur	0.39	wt%
Viscosity at 100 deg F	2.8	SUS

Comments:

**ATTACHMENT EU03-04**

---

There are no regulatory standards or applicable permit conditions that require periodic testing of Combustion Turbine No. 1 (EU03). The existing operating permit (A065-242827) contains only one compliance testing condition which requires the performance of visible emissions tests in the fiscal years during which the individual turbine operates more than 400 hours. Therefore, stack sampling facilities are not applicable on the combustion turbine units at the City of Tallahassee Purdom Generating Station.

**ATTACHMENT EU03-05**

---

The City of Tallahassee follows best operational practices in the startup and shutdown of the gas turbines at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the gas turbines. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

**ATTACHMENT EU03-06**

---

Combustion Turbine No. 1 (EU03) is used as a peaking and emergency reserve unit. It is fueled by natural gas or fuel oil with a maximum of 0.4% sulfur. The alternative methods of operation (AMO) associated with the combustion turbine are related to the type of fuel being fired and rate of operation. The combustion turbine has a nominal production capacity of 12.3 MW. The current AMOs include the following:

Natural Gas Firing - Maximum Rate of 228 mmBtu/hr

Fuel Oil Firing - Maximum Rate of 228 mmBtu/hr

Fuel Grade No. 2



ATTACHMENT EU03-07

---

The additional requirements are included within the attached current state operating permit (AO37-242827). Specific Conditions which have already been addressed have been crossed out. The attached requirements are contained in a State of Florida Operating Permit, which is not federally enforceable. These requirements are not subject to the definition of "applicable requirements".

### **Revision Requests**

The City of Tallahassee requests the following revisions to the attached Specific Conditions be incorporated into the Title V Operating Permit:

1. Specific Condition No. 2 - The condition requires that emissions testing be conducted at 95-100% of the permitted rated heat input based on the ambient air temperature during the test. Based on a guidance memo dated September 18, 1996 issued by the FDEP Division of Air Resources Management addressing rate of operation during compliance testing for combustion turbines, the City of Tallahassee requests that the portion of Specific Condition No. 2 which addresses the rate of operation during emissions testing be replaced by the following language:

"Testing of emissions shall be conducted with the source operating at capacity (maximum heat input rate for the inlet air temperature to the CT during the test). Capacity is defined as 90-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input versus inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 110 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report".

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108,09

Permit/Certification Number: AO65-242827

Date of Issue: March 8, 1994

Modification Date: June 10, 1994

Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.
2. The maximum allowable operating rate per combustion turbine is 228 MMBtu/hour (LHV) corrected to an ambient temperature of 80 degrees Fahrenheit. Testing of emissions shall be conducted at 95-100% of the permitted rated heat input based on the average ambient air temperature during the test. Data for correcting heat input rates (corrected for air temperatures other than 80 degrees Fahrenheit) must be submitted with the compliance test report. If it is impracticable to test at capacity, then sources may be tested at less than capacity; if the source is tested at less than capacity subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacity is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit with prior notification to the Department.
3. The maximum hours of operation are 6993 hours/year for each turbine. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.

4. ~~The maximum allowable emission rate for each pollutant is as follows:~~

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Allowable Emissions</u>
VE	17-296.310(2)	less than 20% opacity

~~The excess emissions provision of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.~~

5. Emissions tests for the following pollutants shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

<u>Pollutant</u>	<u>Frequency</u>	<u>Test Method</u>
VE	Annually	DEP 9

However, with the following exceptions, the visible emissions test shall only be required during those federal fiscal years during which the individual turbines operate greater than 400 hours.

- An initial VE test is required within 15 days of any use of fuel oil.
- A VE test is required in 1998 while operating on fuel oil.

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108,09  
Permit/Certification Number: AO65-242827  
Date of Issue: March 8, 1994  
Modification Date: June 10, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 0.4% sulfur by weight. Records of fuel oil sulfur content shall be kept and made available for Department inspections.

7. An annual operation report [DEP Form 17-210.900(4) enclosed] shall be submitted by March 1 each year. The enclosed form shall be reproduced by the Permittee and used for future annual submittals.

8. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) enclosed] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.220.867, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The enclosed form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

9. An application to renew this permit shall be submitted prior to December 31, 1998.

10. The permanent source identification numbers for these point sources are:

- 10TLH65000108 -- Combustion Turbine No. 1
- 10TLH65000109 -- Combustion Turbine No. 2

Please cite these numbers on all test reports and other correspondence specific to this permitted point source.

11. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 488-3704 during normal working hours.

Expiration Date:

March 1, 1999

Issued this 10<sup>th</sup> day of June, 1994.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
BOBBY A. COOLEY  
District Director

EU - 04

### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

#### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

##### Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

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



**Emissions Unit Information Section 4 of 7**

**B.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:



**Emissions Unit Information Section 4 of 7**

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit: Manufacturer: <b>Westinghouse</b> Model Number <b>W171G:</b>		
4. Generator Nameplate Rating: <b>12.3 MW</b>		
5. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate: <b>228</b> mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):  <b>The maximum heat input rate is based on the lower heating value at an ambient temperature of 80 degrees fahrenheit.</b>		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	<b>6993</b> hours/year

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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the user to provide a Rule Applicability Analysis for Category II and III applications involving non Title-V sources.

**Emissions Unit Information Section 4 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

<b>Rule 62-210.700(1),(4),(6) F.A.C.</b>	
<b>Rule 62-296.320(4),(b) F.A.C.</b>	
<b>Rule 62-297.310(2)(a) F.A.C.</b>	
<b>Rule 62-297.310(4)(a)2 (except a-c) F.A.C.</b>	
<b>Rule 62-297.310(7)(a)3,4a,8,9 F.A.C.</b>	
<b>Rule 62-297.310(8) F.A.C.</b>	
<b>40 CFR 72.6(b)(1)</b>	

Emissions Unit Information Section 4 of 7

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EU04</b>
2. Emission Point Type Code: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <b>This emission point, EU04, represents the exhaust for Combustion Turbine No. 2.</b>
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W
6. Stack Height: <b>38</b> feet
7. Exit Diameter: <b>10</b> feet
8. Exit Temperature: <b>880</b> °F
9. Actual Volumetric Flow Rate: <b>395,080</b> acfm

**Emissions Unit Information Section 4 of 7**

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:                      East (km):                      North (km):	
14. Emission Point Comment (limit to 200 characters):	

Emissions Unit Information Section 4 of 7

**F. SEGMENT (PROCESS/FUEL) INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Natural Gas</b>	
2. Source Classification Code (SCC): <b>20100201</b>	
3. SCC Units: <b>mmSCF</b>	
4. Maximum Hourly Rate: <b>0.228</b>	5. Maximum Annual Rate: <b>1594</b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>0.1 (grains/cf)</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>1000</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 6993 hours per year operation.</b>	

**Emissions Unit Information Section 4 of 7**

**Segment Description and Rate: Segment 2 of 2**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Fuel Oil No. 2</b>	
2. Source Classification Code (SCC): <b>20100101</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>1727</b>	5. Maximum Annual Rate: <b>1.21 x 10<sup>7</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>0.4</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.132</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 6993 hours per year operation.</b>	

**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>CO</b>			<b>NS</b>
<b>NOX</b>			<b>NS</b>
<b>PM</b>			<b>NS</b>
<b>PM10</b>			<b>NS</b>
<b>SO2</b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>H106</b>			<b>NS</b>
<b>H107</b>			<b>NS</b>
<b>H133</b>			<b>NS</b>



**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information:**

1. Pollutant Emitted: <b>SO2</b>	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	<b>97.4 lb/hour, 340.6 tons/year</b>
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year	
6. Emission Factor: Reference:	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters):  <b>Fuel Oil Sulfur Content: 0.4 % (wt)</b> <b>Fuel Oil Usage Rate: 1.22 x 10<sup>4</sup> lb/hr</b> <b>MW SO<sub>2</sub>: 64, MW O<sub>2</sub>: 32</b>  <b>lb/hr = (1.22 x 10<sup>4</sup> lb/hr) x (0.4/100) x (64/32) = 97.4 lb/hr</b>  <b>TPY = (97.6 lb/hr) x (6993 hrs/yr) x (ton/2000 lb) = 340.6 TPY</b>  <b>See Attachment EU04-01</b>	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <b>The current maximum permitted fuel sulfur content is 0.4 % and the maximum hours of operation are 6993 hours per year. Potential emissions are set equal to the equivalent allowable emissions.</b>	



Emissions Unit Information Section 4 of 7

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE20</b>	
2. Basis for Allowable Opacity:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>&lt; 20 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>60 min/hour</b>	
4. Method of Compliance: <b>EPA Method 9 in any fiscal year in which the turbine operates greater than 400 hours.</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>In accordance with Rule 62-210.700(1),F.A.C., excess emissions resulting from startup, shutdown, or malfunction are permitted providing that the duration of excess emissions be minimized but in no case to exceed two hours in any 24 hour period unless authorized by the Department for longer duration.</b>	

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	
2. Basis for Allowable Opacity:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 4 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
SO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
NO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			

**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>EU04-02</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>EU04-03</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <u>EU04-04</u> [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____  <input checked="" type="checkbox"/> Previously submitted, Date: <u>January 12, 1996</u>  <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>EU04-05</u> [ ] Not Applicable
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Emissions Unit Information Section 4 of 7

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation [ X ] Attached, Document ID: <u>EU04-06</u> [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Identification of Additional Applicable Requirements [ X ] Attached, Document ID: <u>EU04-07</u> [ ] Not Applicable
13. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
14. Acid Rain Application (Hard-copy Required)  [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____  [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____  [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____  [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____  [ X ] Not Applicable



**ATTACHMENT EU04-01**

---

# FOSTER WHEELER ENVIRONMENTAL CORPORATION

## CALCULATION SHEET - MATHCAD 5.0+

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 1 of 2  
Calc. No.: 940819DH02

Rv'd: 03/15/95

### Emission Unit Description:

The emissions unit is a Westinghouse combustion turbine designated CT 2. The unit is currently operating under a nonfederally enforceable permit (AO65-242827) issued by the FDEP. The unit is capable of firing No. 2 fuel oil and natural gas. The unit is currently rated for a maximum heat input rate of 228 mmBtu/hr when firing fuel oil or natural gas and a nominal production capacity of 12.3 MW. The unit operates as a peaking or emergency unit in a simple cycle mode. The existing permit limits visible emissions (VE) and the sulfur content of the fuel oil (0.4% by weight). Annual operating hours are continuous. The emission limitation established through the SIP is the same VE limit of 20%.

### References:

No. 1 - FDEP Permit No. AO65-242827, Spec. Condition Nos. 3, 4, and 6.  
No. 2 - FDEP Rule 62-296.320.(4)(b)1

### Operating Parameters

Annual Hours Of Operation (hrs/yr)	AHOP := 6993
Maximum Heat Input Rate on fuel oil (mmBtu/hr) (lower heating value)	MHR1 := 228
Maximum Heat Input Rate on Natural Gas (mmBtu/hr) (lower heating value)	MHR2 := 228
Fuel Oil Heat Content (Btu/Gal)	FOHC := 132000
Fuel Oil Density (lb/gal)	FOD := 7.05
Natural Gas Heat Content (Btu/CF)	NGHC := 1000
Fuel Oil Sulfur Content (%wt)	FOSC := 0.4

Calculated Fuel Oil Usage Rate (lb/hr)

$$FOUR1 := MHR1 \cdot \frac{10^6}{FOHC} \cdot FOD \quad FOUR1 = 1.22 \cdot 10^4$$

Calculated Fuel Oil Usage Rate (kgal/hr)

$$FOUR2 := \frac{FOUR1}{FOD \cdot 1000} \quad FOUR2 = 1.727$$

**FOSTER WHEELER ENVIRONMENTAL CORPORATION  
CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 2 of 2  
Calc. No.: 940819DH02

Rv'd: 03/15/95

**Emission Estimates**

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimate is based on allowable emission limitations as specified by Rule or permit condition. The emissions estimates provide hourly rates (lbs/hr) denoted with an "H" and annual emission rates (tons/year) denoted with an "A".

**Emission Estimates - Segment No. 1 Fuel Oil Firing**

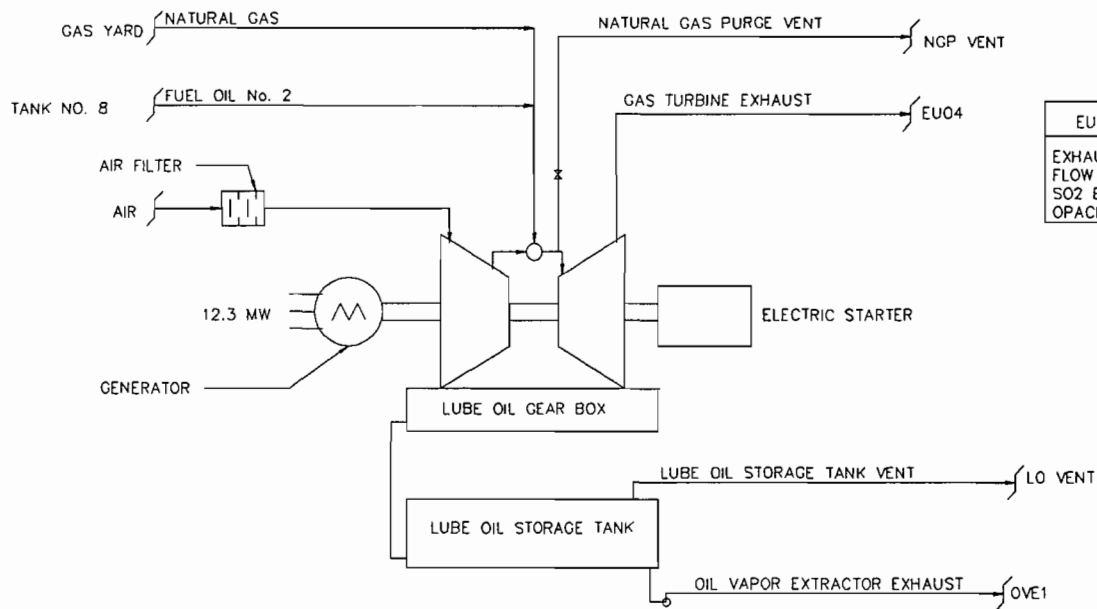
Sulfur Dioxide - Existing Operating Permit (Reference No. 1)

$$\text{HSO2} := \text{FOUR1} \cdot \frac{\text{FOSC}}{100} \cdot \frac{64}{32} \quad \text{HSO2} = 97.4$$

$$\text{ASO2} := \text{HSO2} \cdot \frac{\text{AHOP}}{2000} \quad \text{ASO2} = 340.6$$

**ATTACHMENT EU04-02**

---



EU04 - EXHAUST PARAMETERS	
EXHAUST TEMP.	-880 F
FLOW RATE	- 395,080 ACFM
SO2 EMISSIONS	- 97.4 LBS/HR
OPACITY	- <20% EXCEPT AS ALLOWED

OPERATING DATA		
PARAMETER	NATURAL GAS	NO. 2 FUEL OIL
HEAT RATE (MMBTU/HR)	228	228
FEED RATE (MMCF/HR)	0.228	N/A
FEED RATE (KGAL/HR)	N/A	1.73
FEED RATE (LB/HR)	N/A	12,175

CITY OF TALLAHASSEE, FLORIDA  
 TITLE V PERMIT APPLICATION  
 PURDOM GENERATING STATION

SIMPLIFIED PROCESS FLOW DIAGRAM  
 COMBUSTION TURBINE NO. 2

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A  
 DATE 3/15/95

BY: DJG  
 CKD BY: DF  
 REV. BY: CJT

CAD FILE NO.  
 PGT1.DWG  
 FIGURE NO. EU04-02

**ATTACHMENT EU04-03**

---

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU04, Combustion Turbine No.2. Maximum values could be higher. The fuels represented in the analyses are natural gas and #2 fuel oil.

BEST AVAILABLE COPY

TYPICAL ANALYSIS - NATURAL GAS

DATE: 05/13/96  
TIME: 08:09  
ANALYZER#: 362007

ANALYSIS TIME: 225  
CYCLE TIME: 240  
MODE: RUN

STREAM SEQUENCE: 12  
STREAM#: 2  
CYCLE START TIME: 08:05

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
I 6 +	108	0.080	0.0357	4.23	0.0027
PROPANE	102	0.331	0.0912	8.35	0.0050
I-BUTANE	103	0.085	0.0278	2.77	0.0017
N-BUTANE	104	0.076	0.0240	2.49	0.0015
VED C5	107	.000000	0.0000	0.00	0.0000
IPENTANE	105	0.039	0.0143	1.56	0.0010
NPENTANE	106	0.027	0.0098	1.08	0.0007
NITROGEN	114	0.424	0.0000	0.00	0.0041
METHANE	100	95.837	0.0000	970.16	0.5308
CO2	117	0.728	0.0000	0.00	0.0111
ETHANE	101	2.373	0.6348	42.09	0.0246
TOTALS		100.000	0.8375	1032.73	0.5832

@ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

\* 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0022

DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1035.0

REAL RELATIVE DENSITY = 0.5842

UNNORMALIZED TOTAL = 100.66

ANALOG INPUT CHANNEL 1 = H 2 S 140 = 1.5356

ANALOG INPUT CHANNEL 2 = WATER 144 = 2.7465

ACTIVE ALARMS

DNE



AUG-23-94 12:25 FR

## TYPICAL ANALYSIS - #2 FUEL OIL

PAGE 3

**BETZ**

## Petroleum Analysis Report

TALLAHASSEE, CITY OF  
 SAM PURDOM GEN. STA.  
 C/o Harold Burcham  
 C/o Henry Crum  
 St Marks, FL 32304

Laboratory ID: 7759.2 - Page 2

Date Sampled: 26-JUL-1994  
 Date Reported: 05-AUG-1994

Engineer: Wright, C. S.  
 Sample Name: Tank 4 Bottom No.2 Fuel Oil

<u>Test</u>	<u>Value</u>	<u>Units</u>
API Gravity	34.9	
BS&W - Sediment	trace	vol%
BS&W - Water	trace	vol%
Gross Heat of Combustion	19100	BTU/lb
Cetane Index	53	
Cloud Point	6	deg F
Color	*	
D86 Distillation		
Initial Boiling Point	367	deg F
5% Recovered	421	deg F
10% Recovered	437	deg F
20% Recovered	468	deg F
30% Recovered	491	deg F
40% Recovered	509	deg F
50% Recovered	526	deg F
60% Recovered	543	deg F
70% Recovered	559	deg F
80% Recovered	579	deg F
90% Recovered	605	deg F
95% Recovered	626	deg F
End Point	650	deg F
Volume at End Point	98	mls
Recovery	98.0	vol %
Residue	1.0	vol %
Total Recovery	99.0	vol%
Flash Point	185	deg F
Pour Point	-10	deg F
Total Sulfur	0.39	wt%
Viscosity at 100 deg F	2.8	SUS

Comments:

**ATTACHMENT EU04-04**

---

There are no regulatory standards or applicable permit conditions that require periodic testing of Combustion Turbine No. 2 (EU04). The existing operating permit (A065-242827) contains only one compliance testing condition which requires the performance of visible emissions tests in the fiscal years during which the individual turbine operates more than 400 hours. Therefore, stack sampling facilities are not available on the combustion turbine units at the City of Tallahassee Purdom Generating Station.

**ATTACHMENT EU04-05**

---

The City of Tallahassee follows best operational practices in the startup and shutdown of the gas turbines at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the gas turbines. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

**ATTACHMENT EU04-06**

---

Combustion Turbine No. 2 (EU04) is used as a peaking and emergency reserve unit. It is fueled by natural gas or fuel oil with a maximum of 0.4% sulfur. The alternative methods of operation (AMO) associated with the combustion turbine are related to the type of fuel being fired and rate of operation. The combustion turbine has a nominal production capacity of 12.3 MW. The current AMOs include the following:

Natural Gas Firing - Maximum Rate of 228 mmBtu/hr

Fuel Oil Firing - Maximum Rate of 228 mmBtu/hr

Fuel Grade No. 2

**ATTACHMENT EU04-07**

---



The additional requirements are included within the attached current state operating permit (AO37-242827). Specific Conditions which have already been addressed have been crossed out. The attached requirements are contained in a State of Florida Operating Permit, which is not federally enforceable. These requirements are not subject to the definition of "applicable requirements".

### Revision Requests

The City of Tallahassee requests the following revisions to the attached Specific Conditions be incorporated into the Title V Operating Permit:

1. Specific Condition No. 2 - The condition requires that emissions testing be conducted at 95-100% of the permitted rated heat input based on the ambient air temperature during the test. Based on a guidance memo dated September 18, 1996 issued by the FDEP Division of Air Resources Management addressing rate of operation during compliance testing for combustion turbines, the City of Tallahassee requests that the portion of Specific Condition No. 2 which addresses the rate of operation during emissions testing be replaced by the following language:

"Testing of emissions shall be conducted with the source operating at capacity (maximum heat input rate for the inlet air temperature to the CT during the test). Capacity is defined as 90-100 percent of the manufacturer's rated heat input achievable for the average ambient (or conditioned) air temperature during the test. If it is impracticable to test at capacity, then sources may be tested at less than capacity. In such cases, the entire heat input versus inlet temperature curve will be adjusted by the increment equal to the difference between the design heat input value and 110 percent of the value reached during the test. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report".

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108.09

Permit/Certification Number: AO65-242827

Date of Issue: March 8, 1994

Modification Date: June 10, 1994

Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.

2. The maximum allowable operating rate per combustion turbine is 228 MMBtu/hour (LHV) corrected to an ambient temperature of 80 degrees Fahrenheit. Testing of emissions shall be conducted at 95-100% of the permitted rated heat input based on the average ambient air temperature during the test. Data for correcting heat input rates (corrected for air temperatures other than 80 degrees Fahrenheit) must be submitted with the compliance test report. If it is impracticable to test at capacity, then sources may be tested at less than capacity; if the source is tested at less than capacity subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacity is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit with prior notification to the Department.

3. The maximum hours of operation are 6993 hours/year for each turbine. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.

4. The maximum allowable emission rate for each pollutant is as follows:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Allowable Emissions</u>
VE	17-296.310(2)	less than 20% opacity

The excess emissions provision of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.

5. Emissions tests for the following pollutants shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum operating rate. For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

<u>Pollutant</u>	<u>Frequency</u>	<u>Test Method</u>
VE	Annually	DEP 9

However, with the following exceptions, the visible emissions test shall only be required during those federal fiscal years during which the individual turbines operate greater than 400 hours.

- An initial VE test is required within 15 days of any use of fuel oil.
- A VE test is required in 1998 while operating on fuel oil.

PERMITTEE:

City of Tallahassee

I.D. Number: 10TLH65000108,09

Permit/Certification Number: AO65-242827

Date of Issue: March 8, 1994

Modification Date: June 10, 1994

Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 0.4% sulfur by weight. Records of fuel oil sulfur content shall be kept and made available for Department inspections.

7. An annual operation report [DEP Form 17-210.900(4) enclosed] shall be submitted by March 1 each year. The enclosed form shall be reproduced by the Permittee and used for future annual submittals.

8. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) enclosed] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.220.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The enclosed form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number) 2000 Blair Stone Road, Tallahassee, Florida 32399-2400.

9. An application to renew this permit shall be submitted prior December 31, 1998.

10. The permanent source identification numbers for these point sources are:

- 10TLH65000108 -- Combustion Turbine No. 1
- 10TLH65000109 -- Combustion Turbine No. 2

Please cite these numbers on all test reports and other correspondence specific to this permitted point source.

11. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 488-3704 during normal working hours.

Expiration Date:

Issued this 10<sup>th</sup> day of June, 1994.

March 1, 1999

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
BOBBY A. COOLEY  
District Director

EU - 09

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

**A. TYPE OF EMISSIONS UNIT  
(Regulated and Unregulated Emissions Units)**

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

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

Emissions Unit Information Section 5 of 7

**B. GENERAL EMISSIONS UNIT INFORMATION  
(Regulated and Unregulated Emissions Units)**

Emissions Unit Description and Status

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):  <b>Boiler No. 5</b>		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown <b>005</b>		
3. Emissions Unit Status Code: <b>A</b>	4. Acid Rain Unit? [ ] Yes [ <b>X</b> ] No	5. Emissions Unit Major Group SIC Code: <b>49</b>
6. Emissions Unit Comment (limit to 500 characters):  <b>The maximum allowable heat input is currently 300 mmBtu/hr. The maximum hours of operation are 8760 hours per year. This unit pre-dates PSD regulations.</b>		

Emissions Unit Control Equipment

**A.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**Emissions Unit Information Section 5 of 7**

**B.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**Emissions Unit Information Section 5 of 7**

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit:		
Manufacturer: <b>Combustion Engineering</b>	Model Number	
4. Generator Nameplate Rating: <b>22 MW</b>		
5. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate: <b>300 mmBtu/hr</b>		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:			
<b>24</b>	hours/day	<b>7</b>	days/week
<b>52</b>	weeks/year	<b>8760</b>	hours/year



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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the user to provide a Rule Applicability Analysis for Category II and Category III applications involving non Title-V sources.

**Emissions Unit Information Section 5 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

<b>Rule 62-210.700(1),(2),(3)-( 6) F.A.C.</b>	
<b>Rule 62-296.405(1)(a),(b),(c)1h F.A.C.</b>	
<b>Rule 62-296.405(1)(e)1,2,3,(f)1a,(f)1bF.A.C.</b>	
<b>Rule 62-297.310(1) F.A.C.</b>	
<b>Rule 62-297.310(2)(b) F.A.C.</b>	
<b>Rule 62-297.310(3) F.A.C.</b>	
<b>Rule 62-297.310(4) F.A.C.</b>	
<b>Rule 62-297.310(5) F.A.C.</b>	
<b>Rule 62-297.310(6)(b) F.A.C.</b>	
<b>Rule 62-297.310(7)(a)2,3,4,5,9,(c) F.A.C.</b>	
<b>Rule 62-297.310(8) F.A.C.</b>	

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EU09</b>
2. Emission Point Type Code: <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <b>This emission point, EU09, represents the exhaust for Boiler No. 5.</b>
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:  <b>Exhaust from Boiler No. 5 (EU09) and Boiler No. 6 (EU10) share the same physical stack.</b>
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W
6. Stack Height: <b>125</b> feet
7. Exit Diameter: <b>13.0</b> feet
8. Exit Temperature: <b>344</b> °F
9. Actual Volumetric Flow Rate: <b>94,400</b> acfm

**Emissions Unit Information Section 5 of 7**

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone: East (km): North (km):	
14. Emission Point Comment (limit to 200 characters):	

**F. SEGMENT (PROCESS/FUEL) INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate: Segment 1 of 5**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Natural Gas</b>	
2. Source Classification Code (SCC): <b>10100601</b>	
3. SCC Units: <b>mmSCF</b>	
4. Maximum Hourly Rate: <b>0.3</b>	5. Maximum Annual Rate: <b>2.6 x 10<sup>3</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>1000</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

Emissions Unit Information Section 5 of 7

Segment Description and Rate: Segment 2 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>No. 6 Fuel Oil</b>	
2. Source Classification Code (SCC): <b>10100404</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>2000</b>	5. Maximum Annual Rate: <b><math>1.75 \times 10^7</math></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

Emissions Unit Information Section 5 of 7

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>On-Spec Used Oil</b>	
2. Source Classification Code (SCC): <b>10100404</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>2000</b>	5. Maximum Annual Rate: <b>10,000</b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

Emissions Unit Information Section 5 of 7

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Distillate Fuel Oils</b>	
2. Source Classification Code (SCC): <b>10100501</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>2273</b>	5. Maximum Annual Rate: <b>1.99 x 10<sup>7</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.132</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	



Emissions Unit Information Section 5 of 7

Segment Description and Rate: Segment 5 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Any mixture of Fuel Oil No.6 (Residual Oil) ,On-Spec Used Oil, Distillate Fuel Oil, or Natural Gas</b>	
2. Source Classification Code (SCC):	
3. SCC Units: <b>Gallons/mmSCF</b>	
4. Maximum Hourly Rate: <b>2000 / 0.3</b>	5. Max. Annual Rate: <b><math>1.75 \times 10^7 / 2.6 \times 10^3</math></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15 / 1000</b>	
10. Segment Comment (limit to 200 characters): <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation and operating usages for Fuel Oil No.6. The purpose of this segment is to indicate the potential to co-fire multiple fuels. In order to provide maximum hourly rates for the co-firing of a liquid and gaseous fuel, the maximum of each fuel is provided.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>CO</b>			<b>NS</b>
<b>NOX</b>			<b>NS</b>
<b>PM</b>			<b>EL</b>
<b>PM10</b>			<b>NS</b>
<b>SO2</b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>PB</b>			<b>NS</b>
<b>H106</b>			<b>NS</b>
<b>H107</b>			<b>NS</b>
<b>H133</b>			<b>NS</b>

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information:** Pollutant 1 of 2

1. Pollutant Emitted: <b>SO2</b>	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions: tons/year	<b>390 lb/hour,</b> <b>1.71 x 10<sup>3</sup></b>
4. Synthetically Limited? [ ] Yes      [ <b>X</b> ] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year	
6. Emission Factor: <b>1.30 lb/mmBtu</b> Reference: <b>*See Field 9</b>	
7. Emissions Method Code: [ <b>X</b> ] 0      [ ] 1      [ ] 2      [ ] 3      [ ] 4      [ ] 5	
8. Calculation of Emissions (limit to 600 characters):  <p><b>Allowable Emission Rate: 1.3 lb/mmBtu</b>  <b>Max Heat Input Rate: 300 mmBtu/hr</b></p> <p><b>lb/hr =(1.3 lb/mmBtu) x (300 mmBtu/hr) = 390 lb/hr</b></p> <p><b>TPY = (390 lb/hr) x (8760 hrs/yr) x (ton/2000 lb) = 1.71 x 10<sup>3</sup> TPY</b></p> <p><b>See Attachment EU09-01</b></p>	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <p><b>The City of Tallahassee is proposing a 1.3 lb/mmBtu emissions limitation on SO2 in order to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards. Potential SO2 emissions are estimated utilizing this emissions rate, the maximum allowable heat input rate of 300 mmBtu/hr, and the maximum annual operating schedule of 8760 hours. Although not pertinent to the above calculation, it should be noted that this unit, Boiler No. 5, is tangentially fired.</b></p>	

**Emissions Unit Information Section 5 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>OTHER</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>1.3 lb/mmBtu</b>
4. Equivalent Allowable Emissions: <b>390 lb/hour</b> <span style="float: right;"><b>1.71 x 10<sup>3</sup> tons/year</b></span>
5. Method of Compliance (limit to 60 characters): <b>Records of fuel oil sulfur content as recieved by vendor are maintained and kept available for Department Inspections.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitation entered in Field 3 reflects the proposed limitation to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards.</b>

**B.**

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

**Emissions Unit Information Section 5 of 7**

**Pollutant Detail Information: Pollutant 2 of 2**

1. Pollutant Emitted: <b>PM</b>	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	<b>30 lb/hour, 164.3 tons/year</b>
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year	
6. Emission Factor: <b>0.1 lb/mmBtu (0.3 lb/mmBtu during Excess Emissions)</b> Reference: <b>62-296.405(1)(b) and 62-210.700, F.A.C</b>	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters): <b>Allowable Emission Rate: 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess Emissions</b> <b>Max Heat Input Rate = 300 mmBtu/hr</b> <b>Estimated 12.5% Excess Emissions</b>  $\text{lb/hr (annual average)} = (1 - .125) \times (300 \text{ mmBtu/hr} \times 0.1 \text{ lb/mmBtu}) + (.125) \times (300 \text{ mmBtu/hr} \times 0.3 \text{ lb/mmBtu})$ $\text{lb/hr} = 37.5$  $\text{TPY} = (37.5 \text{ lb/hr}) \times (8760 \text{ hrs/yr}) \times (\text{ton}/2000 \text{ lb}) = 164.3 \text{ TPY}$  <b>See Attachment EU09-01</b>	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <b>The current maximum allowable emission rate is 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess emissions for load changes and boiler cleaning. The maximum heat input rate is 300 mmBtu/hr. Annual potential PM emissions are estimated utilizing these allowable rates, the maximum annual operating schedule of 8760 hours, and an estimated occurrence of excess emissions of 12.5%.</b>	

**Emissions Unit Information Section 5 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.1 lb/mmBtu</b>
4. Equivalent Allowable Emissions: <b>30 lb/hour 164.3 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>EPA Methods 1,2,3,5, or 17 in any fiscal year in which the fossil fuel system generator burns more than 400 hrs of fuel oil other than startup.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitations entered in Field 3 reflect the maximum allowable emission rates listed in Specific Condition No. 4 in current operating Permit No. AO65-242831. These requirements are found in 62-296.405(1)(b) and 62-210.700(3), F.A.C.</b>

**B.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.3 lb/mmBtu during excess emissions when firing fuel oil</b>
4. Equivalent Allowable Emissions: <b>90 lb/hr</b>
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Excess Emissions Rule 62-210.700(3), F.A.C.</b>

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: <b>VE20</b>		
2. Basis for Allowable Opacity:	<input checked="" type="checkbox"/> Rule	<input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: <b>40 %</b> Maximum Period of Excess Opacity Allowed: <b>2 min/hour</b>		
4. Method of Compliance: <b>Annual VE in accordance with EPA Method 9 using the maximum fuel oil to gas ratio used during the fiscal year.</b>		
5. Visible Emissions Comment (limit to 200 characters):		

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: <b>VE60</b>		
2. Basis for Allowable Opacity:	<input checked="" type="checkbox"/> Rule	<input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>*See Field 5</b>		
4. Method of Compliance		
5. Visible Emissions Comment (limit to 200 characters): <b>In accordance with 62-210.700(1),(2), &amp;(3), F.A.C., excess emissions are allowed at the following opacities for the associated time periods:</b> <b>60% - 3 hrs/ 24 hrs for boiler cleaning and load change</b> <b>100% - 2 hrs / 24 hrs for malfunction</b> <b>100 % - unlimited for start-up and shutdown</b>		

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):	



**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 5 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> C	<input type="checkbox"/> E	<input checked="" type="checkbox"/> Unknown
SO2	<input type="checkbox"/> C	<input type="checkbox"/> E	<input checked="" type="checkbox"/> Unknown
NO2	<input type="checkbox"/> C	<input type="checkbox"/> E	<input checked="" type="checkbox"/> Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			

**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>EU09-02</u> [   ] Not Applicable [   ] Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>EU09-03</u> [   ] Not Applicable [   ] Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable [   ] Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <u>EU09-04</u> [   ] Not Applicable [   ] Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____  <input checked="" type="checkbox"/> Previously submitted, Date: <u>October 7, 1995</u>  <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>EU09-05</u> [   ] Not Applicable
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation [ X ] Attached, Document ID: <u>EU09-06</u> [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Identification of Additional Applicable Requirements [ X ] Attached, Document ID: <u>EU09-07</u> [ ] Not Applicable
13. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
14. Acid Rain Application (Hard-copy Required)  [ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____  [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____  [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____  [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____  [ X ] Not Applicable

**ATTACHMENT EU09-01**

---

**FOSTER WHEELER ENVIRONMENTAL CORPORATION**  
**CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 1 of 2  
Calc. No.: 940819DH07

Rv'd: 03/15/95

**Emission Unit Description:**

The emissions unit is a Combustion Engineering steam generator designated Boiler No. 5. The unit is currently operating under a nonfederally enforceable operating permit issued by the FDEP and has been assigned the tracking number 10TLH65000105. The unit is capable of firing residual fuel oil, on-spec used oil, natural gas and any of the lighter fuel oils (i.e., fuel oil Nos. 5, 4, ..) or any combination thereof. The unit is currently rated for a maximum heat input rate of 300 mmBtu/hr when firing fuel oil, natural gas or any combination and a nominal 22 MW and 220,000 lbs/hr of steam. The existing operating permit allows continuous operation with restrictions on VE (20% & excess emissions), PM (0.11lb/mmBtu - normal operation & 0.3 lb/mmBtu - soot blowing), and SO2 (1.87 lb/mmBtu & sulfur content of 1.8 % by wt). The PM and SO2 limits are for oil firing only. The federally enforceable emission limitations established through the SIP are the same as those in the current operating permit. The City of Tallahassee is proposing an SO2 emissions limit of 1.3 mmBtu/hr to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards. The unit is tangentially fired resulting in slightly different emissions than the similar Unit 6.

**References:**

No. 1 - FDEP Permit No. AO65-242828, Spec. Condition Nos. 5 & 7  
No. 2 - FDEP Rules 62-210.700(2) & (3), 62-296.405(1)(a),(b),(c)1,h

**Operating Parameters**

Annual Hours Of Operation (hrs/yr)      AHOP := 8760  
Maximum Heat Input Rate (mmBtu/hr)      MHR1 := 300  
(lower heating vaule)  
Fuel Oil Heat Content (Btu/Gal)              FOHC := 150000  
Natural Gas Heat Content (Btu/CF)          NGHC := 1000

Calculated Fuel Oil Usage Rate (kgal/hr)

$$\text{FOUR} := \text{MHR1} \cdot \frac{10^6}{\text{FOHC} \cdot 1000} \quad \text{FOUR} = 2$$

**FOSTER WHEELER ENVIRONMENTAL CORPORATION  
CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Rv'd: 03/15/95

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Sheet No.: 2 of 2  
Calc. No.: 940819DH07

**Emission Estimates**

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimates are based on allowable emission limitations as specified by Rule or permit condition. The emission estimates provide hourly rates (lbs/hr) denoted with a "H" and annual emission rates (tons/year) denoted with an "A".

**Emission Estimates - Segment No. 2 (Residual Fuel Oil)**

Particulate Matter Emissions (Reference Nos. 1 & 2) based on 12.5% annual excess emissions.

$$ER1PM := 0.1 \quad ER2PM := 0.3$$

$$H1PM := MHR1 \cdot ER1PM \quad H1PM = 30 \quad \text{Allowable Emissions}$$

$$H2PM := MHR1 \cdot ER2PM \quad H2PM = 90 \quad \text{Excess Emissions}$$

$$HPM := (1 - .125) \cdot H1PM + .125 \cdot H2PM \quad \text{Annual Average}$$

$$APM := HPM \cdot \frac{AHOP}{2000} \quad APM = 164.3$$

**Sulfur Dioxide - Proposed Emissions Limits**

$$ER1SO2 := 1.3$$

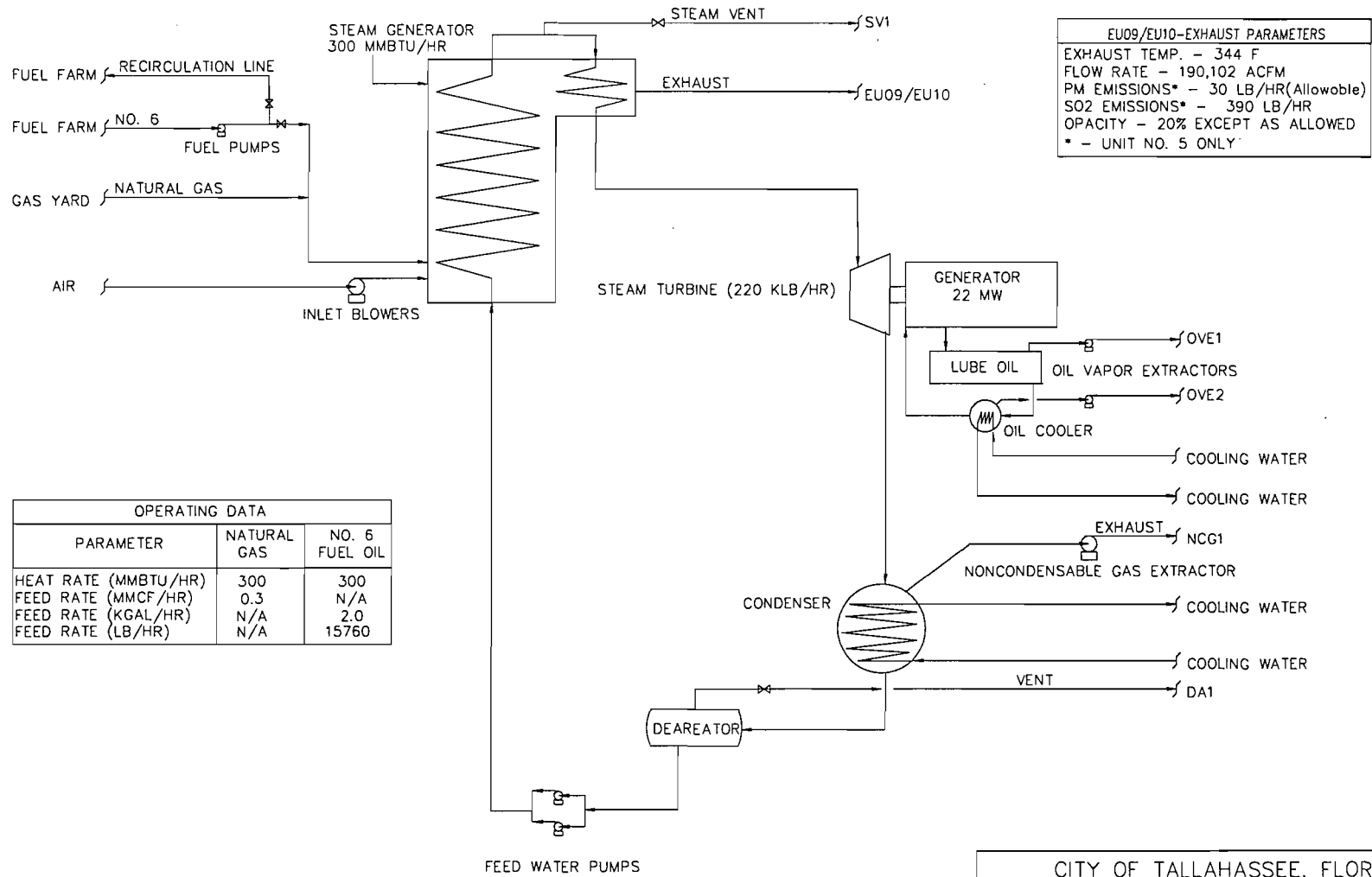
$$H1SO2 := MHR1 \cdot ER1SO2 \quad H1SO2 = 390$$

$$A1SO2 := H1SO2 \cdot \frac{AHOP}{2000} \quad A1SO2 = 1.71 \cdot 10^3$$

**ATTACHMENT EU09-02**

---





EU09/EU10-EXHAUST PARAMETERS	
EXHAUST TEMP. -	344 F
FLOW RATE -	190,102 ACFM
PM EMISSIONS* -	30 LB/HR(Allowable)
SO2 EMISSIONS* -	390 LB/HR
OPACITY -	20% EXCEPT AS ALLOWED
* - UNIT NO. 5 ONLY	

OPERATING DATA		
PARAMETER	NATURAL GAS	NO. 6 FUEL OIL
HEAT RATE (MMBTU/HR)	300	300
FEED RATE (MMCF/HR)	0.3	N/A
FEED RATE (KGAL/HR)	N/A	2.0
FEED RATE (LB/HR)	N/A	15760

CITY OF TALLAHASSEE, FLORIDA  
TITLE V PERMIT APPLICATION  
PURDOM GENERATING STATION  
SIMPLIFIED PROCESS FLOW DIAGRAM  
STEAM GENERATOR NO. 5

---

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A DATE: 3/15/95	BY: DJG CKD BY: DF REV. BY:	CAD FILE NO. PSG5.DWG FIGURE NO. EU09-02
-----------------------------	-----------------------------------	---

**ATTACHMENT EU09-03**

---

The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU09, Boiler No.5. Maximum values could be higher. The fuels represented in the analyses are natural gas, fuel oil, and on-spec used oil.

TYPICAL ANALYSIS - NATURAL GAS

DATE: 05/13/96  
 TIME: 08:09  
 ANALYZER#: 362007

ANALYSIS TIME: 225  
 CYCLE TIME: 240  
 MODE: RUN

STREAM SEQUENCE: 12  
 STREAM#: 2  
 CYCLE START TIME: 08:05

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
6 +	108	0.080	0.0357	4.23	0.0027
PROPANE	102	0.331	0.0912	8.35	0.0050
I-BUTANE	103	0.085	0.0278	2.77	0.0017
N-BUTANE	104	0.076	0.0240	2.47	0.0015
HEX C5	107	.000000	0.0000	0.00	0.0000
IPENTANE	105	0.037	0.0143	1.56	0.0010
NPENTANE	106	0.027	0.0098	1.08	0.0007
NITROGEN	114	0.424	0.0000	0.00	0.0041
METHANE	100	95.837	0.0000	970.16	0.5308
CO2	117	0.728	0.0000	0.00	0.0111
ETHANE	101	2.373	0.6348	42.09	0.0246
TOTALS		100.000	0.8375	1032.73	0.5832

@ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

@ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0022  
 DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1035.0  
 REAL RELATIVE DENSITY = 0.5842  
 UNNORMALIZED TOTAL = 100.66  
 ANALOG INPUT CHANNEL 1 = H 2 S 140 = 1.5356  
 ANALOG INPUT CHANNEL 2 = WATER 144 = 2.7465

ACTIVE ALARMS

DNE

## TYPICAL ANALYSIS - #2 FUEL OIL

Guaranteed Analysis - Bidder Guarantees Supplied No. 6 1.0% Sulfur Fuel Will Meet the Following, Which Shall Meet or Exceed these of Section 4 of the Specifications:

### SULFUR CONTENT - MAX.

API Gravity, 60 degrees F.	Min./Max.	8 Min.	12 Max.
Viscosity, SSF @ 122 degrees F.	Max.	300 Max.	
Flash Point, degrees F.	Min.	150 Min.	
Pour Point, degrees F.	Max.	65 Max.	
Sulfur, %	Max.	1.00 Max.	
Water, %	Max.	1.0 Max.	
Vanadium, ppm	Max.	150 Max.	
Ash, %	Max.	0.10 Max.	
Asphaltenes, %	Max.	6.0 Max.	
BTU Per Barrel	Min.	6,375,000 Min.	



TYPICAL ANALYSIS - USED OIL

16 Industrial Plaza Drive (32301) • P.O. Box 13058 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T5-11304

Received: 03 MAY 95

Ms. Cyrinda Gilmore  
 Sam O. Purdom Generating Station  
 PO Box 8  
 St Marks, FL 32355

Purchase Order: 483701

Project: Used Oil  
 Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , OIL SAMPLES	DATE/ TIME SAMPLED
11304-1	W05395 (10-12)	05-03-95/1315
11304-2	GD5395 (13-15)	05-03-95/1315
PARAMETER	11304-1	11304-2
Arsenic, mg/kg	<1.0	<1.0
Cadmium, mg/kg	<0.50	<0.50
Cobalt, mg/kg	1.2	1.0
Copper, mg/kg	3.6	<0.50
Ignitability-flash point (1010), Degrees F	>140	>140
Total halogens, mg/kg	<200	410
Total Sulfur, mg/kg	14000	32000

Method: EPA SW-846  
 HRS Certification #'s: 81291, E81005, 87412, E87355  
 FDEP Comp QAP #: 890142G

Laura B. Snead

**ATTACHMENT EU09-04**

---

Sam O. Purdom Generating Station Boiler No. 5 (EU09) is not required to conduct compliance testing on at least an annual basis. Therefore, the City of Tallahassee, as owner and operator of the Sam O. Purdom Generating Station, does not maintain permanent stack sampling facilities pursuant to Section 62-297.310(6), Florida Administrative Code (F.A.C.), on the stack serving Boiler No. 5. However, pursuant to Section 297.310(6)(b), F.A.C., the City of Tallahassee can install temporary test facilities on the emissions unit within 5 days of a request by the Department and will maintain such facilities until testing is complete.



**ATTACHMENT EU09-05**

---

The City of Tallahassee follows best operational practices in the startup and shutdown of the boilers at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the boilers. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

**ATTACHMENT EU09-06**

---

Boiler No. 5 (EU09) located at the Purdom Generating Station has a maximum heat input capacity of 300 mmBtu/hour and produces 22 MW electricity. The alternative methods of operation (AMO) associated with the steam generator are related to the fuel type being fired and the operating rate. The current AMOs include the following:

Natural Gas - Up to Maximum Rate of 300 mmBtu.hour

Fuel Oil Firing - Up to Maximum Rate of 300 mmBtu/hour

- Fuel Grade No. 6 (residual fuel oil)
- Distillate Fuel Oils
- On-Spec Waste Oil
- Co-firing any combination any combination of Fuel Oil No. 6, Distillate Fuel Oils, On-Spec Used Oil, or Natural Gas up to 300 mmBtu/hr.

ATTACHMENT EU09-07

---

The additional requirements are included within the attached current state operating permit (AO65-242831). Specific Conditions which have already been addressed have been crossed out. The attached requirements are contained in a State of Florida Operating Permit, which is not federally enforceable. These requirements are not subject to the definition of "applicable requirements".

**Revision Requests**

The City of Tallahassee requests the following revision to the attached Specific Condition be incorporated into the Title V Operating Permit as a federally enforceable requirement:

1. **Specific Condition 4 - This condition sets forth an SO<sub>2</sub> allowable emissions rate of 1.87 lb/mmBtu. The City of Tallahassee requests that this limit be reduced to 1.3 mmBtu/hr to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards.**

PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.
2. The maximum allowable heat input rate is for Boilers 5 and 6 is 300 MMBtu/hour per boiler. The maximum allowable heat input rate for Boiler 7 is 621 MMBtu/hour. Testing of particulate emissions shall be conducted with the source operating at capacity. Capacity is defined as 90 to 100% of the maximum allowable heat input rate for the fuel or mix of fuels being burned. If it is impracticable to test at capacity, then sources may be tested at less than capacity; if the source is tested at less than capacity subsequent source operation is limited to 110% of the test capacity until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department.
3. The maximum hours of operation are 24 hours/day, 7 days/week, and 52 weeks/year. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.

4. The maximum allowable emission rate for each pollutant per source is as follows:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Allowable Emission Rate</u>
VE	17-296.405	20% opacity *
	17-210.700	60% during Excess Emissions
PM	17-296.405	0.1 lbs/MMBtu heat input **
	17-210.700	0.2 lbs/MMBtu heat input during Excess Emissions **
SO <sub>2</sub>	17-296.405	1.87 lbs/MMBtu heat input R

\* except for one two-minute period per hour of not more than 40% opacity

\*\* Emissions of particulate matter shall not exceed 0.1 (normal operations) and 0.2 (during excess emissions) lbs/MMBtu heat input when firing fuel oil. No particulate matter limit shall apply when firing natural gas.

The excess emissions provisions of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.

PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

5. Emissions tests for the following pollutants for each source shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated below, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum heat input rate. ~~The tests shall be conducted using the maximum fuel oil/natural gas ratio to be used during the subsequent operating year.~~ For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

<u>Pollutant</u>	<u>Frequency</u>	<u>Test Method</u>
VE*	Annually, during normal operation Annually, during excess emissions, when applicable	DEP 9 DEP 9
PM*, *1	Annually Annually, during excess emissions, when applicable	EPA 1, 2, 3 and 5, or 17 ✓ EPA 1, 2, 3 and 5, or 17

shall be conducted using the maximum fuel oil to gas ratio in use during the current test year

\*1 No particulate tests shall be required in any federal fiscal year in which the fossil fuel steam generator did not burn fuel oil for more than 400 hours, other than during startup.

The VE test shall be conducted during one of the P.M. test runs. Test reports shall comply with F.A.C. Rule 17-297.570, Test Reports. The Department can require special compliance tests in accordance with F.A.C. Rule 17-297.340(2).

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 1.8% sulfur by weight. Records of fuel sulfur content shall be kept and made available for Department inspections.

7. Satisfactory ladders, platforms, and other safety devices as well as necessary parts shall be provided, maintained, and made available as necessary to facilitate compliance inspections.

8. An annual operation report [DEP Form 17-210.900(4) attached] shall be submitted by March 1 each year. The attached form shall be reproduced by the Permittee and used for future annual submittals.



PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

9. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) attached] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.229.307, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The attached form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number) 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

10. An application to renew this permit shall be submitted prior to December 31, 1998.

11. The permanent source identification number for these point sources are:

10TLH65000105 - Boiler 5  
10TLH65000106 - Boiler 6  
10TLH65000107 - Boiler 7

Please cite these numbers on all test reports and other correspondence specific to a permitted point source.

12. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 444-8300 during normal working hours.

Expiration Date:

March 1, 1999

Issued this 8<sup>th</sup> day of March, 1994.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
BOBBY A. COOLEY  
District Director

EU - 10

### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

#### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

##### Type of Emissions Unit Addressed in This Section

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

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

Emissions Unit Information Section 6 of 7

**B. GENERAL EMISSIONS UNIT INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Emissions Unit Description and Status**

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):  <b>Boiler No.6</b>		
2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown <b>006</b>		
3. Emissions Unit Status Code: <b>A</b>	4. Acid Rain Unit? [ ] Yes [ <b>X</b> ] No	5. Emissions Unit Major Group SIC Code: <b>49</b>
6. Emissions Unit Comment (limit to 500 characters):  <b>The maximum allowable heat input is currently 300 mmBtu/hr. The maximum hours of operation are 8760 hours per year. This unit pre-dates PSD regulations.</b>		

**Emissions Unit Control Equipment**

**A.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**Emissions Unit Information Section 6 of 7**

**B.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):
2. Control Device or Method Code:

**Emissions Unit Information Section 6 of 7**

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit:		
Manufacturer: <b>Combustion Engineering</b>	Model Number	
4. Generator Nameplate Rating: <b>22 MW</b>		
5. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate: <b>300 mmBtu/hr</b>		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:			
<b>24</b>	hours/day	<b>7</b>	days/week
<b>52</b>	weeks/year	<b>8760</b>	hours/year

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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the user to provide a Rule Applicability Analysis for Category II and III applications involving non Title-V sources.

**Emissions Unit Information Section 6 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-210.700(1),(2),(3)-( 6) F.A.C.	
Rule 62-296.405(1)(a),(b),(c)1h F.A.C.	
Rule 62-296.405(1)(e)1,2,3,(f)1a,(f)1bF.A.C.	
Rule 62-297.310(1) F.A.C.	
Rule 62-297.310(2)(b) F.A.C.	
Rule 62-297.310(3) F.A.C.	
Rule 62-297.310(4) F.A.C.	
Rule 62-297.310(5) F.A.C.	
Rule 62-297.310(6)(b) F.A.C.	
Rule 62-297.310(7)(a)2,3,4,5,9,(c) F.A.C.	
Rule 62-297.310(8) F.A.C.	



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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EU10</b>
2. Emission Point Type Code: <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <p><b>This emission point, EU10, represents the exhaust for Boiler No. 6.</b></p>
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:  <p><b>Exhaust from Boiler No. 6 (EU10) and Boiler No. 5 (EU09) share the same physical stack.</b></p>
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W
6. Stack Height: <b>125</b> feet
7. Exit Diameter: <b>13.0</b> feet
8. Exit Temperature: <b>344</b> °F
9. Actual Volumetric Flow Rate: <b>94,400</b> acfm

**Emissions Unit Information Section 6 of 7**

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:                      East (km):                      North (km):	
14. Emission Point Comment (limit to 200 characters):	

**F. SEGMENT (PROCESS/FUEL) INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate: Segment 1 of 5**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Natural Gas</b>	
2. Source Classification Code (SCC): <b>10100601</b>	
3. SCC Units: <b>mmSCF</b>	
4. Maximum Hourly Rate: <b>0.3</b>	5. Maximum Annual Rate: <b>2.6 x 10<sup>3</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>1000</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

**Segment Description and Rate:** Segment 2 of 5

<p>1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):</p> <p><b>No. 6 Fuel Oil</b></p>	
<p>2. Source Classification Code (SCC): <b>10100404</b></p>	
<p>3. SCC Units: <b>Gallons</b></p>	
<p>4. Maximum Hourly Rate: <b>2000</b></p>	<p>5. Maximum Annual Rate: <b>1.75 x 10<sup>7</sup></b></p>
<p>6. Estimated Annual Activity Factor:</p>	
<p>7. Maximum Percent Sulfur: <b>*See Field 10</b></p>	<p>8. Maximum Percent Ash:</p>
<p>9. Million Btu per SCC Unit: <b>0.15</b></p>	
<p>10. Segment Comment (limit to 200 characters):</p> <p><b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b></p> <p><b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b></p>	

**Emissions Unit Information Section 6 of 7**

**Segment Description and Rate: Segment 3 of 5**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>On-Spec Used Oil</b>	
2. Source Classification Code (SCC): <b>10100404</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>2000</b>	5. Maximum Annual Rate: <b>10,000</b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

**Emissions Unit Information Section 6 of 7**

**Segment Description and Rate: Segment 4 of 5**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Distillate Fuel Oils</b>	
2. Source Classification Code (SCC): <b>10100501</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>2273</b>	5. Maximum Annual Rate: <b>1.99 x 10<sup>7</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.132</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

Emissions Unit Information Section 6 of 7

Segment Description and Rate: Segment 5 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Any mixture of Fuel Oil No.6 (Residual Oil) ,On-Spec Used Oil, Distillate Fuel Oil, or Natural Gas</b>	
2. Source Classification Code (SCC):	
3. SCC Units: <b>Gallons/mmSCF</b>	
4. Maximum Hourly Rate: <b>2000 / 0.3</b>	5. Max. Annual Rate: <b><math>1.75 \times 10^7 / 2.6 \times 10^3</math></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15 / 1000</b>	
10. Segment Comment (limit to 200 characters): <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation and operating usages for Fuel Oil No.6. The purpose of this segment is to indicate the potential to co-fire multiple fuels. In order to provide maximum hourly rates for the co-firing of a liquid and gaseous fuel, the maximum of each fuel is provided.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>CO</b>			<b>NS</b>
<b>NOX</b>			<b>NS</b>
<b>PM</b>			<b>EL</b>
<b>PM10</b>			<b>NS</b>
<b>SO2</b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>PB</b>			<b>NS</b>
<b>H106</b>			<b>NS</b>
<b>H107</b>			<b>NS</b>
<b>H133</b>			<b>NS</b>



**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information: Pollutant 1 of 2**

1. Pollutant Emitted: <b>SO2</b>		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions: tons/year	<b>390 lb/hour,</b>	<b>1.71 x 10<sup>3</sup></b>
4. Synthetically Limited? [ ] Yes      [X] No		
5. Range of Estimated Fugitive/Other Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year		
6. Emission Factor: <b>1.30 lb/mmBtu</b> Reference: <b>*See Field 9</b>		
7. Emissions Method Code: [X] 0      [ ] 1      [ ] 2      [ ] 3      [ ] 4      [ ] 5		
8. Calculation of Emissions (limit to 600 characters):  <p><b>Allowable Emission Rate: 1.3 lb/mmBtu</b>  <b>Max Heat Input Rate: 300 mmBtu/hr</b></p> <p><b>lb/hr = (1.3 lb/mmBtu) x (300 mmBtu/hr) = 390 lb/hr</b></p> <p><b>TPY = (390 lb/hr) x (8760 hrs/yr) x (ton/2000 lb) = 1.71 x 10<sup>3</sup> TPY</b></p> <p><b>See Attachment EU10-01</b></p>		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <p><b>The City of Tallahassee is proposing a 1.3 lb/mmBtu emissions limitation on SO2 in order to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards. Potential SO2 emissions are estimated utilizing this emissions rate, the maximum allowable heat input rate of 300 mmBtu/hr, and the maximum annual operating schedule of 8760 hours.</b></p>		

**Emissions Unit Information Section 6 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>OTHER</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>1.3 lb/mmBtu</b>
4. Equivalent Allowable Emissions: <b>390 lb/hour</b> <span style="float: right;"><b>1.71 x 10<sup>3</sup> tons/year</b></span>
5. Method of Compliance (limit to 60 characters): <b>Records of fuel oil sulfur content as recieved by vendor are maintained and kept available for Department Inspections.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitation entered in Field 3 reflects the proposed limitation to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards.</b>

**B.**

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

**Emissions Unit Information Section 6 of 7**

**Pollutant Detail Information: Pollutant 2 of 2**

1. Pollutant Emitted: <b>PM</b>	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	<b>30 lb/hour, 164.3 tons/year</b>
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year	
6. Emission Factor: <b>0.1 lb/mmBtu (0.3 lb/mmBtu during Excess Emissions)</b> Reference: <b>62-296.405(1)(b) and 62-210.700, F.A.C</b>	
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
8. Calculation of Emissions (limit to 600 characters): <b>Allowable Emission Rate: 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess Emissions</b> <b>Max Heat Input Rate = 300 mmBtu/hr</b> <b>Estimated 12.5% Excess Emissions</b>  <b>lb/hr (annual average)=(1-.125)x(300 mmBtu/hr x 0.1lb/mmBtu)+(.125)x(300 mmBtu/hr x 0.3 lb/mmBtu)</b> <b>lb/hr = 37.5</b>  <b>TPY = (37.5 lb/hr) x (8760 hrs/yr) x (ton/2000 lb) = 164.3 TPY</b>  <b>See Attachment EU10-01</b>	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <b>The current maximum allowable emission rate is 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess emissions for load changes and boiler cleaning. The maximum heat input rate is 300 mmBtu/hr. Annual potential PM emissions are estimated utilizing these allowable rates, the maximum annual operating schedule of 8760 hours, and an estimated occurrence of excess emissions of 12.5%.</b>	

**Emissions Unit Information Section 6 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.1 lb/mmBtu</b>
4. Equivalent Allowable Emissions: <b>30 lb/hour 164.3 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>EPA Methods 1,2,3,5, or 17 in any fiscal year in which the fossil fuel system generator burns more than 400 hrs of fuel oil other than startup.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitations entered in Field 3 reflect the maximum allowable emission rates listed in Specific Condition No. 4 in current operating Permit No. AO65-242831. These requirements are found in 62-296.405(1)(b) and 62-210.700(3), F.A.C.</b>

**B.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.3 lb/mmBtu during excess emissions when firing fuel oil</b>
4. Equivalent Allowable Emissions: <b>90 lb/hr</b>
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Excess Emissions Rule 62-210.700(3), F.A.C.</b>

Emissions Unit Information Section 6 of 7

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: <b>VE20</b>
2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: <b>40 %</b> Maximum Period of Excess Opacity Allowed: <b>2 min/hour</b>
4. Method of Compliance: <b>Annual VE in accordance with EPA Method 9 using the maximum fuel oil to gas ratio used during the fiscal year.</b>
5. Visible Emissions Comment (limit to 200 characters):

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: <b>VE60</b>
2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>*See Field 5</b>
4. Method of Compliance
5. Visible Emissions Comment (limit to 200 characters): <b>In accordance with 62-210.700(1),(2), &amp;(3), F.A.C., excess emissions are allowed at the following opacities for the associated time periods:</b> <b>60% - 3 hrs/ 24 hrs for boiler cleaning and load change</b> <b>100% - 2 hrs / 24 hrs for malfunction</b> <b>100 % - unlimited for start-up and shutdown</b>

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):          	

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> 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):          	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 6 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
SO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
NO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			



**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <b>EU10-02</b> [   ] Not Applicable [   ] Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <b>EU10-03</b> [   ] Not Applicable [   ] Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [   ] Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <b>EU10-04</b> [   ] Not Applicable [   ] Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____  <input checked="" type="checkbox"/> Previously submitted, Date: <b>October 7, 1995</b>  <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <b>EU10-05</b> [   ] Not Applicable
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ [ <b>X</b> ] Not Applicable

Emissions Unit Information Section 6 of 7

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation [ <b>X</b> ] Attached, Document ID: <u>EU10-06</u> [   ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading) [   ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
12. Identification of Additional Applicable Requirements [ <b>X</b> ] Attached, Document ID: <u>EU10-07</u> [   ] Not Applicable
13. Compliance Assurance Monitoring Plan [   ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
14. Acid Rain Application (Hard-copy Required)  [   ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____  [   ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____  [   ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____  [   ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____  [ <b>X</b> ] Not Applicable

**ATTACHMENT EU10-01**

---

**FOSTER WHEELER ENVIRONMENTAL CORPORATION  
CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Rv'd: 03/15/95

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Sheet No.: 1 of 2  
Calc. No.: 940819DH07a

**Emission Unit Description:**

The emissions unit is a Combustion Engineering steam generator designated Boiler No. 6. The unit is currently operating under a nonfederally enforceable operating permit issued by the FDEP and has been assigned the tracking number 10TLH65000106. The unit is capable of firing residual fuel oil, on-spec used oil, natural gas and any of the lighter fuel oils (i.e., fuel oil Nos. 5, 4, ..) or any combination thereof. The unit is currently rated for a maximum heat input rate of 300 mmBtu/hr when firing fuel oil, natural gas or any combination and a nominal 22 MW and 220,000 lbs/hr of steam. The existing operating permit allows continuous operation with restrictions on VE (20% & excess emissions), PM (0.1lb/mmBtu - normal operation & 0.3 lb/mmBtu - soot blowing), and SO<sub>2</sub> (1.87 lb/mmBtu & sulfur content of 1.8 % by wt). The PM and SO<sub>2</sub> limits are for oil firing only. The federally enforceable emission limitations established through the SIP are the same as those in the current operating permit. The City of Tallahassee is proposing an SO<sub>2</sub> emissions limit of 1.3 mmBtu/hr to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards.

**References:**

No. 1 - FDEP Permit No. AO65-242828, Spec. Condition Nos. 5 & 7  
No. 2 - FDEP Rules 62-210.700(2) & (3), 62-296.405(1)(a),(b),(c)1,h

**Operating Parameters**

Annual Hours Of Operation (hrs/yr)	AHOP := 8760
Maximum Heat Input Rate (mmBtu/hr) (lower heating vaule)	MHR1 := 300
Fuel Oil Heat Content (Btu/Gal)	FOHC := 150000
Natural Gas Heat Content (Btu/CF)	NGHC := 1000

Calculated Fuel Oil Usage Rate (kgal/hr)

$$\text{FOUR} := \text{MHR1} \cdot \frac{10^6}{\text{FOHC} \cdot 1000} \quad \text{FOUR} = 2$$

**FOSTER WHEELER ENVIRONMENTAL CORPORATION  
CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 2 of 2  
Calc. No.: 940819DH07a

Rv'd: 03/15/95

**Emission Estimates**

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimates are based on allowable emission limitations as specified by Rule or permit condition. The emission estimates provide hourly rates (lbs/hr) denoted with a "H" and annual emission rates (tons/year) denoted with an "A".

**Emission Estimates - Segment No. 2 (Residual Fuel Oil)**

Particulate Matter Emissions (Reference Nos. 1 & 2) based on 12.5% annual excess emissions.

$$ER1PM := 0.1 \quad ER2PM := 0.3$$

$$H1PM := MHR1 \cdot ER1PM \quad H1PM = 30 \quad \text{Allowable Emissions}$$

$$H2PM := MHR1 \cdot ER2PM \quad H2PM = 90 \quad \text{Excess Emissions}$$

$$HPM := (1 - .125) \cdot H1PM + .125 \cdot H2PM \quad \text{Annual Average}$$

$$APM := HPM \cdot \frac{AHOP}{2000} \quad APM = 164.3$$

**Sulfur Dioxide - Proposed Emissions Limits**

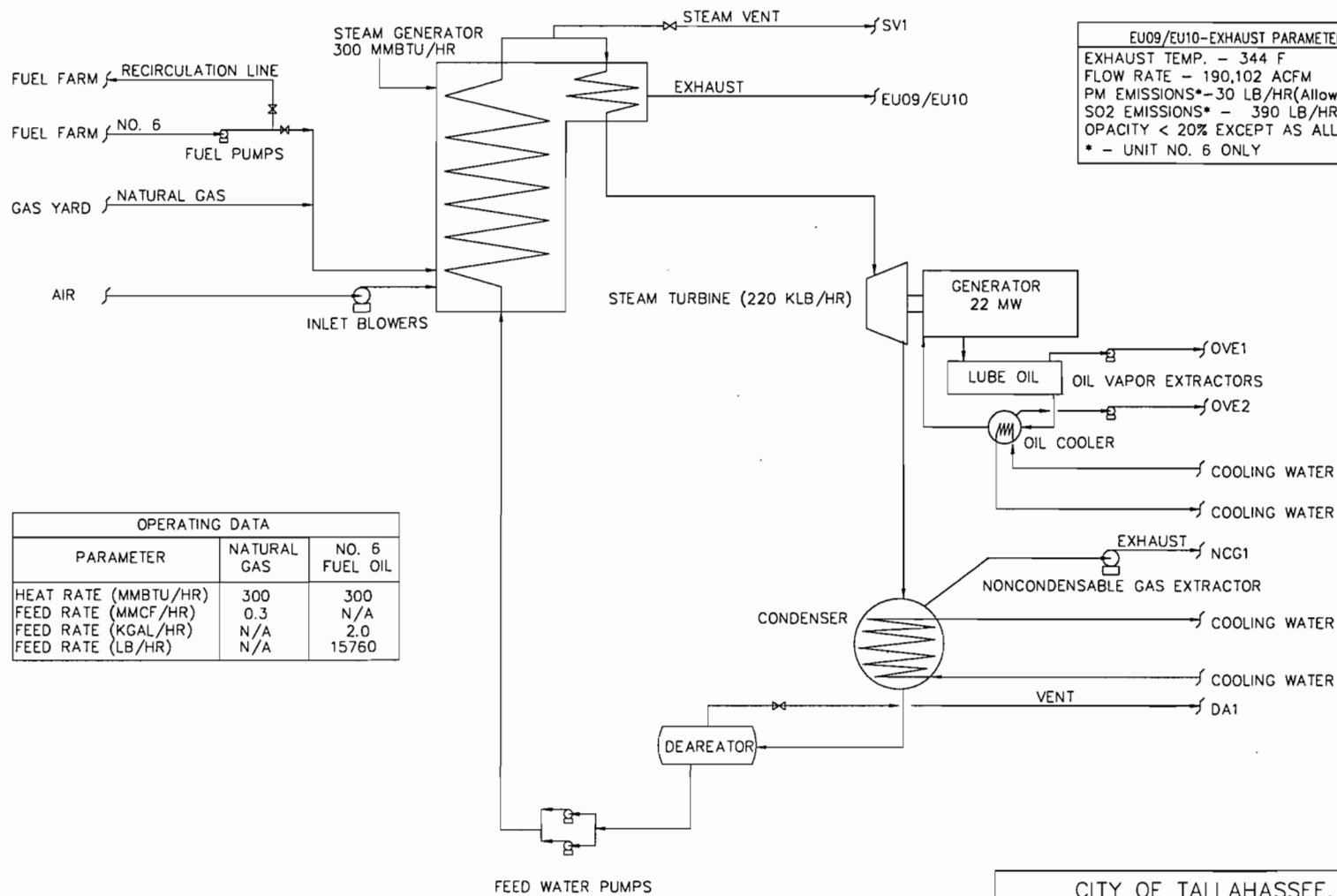
$$ER1SO2 := 1.3$$

$$H1SO2 := MHR1 \cdot ER1SO2 \quad H1SO2 = 390$$

$$A1SO2 := H1SO2 \cdot \frac{AHOP}{2000} \quad A1SO2 = 1.71 \cdot 10^3$$

**ATTACHMENT EU10-02**

---



EU09/EU10-EXHAUST PARAMETERS	
EXHAUST TEMP.	- 344 F
FLOW RATE	- 190,102 ACFM
PM EMISSIONS*	- 30 LB/HR (Allowable)
SO2 EMISSIONS*	- 390 LB/HR
OPACITY	< 20% EXCEPT AS ALLOWED
* - UNIT NO. 6 ONLY	

OPERATING DATA		
PARAMETER	NATURAL GAS	NO. 6 FUEL OIL
HEAT RATE (MMBTU/HR)	300	300
FEED RATE (MMCF/HR)	0.3	N/A
FEED RATE (KGAL/HR)	N/A	2.0
FEED RATE (LB/HR)	N/A	15760

CITY OF TALLAHASSEE, FLORIDA  
TITLE V PERMIT APPLICATION  
PURDOM GENERATING STATION  
SIMPLIFIED PROCESS FLOW DIAGRAM  
STEAM GENERATOR NO. 6

---

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A DATE: 3/15/95	BY: DJG CKD' BY: DF REV. BY:	CAD FILE NO. PSG6.DWG FIGURE NO. EU10-02
-----------------------------	------------------------------------	---

**ATTACHMENT EU10-03**

---



The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU10, Boiler No.6. Maximum values may be higher. The fuels represented in the analyses are natural gas, fuel oil, and on-spec used oil.

TYPICAL ANALYSIS - NATURAL GAS

DATE: 05/13/98 ANALYSIS TIME: 225 STREAM SEQUENCE: 12  
 TIME: 08:09 CYCLE TIME: 240 STREAM#: 2  
 ANALYZER#: 3&2007 MODE: RUN CYCLE START TIME: 08:05

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
C 6 +	108	0.080	0.0357	4.23	0.0027
PROPANE	102	0.331	0.0912	8.35	0.0050
I-BUTANE	103	0.085	0.0278	2.77	0.0017
N-BUTANE	104	0.076	0.0240	2.49	0.0015
NEO C5	107	.000000	0.0000	0.00	0.0000
IPENTANE	105	0.039	0.0143	1.56	0.0010
NPENTANE	106	0.027	0.0098	1.08	0.0007
NITROGEN	114	0.424	0.0000	0.00	0.0041
METHANE	100	95.837	0.0000	970.16	0.5308
C O 2	117	0.728	0.0000	0.00	0.0111
ETHANE	101	2.373	0.6348	42.09	0.0246
TOTALS		100.000	0.8375	1032.73	0.5832

@ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

\* @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0022  
 DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1035.0  
 REAL RELATIVE DENSITY = 0.5842  
 UNNORMALIZED TOTAL = 100.66  
 ANALOG INPUT CHANNEL 1 = H 2 S 140 = 1.5356  
 ANALOG INPUT CHANNEL 2 = WATER 144 = 2.7465

CTIVE ALARMS

ONE

## TYPICAL ANALYSIS - FUEL OIL

### EXHIBIT A

Guaranteed Analysis - Bidder Guarantees Supplied No. 6 1.0% Sulfur Fuel Will Meet the Following, Which Shall Meet or Exceed these of Section 4 of the Specifications:

#### SULFUR CONTENT - MAX.

API Gravity, 60 degrees F.	Min./Max.	8 Min.	12 Max.
Viscosity, SSF @ 122 degrees F.	Max.	300 Max.	
Flash Point, degrees F.	Min.	150 Min.	
Pour Point, degrees F.	Max.	65 Max.	
Sulfur, %	Max.	1.00 Max.	
Water, %	Max.	1.0 Max.	
Vanadium, ppm	Max.	150 Max.	
Ash, %	Max.	0.10 Max.	
Asphaltenes, %	Max.	6.0 Max.	
BTU Per Barrel	Min.	6,375,000 Min.	

### TYPICAL ANALYSIS - USED OIL



6 Industrial Plaza Drive (32301) • P.O. Box 13058 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T5-11304

Received: 03 MAY 95

Ms. Cyrinda Gilmore  
Sam O. Purdom Generating Station  
PO Box 8  
St Marks, FL 32355

Purchase Order: 483701

Project: Used Oil  
Sampled By: Client

#### REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , OIL SAMPLES	DATE/ TIME SAMPLED
11304-1	W05395 (10-12)	05-03-95/1315
11304-2	GD5395 (13-15)	05-03-95/1315
PARAMETER	11304-1	11304-2
Arsenic, mg/kg	<1.0	<1.0
Cadmium, mg/kg	<0.50	<0.50
Chromium, mg/kg	1.2	1.0
Copper, mg/kg	3.6	<0.50
Ignitability-flash point (1010), Degrees F	>140	>140
Total halogens, mg/kg	<200	410
Total Sulfur, mg/kg	14000	32000

Method: EPA SW-846  
HRS Certification #'s: 81291, E81005, 87412, E87355  
FDEP Comp QAP #: 890142G

\_\_\_\_\_  
Laura B. Snead

**ATTACHMENT EU10-04**

---

Sam O. Purdom Generating Station Boiler No. 6 (EU10) is not required to conduct compliance testing on at least an annual basis. Therefore, the City of Tallahassee, as owner and operator of the Sam O. Purdom Generating Station, does not maintain permanent stack sampling facilities pursuant to Section 62-297.310(6), Florida Administrative Code (F.A.C.), on the stack serving Boiler No. 6. However, pursuant to Section 297.310(6)(b), F.A.C., the City of Tallahassee can install temporary test facilities on the emissions unit within 5 days of a request by the Department and will maintain such facilities until testing is complete.

**ATTACHMENT EU10-05**

---

The City of Tallahassee follows best operational practices in the startup and shutdown of the boilers at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the boilers. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.



**ATTACHMENT EU10-06**

---

Boiler No. 6 (EU10) located at the Purdom Generating Station has a maximum heat input capacity of 300 mmBtu/hour and produces 22 MW electricity. The alternative methods of operation (AMO) associated with the steam generator are related to the fuel type being fired and the operating rate. The current AMOs include the following:

Natural Gas - Up to Maximum Rate of 300 mmBtu.hour

Fuel Oil Firing - Up to Maximum Rate of 300 mmBtu/hour

Fuel Grade No. 6 (residual fuel oil)

Distillate Fuel Oils

On-Spec Waste Oil

Co-firing any combination any combination of Fuel Oil No. 6, Distillate Fuel Oils, On-Spec Used Oil, or Natural Gas up to 300 mmBtu/hr.

**ATTACHMENT EU10-07**

---

The additional requirements are included within the attached current state operating permit (AO65-242831). Specific Conditions which have already been addressed have been crossed out. The attached requirements are contained in a State of Florida Operating Permit, which is not federally enforceable. These requirements are not subject to the definition of "applicable requirements".

**Revision Requests**

The City of Tallahassee requests the following revision to the attached Specific Condition be incorporated into the Title V Operating Permit as a federally enforceable requirement:

1. **Specific Condition 4 - This condition sets forth an SO<sub>2</sub> allowable emissions rate of 1.87 lb/mmBtu. The City of Tallahassee requests that this limit be reduced to 1.3 mmBtu/hr to further assure that emissions will neither cause nor contribute to an exceedance of applicable air quality standards.**

PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.
2. The maximum allowable heat input rate is for Boilers 5 and 6 is 300 MMBtu/hour per boiler. The maximum allowable heat input rate for Boiler 7 is 621 MMBtu/hour. Testing of particulate emissions shall be conducted with the source operating at capacity. Capacity is defined as 90 to 100% of the maximum allowable heat input rate for the fuel or mix of fuels being burned. If it is impracticable to test at capacity, then sources may be tested at less than capacity; if the source is tested at less than capacity subsequent source operation is limited to 110% of the test capacity until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department.
3. The maximum hours of operation are 24 hours/day, 7 days/week, and 52 weeks/year. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.
4. The maximum allowable emission rate for each pollutant per source is as follows.

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Allowable Emission Rate</u>
VE	17-296.405 17-210.700	20% opacity * 60% during Excess Emissions
PM	17-296.405 17-210.700	0.1 lbs/MMBtu heat input * 0.3 lbs/MMBtu heat input during Excess Emissions **
SO <sub>2</sub>	17-296.405	1.87 lbs/MMBtu heat input R

\* except for one two-minute period per hour of not more than 40% opacity

\*\* Emissions of particulate matter shall not exceed 0.1 (normal operations) and 0.3 (during excess emissions) lbs/MMBtu heat input when firing fuel oil. No particulate matter limit shall apply when firing natural gas.

The excess emissions provisions of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.

PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

5. Emissions tests for the following pollutants for each source shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated below, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum heat input rate. ~~The tests shall be conducted using the maximum fuel oil/natural gas ratio to be used during the subsequent operating year.~~ For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

<u>Pollutant</u>	<u>Frequency</u>	<u>Test Method</u>
VE*	Annually, during normal operation Annually, during excess emissions, when applicable	DEP 9 DEP 9
PM*, *1	Annually Annually, during excess emissions, when applicable	EPA 1, 2, 3 and 5, or 17 ✓ EPA 1, 2, 3 and 5, or 17

shall be conducted using the maximum fuel oil to gas ratio in use during the current test year

\*1 No particulate tests shall be required in any federal fiscal year in which the fossil fuel steam generator did not burn fuel oil for more than 400 hours, other than during startup.

The VE test shall be conducted during one of the P.M. test runs. Test reports shall comply with F.A.C. Rule 17-297.570, Test Reports. The Department can require special compliance tests in accordance with F.A.C. Rule 17-297.340(2).

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 1.8% sulfur by weight. Records of fuel sulfur content shall be kept and made available for Department inspections.

7. Satisfactory ladders, platforms, and other safety devices as well as necessary parts shall be provided, maintained, and made available as necessary to facilitate compliance inspections.

8. An annual operation report [DEP Form 17-210.900(4) attached] shall be submitted by March 1 each year. The attached form shall be reproduced by the Permittee and used for future annual submittals.

PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

9. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) attached] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s.229.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The attached form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

10. An application to renew this permit shall be submitted prior to December 31, 1998.

11. The permanent source identification number for these point sources are:

- 10TLH65000105 - Boiler 5
- 10TLH65000106 - Boiler 6
- 10TLH65000107 - Boiler 7

Please cite these numbers on all test reports and other correspondence specific to a permitted point source.

12. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 444-8300 during normal working hours.

Expiration Date:

March 1, 1999

Issued this 8<sup>th</sup> day of March, 1994.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
BOBBY A. COOLEY  
District Director

EU - 11



**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

**A. TYPE OF EMISSIONS UNIT  
(Regulated and Unregulated Emissions Units)**

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

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

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

2. Single Process, Group of Processes, or Fugitive Only? Check one:

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

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

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



**Emissions Unit Information Section 7 of 7**

**B.**

1. Description (limit to 200 characters):

2. Control Device or Method Code:

**C.**

1. Description (limit to 200 characters):

2. Control Device or Method Code:

**C. EMISSIONS UNIT DETAIL INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Details**

1. Initial Startup Date:		
2. Long-term Reserve Shutdown Date:		
3. Package Unit:		
Manufacturer: <b>Riley Stoker Corporation</b>	Model Number: <b>Type RX-33</b>	
4. Generator Nameplate Rating: <b>44 MW</b>		
5. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

**Emissions Unit Operating Capacity**

1. Maximum Heat Input Rate: <b>621 mmBtu/hr</b>		
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Operating Capacity Comment (limit to 200 characters):		

**Emissions Unit Operating Schedule**

Requested Maximum Operating Schedule:			
<b>24</b>	hours/day	<b>7</b>	days/week
<b>52</b>	weeks/year	<b>8760</b>	hours/year

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

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

A large, empty rectangular box with a thin black border, occupying the central portion of the page. It is intended for the user to provide a Rule Applicability Analysis for regulated emissions units.

**Emissions Unit Information Section 7 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

Rule 62-210.700(1),(2),(3),(4),(6) F.A.C.	40 CFR 72.23
Rule 62-214.300 F.A.C.	40 CFR 72.30(a),(c),(d)
Rule 62-214.350(2),(3),(5),(6) F.A.C.	40 CFR 72.32
Rule 62-214.430(1) F.A.C.	40 CFR 72.40(a)(c)(d)
Rule 62-296.405(1)(a),(b),(c)1,h, F.A.C.	40 CFR 72.51
Rule 62-296.405(1)(f)1,b,(e)1,2,3;(f)1a(i)	40 CFR 72.90
Rule 62-297.310(1) F.A.C.	40 CFR 73.33(c)(d)(e)
Rule 62-297.310(2)(b) F.A.C.	40 CFR 73.35(c)(1)
Rule 62-297.310(3) F.A.C.	40 CFR 75.4
Rule 62-297.310(4) F.A.C.	40 CFR 75.5
Rule 62-297.310(5) F.A.C.	40 CFR 75.10(a)(1),(a)(2),(a)(3)(ii)(b)-(d),(f),(g)
Rule 62-297.310(6)(a),(c)-(g) F.A.C.	40 CFR 75.11(d)(2)
Rule 62-297.310(7)(a)2,3,4,5,9,(c) F.A.C.	40 CFR 75.12(a),(b)
Rule 62-297.310(8) F.A.C.	40 CFR 75.13(a),(b)
40 CFR 72.9(a),(b),(c)(1)-(3)(iii),(d)-(g)	40 CFR 75.14(c)
40 CFR 72.20(a)-(c)	40 CFR 75.20(a)(5),(b),(c),(d),(g)
40 CFR 72.21	40 CFR 75.21(a),(c)
40 CFR 72.22	

**Emissions Unit Information Section 7 of 7**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

40 CFR 75.22	40 CFR 75.64
40 CFR 75.24	40 CFR 75, Appendix A
40 CFR 75.30(a)(3),(d)(2)	40 CFR 75, Appendix B
40 CFR 75.31	40 CFR 75, Appendix C
40 CFR 75.32	40 CFR 75, Appendix D
40 CFR 75.33(a),(c)	40 CFR 75, Appendix G(2),(4)
40 CFR 75.53	40 CFR 75, Appendix H
40 CFR 75.54 [except (f)]	40 CFR 77.3
40 CFR 75.55(c)	40 CFR 77.5(b)
40 CFR 75.56	40 CFR 77.6
40 CFR 75.60	
40 CFR 75.61	
40 CFR 75.62	
40 CFR 75.63	

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EU11</b>
2. Emission Point Type Code: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
3. Descriptions of Emissions Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <p><b>This emission point, EU11, represents the exhaust for Boiler No. 7.</b></p>
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
5. Discharge Type Code: <input type="checkbox"/> D <input type="checkbox"/> F <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> R <input checked="" type="checkbox"/> V <input type="checkbox"/> W
6. Stack Height: <b>180</b> feet
7. Exit Diameter: <b>9.0</b> feet
8. Exit Temperature: <b>300</b> °F
9. Actual Volumetric Flow Rate: <b>180,798</b> acfm



**Emissions Unit Information Section 7 of 7**

10. Percent Water Vapor :	%
11. Maximum Dry Standard Flow Rate:	dscfm
12. Nonstack Emission Point Height:	feet
13. Emission Point UTM Coordinates: Zone:                      East (km):                      North (km):	
14. Emission Point Comment (limit to 200 characters):	

**F. SEGMENT (PROCESS/FUEL) INFORMATION  
(Regulated and Unregulated Emissions Units)**

**Segment Description and Rate:** Segment 1 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Natural Gas</b>	
2. Source Classification Code (SCC): <b>10100601</b>	
3. SCC Units: <b>mmSCF</b>	
4. Maximum Hourly Rate: <b>0.621</b>	5. Maximum Annual Rate: <b>5.4 x 10<sup>3</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>1000</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	



**Emissions Unit Information Section 7 of 7**

**Segment Description and Rate: Segment 3 of 5**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>On-Spec Used Oil</b>	
2. Source Classification Code (SCC): <b>10100401</b>	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>4140</b>	5. Maximum Annual Rate: <b>10,000</b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

**Emissions Unit Information Section 7 of 7**

**Segment Description and Rate: Segment 4 of 5**

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Distillate Fuel Oils</b>	
2. Source Classification Code (SCC):	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>4705</b>	5. Maximum Annual Rate: <b>4.12 x 10<sup>7</sup></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.132</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

Emissions Unit Information Section 7 of 7

Segment Description and Rate: Segment 5 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):  <b>Any mixture of Fuel Oil No.6 (Residual Oil) ,On-Spec Used Oil, Distillate Fuel Oil, or Natural Gas</b>	
2. Source Classification Code (SCC):	
3. SCC Units: <b>Gallons</b>	
4. Maximum Hourly Rate: <b>4140 / 0.621</b>	5. Max. Annual Rate: <b><math>3.63 \times 10^7 / 5.4 \times 10^3</math></b>
6. Estimated Annual Activity Factor:	
7. Maximum Percent Sulfur: <b>*See Field 10</b>	8. Maximum Percent Ash:
9. Million Btu per SCC Unit: <b>0.15 / 1000</b>	
10. Segment Comment (limit to 200 characters):  <b>Maximum Hourly and Annual Rates based on 8760 hours per year operation and operating usages for Fuel Oil No.6. The purpose of this segment is to indicate the potential to co-fire multiple fuels. In order to provide maximum hourly rates for the co-firing of a liquid and gaseous fuel, the maximum of each fuel is provided.</b>  <b>*This unit is operated in accordance with allowable limits contained in its operating permit. No limitation applies to maximum percent sulfur. Upon receipt of information pertaining to the sulfur content of fuels, the City of Tallahassee co-fires fuels as necessary to meet the sulfur dioxide emissions limitation. Thus, the City of Tallahassee maintains no expectation regarding the maximum percent sulfur in any single fuel.</b>	

**G. EMISSIONS UNIT POLLUTANTS  
(Regulated and Unregulated Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>CO</b>			<b>NS</b>
<b>NOX</b>			<b>NS</b>
<b>PM</b>			<b>EL</b>
<b>PM10</b>			<b>NS</b>
<b>SO2</b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>PB</b>			<b>NS</b>
<b>H095</b>			<b>NS</b>
<b>H106</b>			<b>NS</b>
<b>H107</b>			<b>NS</b>
<b>H133</b>			<b>NS</b>

**H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)**

**Pollutant Detail Information: Pollutant 1 of 2**

1. Pollutant Emitted: <b>SO2</b>	
2. Total Percent Efficiency of Control:	%
3. Potential Emissions:	<b>1.2 x 10<sup>3</sup> lb/hour,</b> <b>5.1 x 10<sup>3</sup></b> tons/year
4. Synthetically Limited? [ ] Yes      [ <b>X</b> ] No	
5. Range of Estimated Fugitive/Other Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year	
6. Emission Factor: <b>1.87 lb/mmBtu</b> Reference: <b>62-296.405(1)(c), F.A.C</b>	
7. Emissions Method Code: [ <b>X</b> ] 0      [ ] 1      [ ] 2      [ ] 3      [ ] 4      [ ] 5	
8. Calculation of Emissions (limit to 600 characters):  <p><b>Allowable Emission Rate: 1.87 lb/mmBtu</b>  <b>Max Heat Input Rate: 621 mmBtu/hr</b></p> <p><b>lb/hr = (1.87 lb/mmBtu) x (621 mmBtu/hr) = 1.2 x 10<sup>3</sup> lb/hr</b></p> <p><b>TPY = (1.2 x 10<sup>3</sup> lb/hr) x (8760 hrs/yr) x (ton/2000 lb) = 5.1 x 10<sup>3</sup> TPY</b></p> <p><b>See Attachment EU11-01</b></p>	
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters): <p><b>The current maximum allowable emission rate is 1.87 lb/mmBtu and the maximum heat input rate is 621 mmBtu/hr. Potential SO2 emissions are estimated utilizing these allowable rates and the maximum annual operating schedule of 8760 hours.</b></p>	



**Emissions Unit Information Section 7 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>1.87 lb/mmBtu</b>
4. Equivalent Allowable Emissions: <b>1.2 x 10<sup>3</sup> lb/hour</b> <b>5.1 x 10<sup>3</sup> tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>Records of fuel oil sulfur content as received by vendor are maintained and kept available for Department Inspections.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitation entered in Field 3 reflects the maximum allowable emission rate listed in Specific Condition No. 4 in current operating Permit No. AO65-242831. This requirement is found in 62-296.405(1)(c)1,h, F.A.C.</b>

**B.**

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

**Emissions Unit Information Section 7 of 7**

**Pollutant Detail Information: Pollutant 2 of 2**

1. Pollutant Emitted: <b>PM</b>		
2. Total Percent Efficiency of Control:		%
3. Potential Emissions:	<b>62.1 lb/hour,</b>	<b>340 tons/year</b>
4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year		
6. Emission Factor: <b>0.1 lb/mmBtu (0.3 lb/mmBtu during Excess Emissions)</b> Reference: <b>62-296.405(1)(b) and 62-210.700, F.A.C</b>		
7. Emissions Method Code: <input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5		
8. Calculation of Emissions (limit to 600 characters): <b>Allowable Emission Rate: 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess Emissions</b> <b>Max Heat Input Rate = 621 mmBtu/hr</b> <b>Estimated 12.5% Excess Emissions</b>  <b>lb/hr(annual average) = (1-.125)x(621 mmBtu/hr x 0.1lb/mmBtu)+(.125)x(621 mmBtu/hr x 0.3 lb/mmBtu)</b> <b>lb/hr = 77.6</b>  <b>TPY = (77.6 lb/hr) x (8760 hrs/yr) x (ton/2000 lb) = 340 TPY</b>  <b>See Attachment EU11-01</b>		
9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):  <b>The current maximum allowable emission rate is 0.1 lb/mmBtu and 0.3 lb/mmBtu during excess emissions for load changes and boiler cleaning. The maximum heat input rate is 621 mmBtu/hr. Annual potential PM emissions are estimated utilizing these allowable rates, the maximum annual operating schedule of 8760 hours, and an estimated occurrence of excess emissions of 12.5%.</b>		

**Emissions Unit Information Section 7 of 7**

**Allowable Emissions** (Pollutant identified on front of page)

**A.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.1 lb/mmBtu</b>
4. Equivalent Allowable Emissions: <b>62.1 lb/hour 340 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>EPA Methods 1,2,3,5, or 17 in any fiscal year in which the fossil fuel system generator burns more than 400 hrs of fuel oil other than startup.</b>
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Emissions limitations entered in Field 3 reflect the maximum allowable emission rates listed in Specific Condition No. 4 in current operating Permit No. AO65-242831. These requirements are found in 62-296.405(1)(b) and 62-210.700(3), F.A.C.</b>

**B.**

1. Basis for Allowable Emissions Code: <b>RULE</b>
2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.3 lb/mmBtu during excess emissions when firing fuel oil</b>
4. Equivalent Allowable Emissions: <b>186.3 lb/hr</b>
5. Method of Compliance (limit to 60 characters):
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):  <b>Excess Emissions Rule 62-210.700(3), F.A.C.</b>

**I. VISIBLE EMISSIONS INFORMATION  
(Regulated Emissions Units Only)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: <b>VE20</b>		
2. Basis for Allowable Opacity:	<input checked="" type="checkbox"/> Rule	<input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: <b>40 %</b> Maximum Period of Excess Opacity Allowed: <b>2 min/hour</b>		
4. Method of Compliance: <b>Annual VE in accordance with EPA Method 9 using the maximum fuel oil to gas ratio used during the fiscal year.</b>		
5. Visible Emissions Comment (limit to 200 characters):		

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 2

1. Visible Emissions Subtype: <b>VE60</b>		
2. Basis for Allowable Opacity:	<input checked="" type="checkbox"/> Rule	<input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>*See Field 5</b>		
4. Method of Compliance		
5. Visible Emissions Comment (limit to 200 characters): <b>In accordance with 62-210.700(1),(2), &amp;(3), F.A.C., excess emissions are allowed at the following opacities for the associated time periods:</b> <b>60% - 3 hrs/ 24 hrs for boiler cleaning and load change</b> <b>100% - 2 hrs / 24 hrs for malfunction</b> <b>100 % - unlimited for start-up and shutdown</b>		

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System: Continuous Monitor 1 of 4**

1. Parameter Code:	2. Pollutant(s): <b>Gas Fuel Flow</b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Superior</b> Model Number: <b>GHFA 8" 600RF</b> Serial Number: <b>94128</b>	
5. Installation Date: <b>12-31-94</b>	
6. Performance Specification Test Date: <b>12-31-94</b>	
7. Continuous Monitor Comment (limit to 200 characters):  <b>Orifice Meter. Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.</b>  <b>Note: The serial numbers are correct as of June 15, 1996, but are subject to change.</b>	

**Continuous Monitoring System: Continuous Monitor 2 of 4**

1. Parameter Code:	2. Pollutant(s): <b>Oil Fuel Flow Monitor (2)</b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Micro Motion</b> Model Number: <b>CMF200M342NV &amp; EX122A</b> Serial Number: <b>319657 &amp; 9210S0005062</b>	
5. Installation Date: <b>12-21-94 &amp; 12-16-94</b>	
6. Performance Specification Test Date: <b>12-21-94 &amp; 12-16-94</b>	
7. Continuous Monitor Comment (limit to 200 characters):  <b>Coriolis Type Meter. Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.</b>  <b>Note: The serial numbers are correct as of June 15, 1996, but are subject to change.</b>	

Emissions Unit Information Section 7 of 7

**J. CONTINUOUS MONITOR INFORMATION  
(Regulated Emissions Units Only)**

**Continuous Monitoring System:** Continuous Monitor **3** of **4**

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>NOx</b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Teco</b> Model Number: <b>42D</b> Serial Number: <b>42D45683274</b>	
5. Installation Date: <b>2-28-95</b>	
6. Performance Specification Test Date: <b>5-24-95 (certification date)</b>	
7. Continuous Monitor Comment (limit to 200 characters):  <b>Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.</b>  <b>Note: The serial numbers are correct as of June 15, 1996, but are subject to change.</b>	

**Continuous Monitoring System:** Continuous Monitor **4** of **4**

1. Parameter Code: <b>CO2</b>	2. Pollutant(s): <b>Carbon Dioxide</b>
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Teco</b> Model Number: <b>41H</b> Serial Number: <b>41H48548281</b>	
5. Installation Date: <b>2-28-96</b>	
6. Performance Specification Test Date: <b>2-28-96</b>	
7. Continuous Monitor Comment (limit to 200 characters):  <b>Installed in accordance with Rule 62-214.320, F.A.C., Rule 62-214.330, F.A.C., and 40 CFR Part 75 Appendix D, Section 2.1.</b>  <b>Note: The serial numbers are correct as of June 15, 1996, but are subject to change.</b>	

**K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT  
TRACKING INFORMATION  
(Regulated and Unregulated Emissions Units)**

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

- ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

**Emissions Unit Information Section 7 of 7**

**2. Increment Consuming for Nitrogen Dioxide?**

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

- ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] The facility addressed in this application is classified as an EPA major source, and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and emissions unit consumes increment.
- ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

<b>3. Increment Consuming/Expanding Code:</b>			
PM	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
SO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
NO2	<input type="checkbox"/> ] C	<input type="checkbox"/> ] E	<input checked="" type="checkbox"/> ] Unknown
<b>4. Baseline Emissions:</b>			
PM	lb/hour	tons/year	
SO2	lb/hour	tons/year	
NO2		tons/year	
<b>5. PSD Comment (limit to 200 characters):</b>			



**L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements for All Applications**

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <u>EU11-02</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification <input checked="" type="checkbox"/> Attached, Document ID: <u>EU11-03</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities <input checked="" type="checkbox"/> Attached, Document ID: <u>EU11-04</u> [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____  <input checked="" type="checkbox"/> Previously submitted, Date: <u>September 19, 1995</u>  <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input checked="" type="checkbox"/> Attached, Document ID: <u>EU11-05</u> [ ] Not Applicable
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**Emissions Unit Information Section 7 of 7**

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation [ X ] Attached, Document ID: <b>EU11-06</b> [ ] Not Applicable
11. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
12. Identification of Additional Applicable Requirements [ X ] Attached, Document ID: <b>EU11-07</b> [ ] Not Applicable
13. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
14. Acid Rain Application (Hard-copy Required)  [ X ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: <b>EU11-08</b>  [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____  [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____  [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____  [ ] Not Applicable

**ATTACHMENT EU11-01**

---

**FOSTER WHEELER ENVIRONMENTAL CORPORATION  
CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 1 of 2  
Calc. No.: 940819DH09

Rv'd: 03/15/95

**Emission Unit Description:**

The emissions unit is a Riley steam generator designated Boiler No. 7. The unit is currently operating under a nonfederally enforceable operating permit issued by the FDEP and has been assigned the tracking number 10TLH65000107. The unit pre-dates the PSD regulations. The unit is capable of firing residual fuel oil, on-spec used oil, natural gas, any of the lighter fuel oils (i.e., fuel oil Nos. 5, 4, ..) or any combination thereof. The unit is currently rated for a maximum heat input rate of 621 mmBtu/hr when firing fuel oil or natural gas and a nominal 44 MW and 500,000 lbs/hr of steam. The existing operating permit allows continuous operation with restrictions on VE (20% & excess emissions), PM (0.1 lb./mmBtu - normal operation & 0.3 lb./mmBtu - soot blowing), and SO<sub>2</sub> (1.87 lb./mmBtu & sulfur content of 1.8% by wt). The federally enforceable emission limitations established through the SIP are the same as those in the permit.

**References:**

- No. 1 - FDEP Permit No. AO37-242825, Spec. Condition Nos. 3, 4 & 6
- No. 2 - FDEP Rules 62-210.700(1)(2) & (3), 62-296.405(1)(a),(b),(c),1,.h

**Operating Parameters**

Annual Hours Of Operation (hrs/yr)      AHOP := 8760

Maximum Heat Input Rate (mmBtu/hr)      MHR1 := 621  
(lower heating value)

Fuel Oil Heat Content (Btu/Gal)              FOHC := 150000    MHR2 := MHR1

Natural Gas Heat Content (Btu/CF)          NGHC := 1000

Fuel Oil Sulfur Content (% wt)              FOHC := 1.8

Calculated Fuel Oil Usage Rate (kgal/hr)

$$\text{FOUR} := \text{MHR1} \cdot \frac{10^6}{\text{FOHC} \cdot 1000} \quad \text{FOUR} = 4.14$$

Calculated Natural Gas Usage Rate (mmCF/hr)

$$\text{NGUR} := \text{MHR1} \cdot \frac{10^6}{\text{NGHC} \cdot 10^6} \quad \text{NGUR} = 0.621$$

**FOSTER WHEELER ENVIRONMENTAL CORPORATION  
CALCULATION SHEET - MATHCAD 5.0+**

By: D. Hackel  
Date: 08/19/94

Client: City of Tallahassee  
OFS No: 1000.4015.0027

Ck'd By: D. Graziani, P.E.  
Date: 08/26/94

Sheet No.: 2 of 2  
Calc. No.: 940819DH09

Rv'd: 03/15/95

**Emission Estimates**

The following emission estimates are provided as required by Rules 62-213.420(3)(c)1, 2, 3 and 4, FAC. The emission estimates are based on allowable emission limitations as specified by Rule or permit condition. The emission estimates provide hourly rates (lbs/hr) denoted with a "H" and annual emission rates (tons/year) denoted with an "A".

**Emission Estimates - Segment No. 2 (Residual Fuel Oil)**

Particulate Matter Emissions (Reference Nos. 1 & 2) based on 12.5% annual excess emissions.

$$ER1PM := 0.1 \quad ER2PM := 0.3$$

$$H1PM := MHR1 \cdot ER1PM \quad H1PM = 62.1 \quad \text{Allowable Emissions}$$

$$H2PM := MHR1 \cdot ER2PM \quad H2PM = 186.3 \quad \text{Excess Emissions}$$

$$HPM := (1 - .125) \cdot H1PM + .125 \cdot H2PM \quad \text{Annual Average}$$

$$APM := HPM \cdot \frac{AHOP}{2000} \quad APM = 340$$

Sulfur Dioxide (SO2) - Federally Enforceable Limits (Reference No. 2)

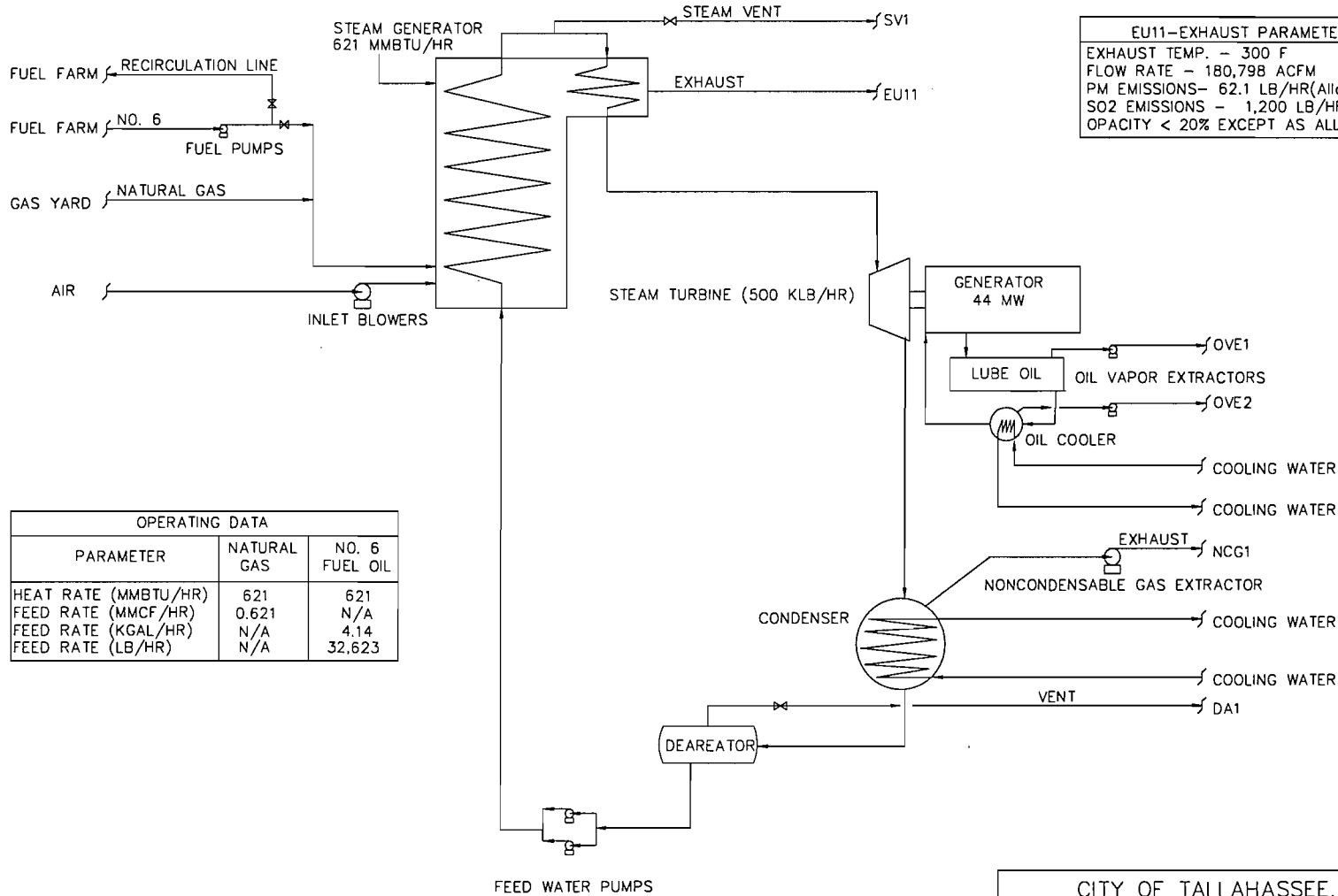
$$ER1SO2 := 1.87$$

$$H1SO2 := MHR1 \cdot ER1SO2 \quad H1SO2 = 1.2 \cdot 10^3$$

$$A1SO2 := H1SO2 \cdot \frac{AHOP}{2000} \quad A1SO2 = 5.1 \cdot 10^3$$

**ATTACHMENT EU11-02**

---



EU11-EXHAUST PARAMETERS	
EXHAUST TEMP.	- 300 F
FLOW RATE	- 180,798 ACFM
PM EMISSIONS	- 62.1 LB/HR(Allowable)
SO2 EMISSIONS	- 1,200 LB/HR
OPACITY	< 20% EXCEPT AS ALLOWED

OPERATING DATA		
PARAMETER	NATURAL GAS	NO. 6 FUEL OIL
HEAT RATE (MMBTU/HR)	621	621
FEED RATE (MMCF/HR)	0.621	N/A
FEED RATE (KGAL/HR)	N/A	4.14
FEED RATE (LB/HR)	N/A	32,623

CITY OF TALLAHASSEE, FLORIDA  
TITLE V PERMIT APPLICATION  
PURDOM GENERATING STATION  
SIMPLIFIED PROCESS FLOW DIAGRAM  
STEAM GENERATOR NO. 7

---

FOSTER WHEELER ENVIRONMENTAL CORPORATION

SCALE: N/A DATE: 3/15/95	BY: DJG CKD' BY: DF REV. BY:	CAD FILE NO. PSG7.DWG FIGURE NO. EU11-02
-----------------------------	------------------------------------	---

**ATTACHMENT EU11-03**

---



The attached fuel sample analyses represent "typical" characterizations for the fuels combusted in EU11, Boiler No.7. Maximum values may be higher. The fuels represented in the analyses are natural gas, fuel oil, and on-spec used oil.

TYPICAL ANALYSIS - NATURAL GAS

DATE: 05/13/96  
 TIME: 08:09  
 ANALYZER#: 362007

ANALYSIS TIME: 225  
 CYCLE TIME: 240  
 MODE: RUN

STREAM SEQUENCE: 12  
 STREAM#: 2  
 CYCLE START TIME: 08:05

COMP NAME	COMP CODE	MOLE %	GAL/MCF**	B.T.U.*	REL DEN*
C 6 +	108	0.080	0.0357	4.23	0.0027
PROPANE	102	0.331	0.0912	8.35	0.0050
I-BUTANE	103	0.085	0.0278	2.77	0.0017
N-BUTANE	104	0.076	0.0240	2.49	0.0015
VED C5	107	.000000	0.0000	0.00	0.0000
IPENTANE	105	0.039	0.0143	1.56	0.0010
NPENTANE	106	0.027	0.0098	1.08	0.0007
NITROGEN	114	0.424	0.0000	0.00	0.0041
METHANE	100	95.837	0.0000	970.16	0.5308
C O 2	117	0.728	0.0000	0.00	0.0111
ETHANE	101	2.373	0.6348	42.09	0.0246
TOTALS		100.000	0.8375	1032.73	0.5832

@ 14.730 PSIA & UNCORRECTED FOR COMPRESSIBILITY

\* @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) = 1.0022  
 DRY B.T.U. @ 14.730 PSIA & 60 DEG. F CORRECTED FOR (1/Z) = 1035.0  
 REAL RELATIVE DENSITY = 0.5842  
 UNNORMALIZED TOTAL = 100.66  
 ANALOG INPUT CHANNEL 1 = H 2 S 140 = 1.5356  
 ANALOG INPUT CHANNEL 2 = WATER 144 = 2.7465

ACTIVE ALARMS

DNE

TYPICAL ANALYSIS - #2 FUEL OIL

CITY OF TALLAHASSEE  
 CYRINDA DEMONTE  
 363  
 OM GENERATION STATION  
 T MARKS FL 32355

TESTING GROUP  
 FUEL ANALYSIS REPORT

CITY OF TALLAHASSEE  
 LOCATION: PURDOW  
 LOCATION CODE: 7  
 FUEL TYPE: FUEL  
 TANK CAPACITY: N/G  
 INHIBITOR USED: N/G

SAMPLE INFORMATION		Computer-Code--> TALST	COMMENTS
NO. 1-	G01029755		SAMPLE SUBMITTED AND PROCESSED FOR TEST DATA ONLY. (EVALUATOR-MIKE COSTELLO) [BTU/LB=18,300]
Sample Drawn:	12/25/95		
Port Date:	01/05/96		
Days in Tank:	N/G		
7			APP=BLACK
NO. 2-	G01029753		SAMPLE SUBMITTED AND PROCESSED FOR TEST DATA ONLY. (EVALUATOR-MIKE COSTELLO) [BTU/LB=17,690]
Sample Drawn:	12/26/95		
Port Date:	01/05/96		
Days in Tank:	N/G		
			APP=BLACK
NO. 3-	G01029754		SAMPLE SUBMITTED AND PROCESSED FOR TEST DATA ONLY. (EVALUATOR-MIKE COSTELLO) [BTU/LB=18,020]
Sample Drawn:	12/27/95		
Port Date:	01/05/96		
Days in Tank:	N/G		
			APP=BLACK

PHYSICAL DATA

WATER & SEDIMENT	DISTILLATION °F					END POINT	CETANE INDEX	GRAVITY	CLOUD POINT	FLASH POINT	SULFUR	POUR POINT	COLOR	PARTICULATE			INITIAL STABILITY	FINAL STABILITY	BACTERIA & FUNGI
	5%	50%	80%	90%	% VOL.									ASTM	MG/100 ML	MG/100 ML			
												1.02%							
												.956							
												.863							

TYPICAL ANALYSIS - USED OIL



16 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T5-11304

Received: 03 MAY 95

Ms. Cyrinda Gilmore  
 Sam O. Purdom Generating Station  
 PO Box 8  
 St Marks, FL 32355

Purchase Order: 483701

Project: Used Oil  
 Sampled By: Client

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , OIL SAMPLES	DATE/ TIME SAMPLED	
11304-1	W05395 (10-12)	05-03-95/1315	
11304-2	GD5395 (13-15)	05-03-95/1315	
PARAMETER		11304-1	11304-2
Arsenic, mg/kg		<1.0	<1.0
Cadmium, mg/kg		<0.50	<0.50
Chromium, mg/kg		1.2	1.0
Copper, mg/kg		3.6	<0.50
Ignitability-flash point (1010), Degrees F		>140	>140
Total halogens, mg/kg		<200	410
Total Sulfur, mg/kg		14000	32000

Method: EPA SW-846  
 HRS Certification #'s: 81291, E81005, 87412, E87355  
 FDEP Comp QAP #: 890142G

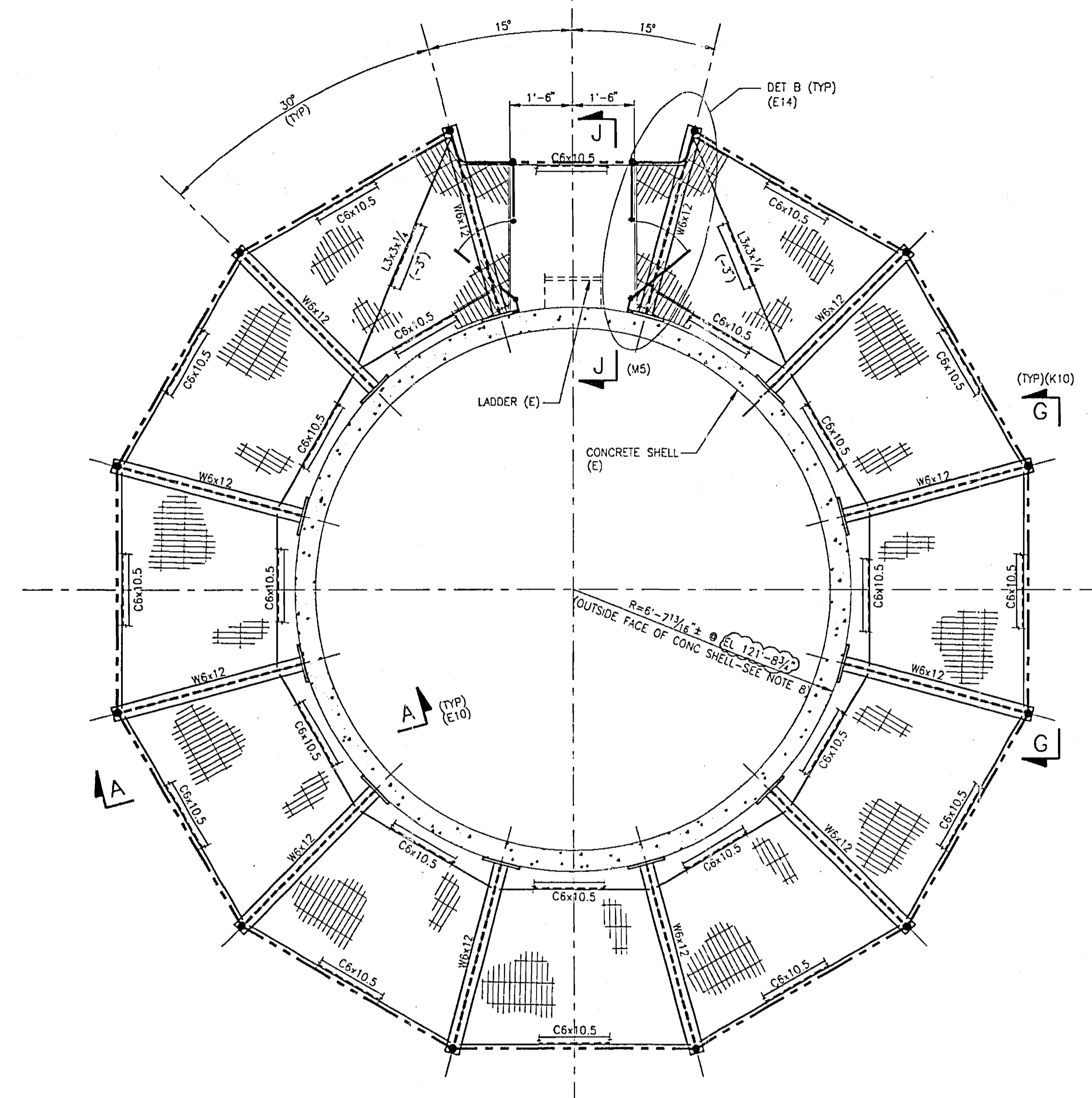
\_\_\_\_\_  
 Laura B. Snead

**ATTACHMENT EU11-04**

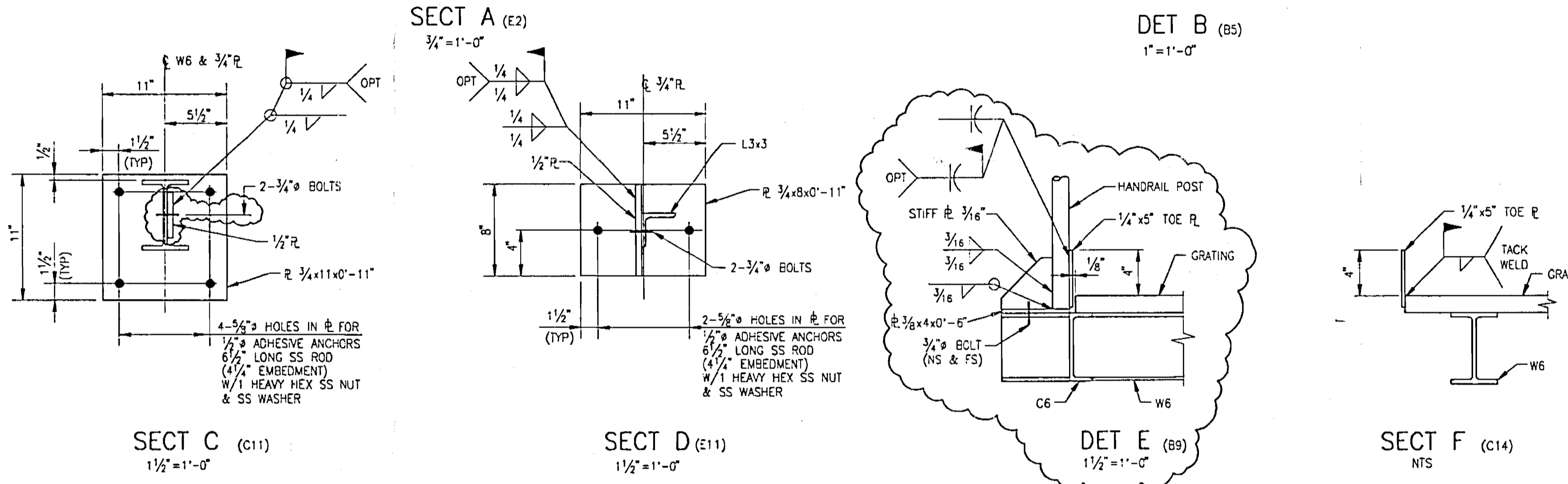
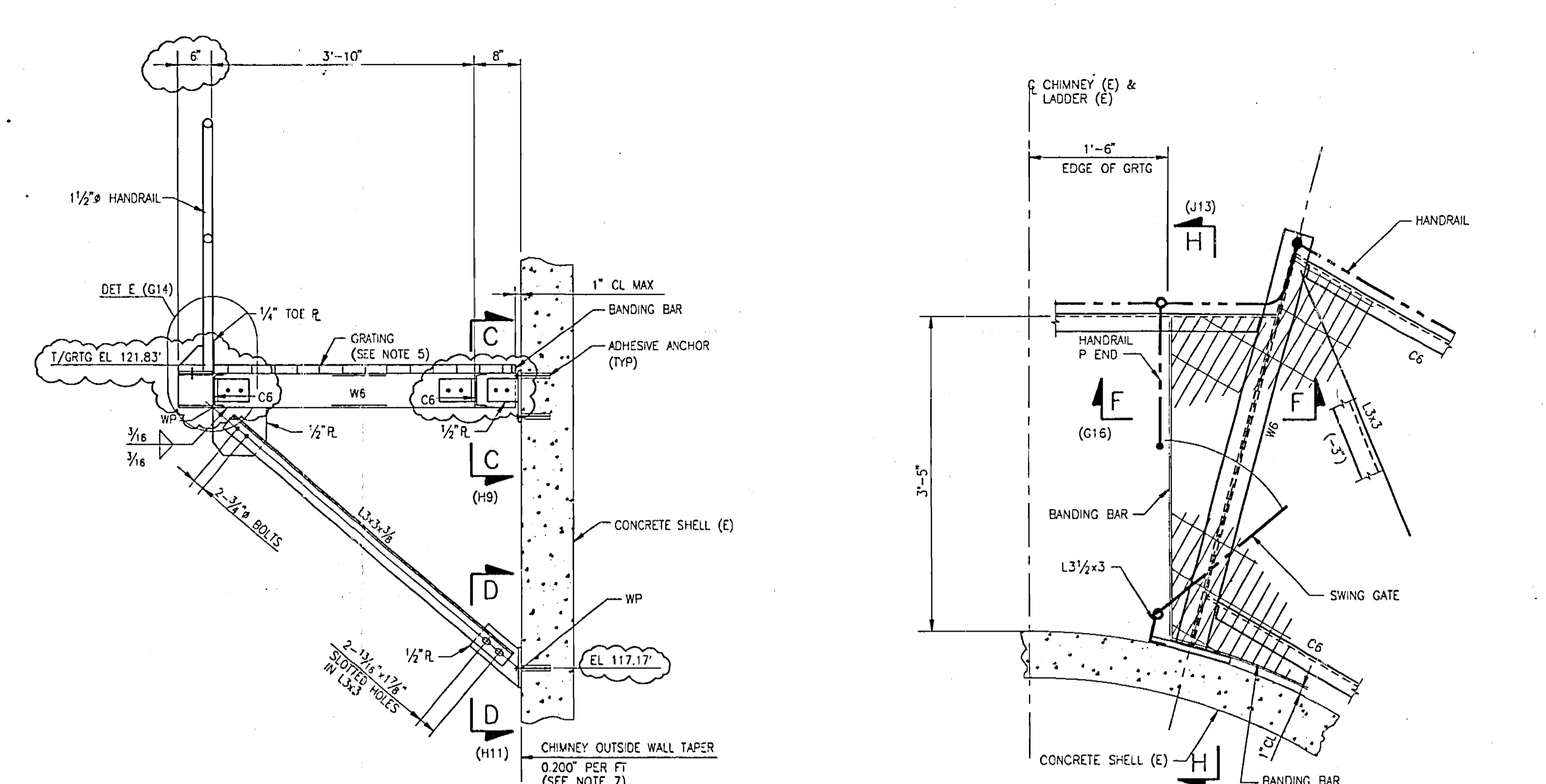
---

REV. NO.	DATE	REVISION	DR	CH	APPROVED
1	8-5-94	REVISED PER CONSTRUCTION DOCUMENTS REVISED (A9, C9, C11, F9, G14) CONN DET, (C9, D11, H4) ELEV.	DN	JK	JK

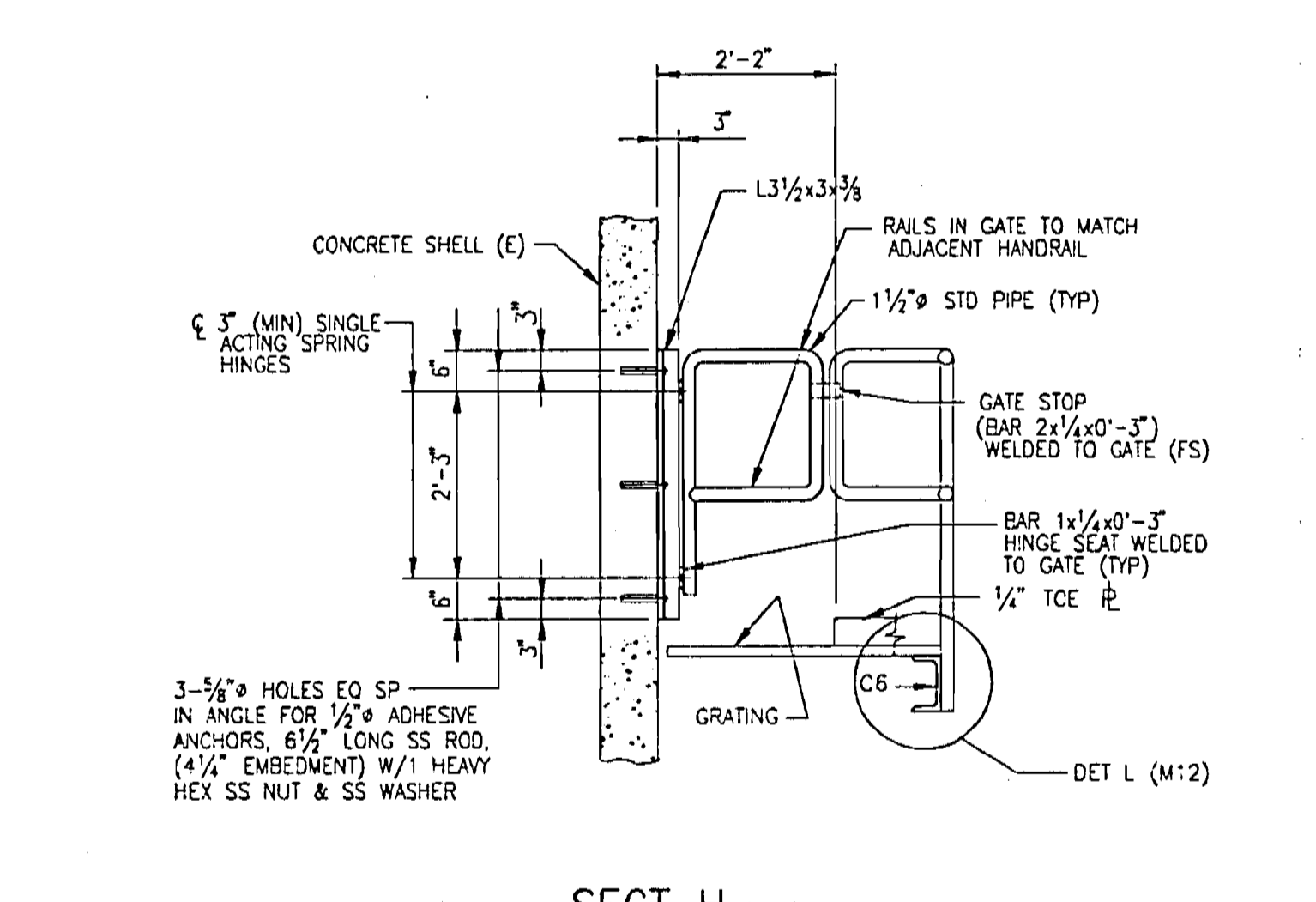
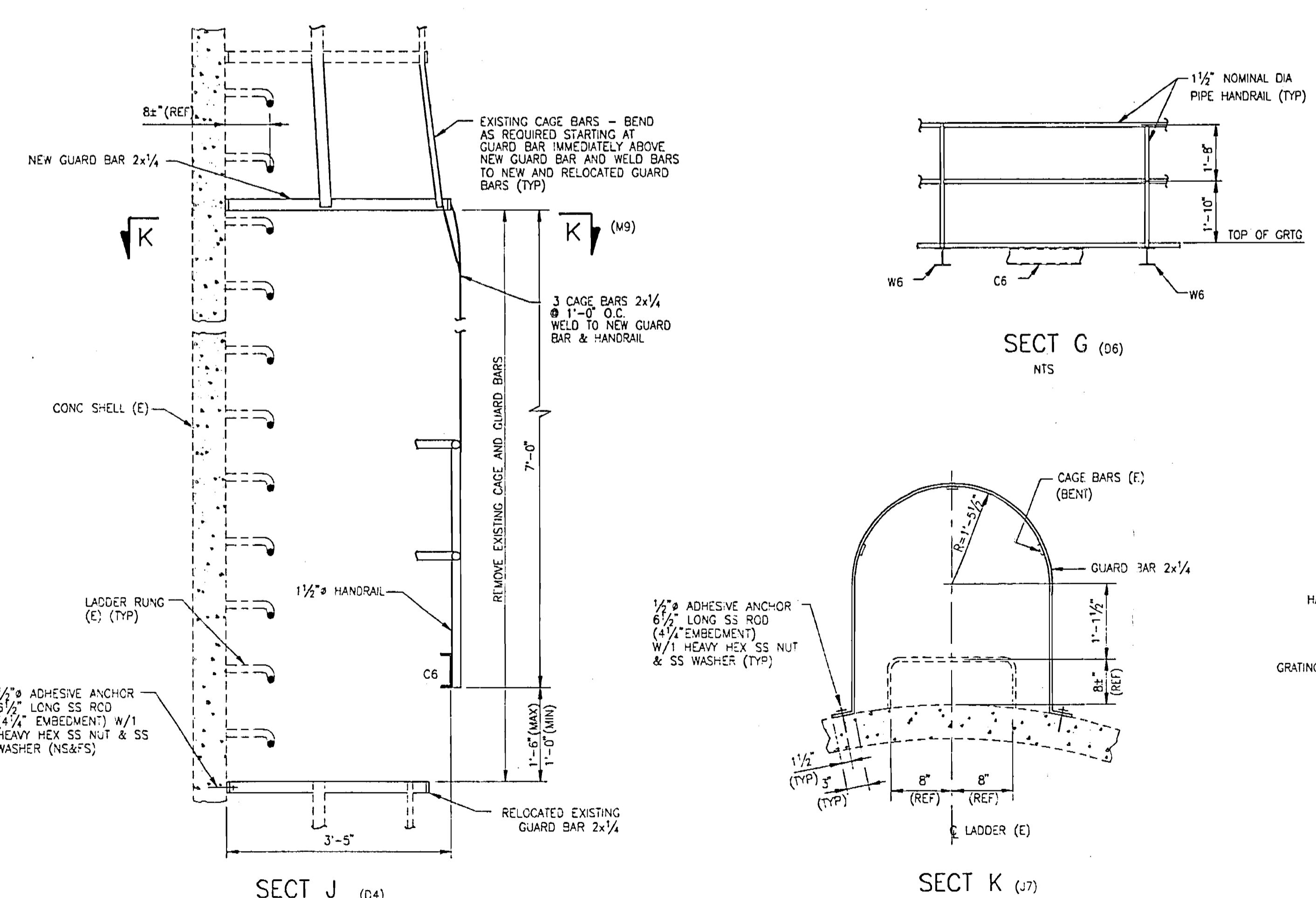
129-001-001 AV (1)



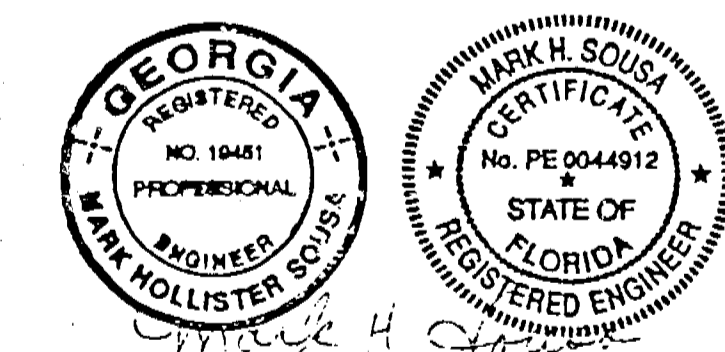
PLAN - PLATFORM AT EL 121.83  
DESIGN LIVE LOAD = 50 PSF  
(10S - 1 1/4" TYP UN)



- NOTES:
- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH AISC SPECIFICATION CTAL-4015-C-01.
  - STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH ASTM A36, UNLESS NOTED OTHERWISE.
  - (E) DENOTES EXISTING.
  - DENOTES HANDRAIL.
  - ALL BOLTED CONNECTIONS SHALL BE 3/4" A325 BOLTS UNLESS NOTED.
  - ALL GRATING SHALL BE GALVANIZED AND HAVE 1/2" DEEP BEARING BARS.
  - AFTER FABRICATION, ALL STEEL SURFACES (EXCEPT STAINLESS STEEL SURFACES) SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH SPECIFICATION CTAL-4015-C-01. AFTER ERECTION, ALL DAMAGED GALVANIZED SURFACES SHALL BE PREPARED AND TOUCHED-UP BY ERECTOR IN ACCORDANCE WITH SPECIFICATION CTAL-4015-C-01.
  - ERECTOR SHALL FURNISH THE SHERWIN-WILLIAMS ZINC CLAD 5, BEGMA45 PAINT REQUIRED FOR FIELD TOUCH-UP OF GALVANIZED SURFACES.
  - ADHESIVE ANCHORS SHALL BE HILTI HM ADHESIVE ANCHORS WITH COMPONENTS AND DIMENSIONS AS SHOWN. ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - CONTRACTOR SHALL CONFIRM DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION. IF DEVIATIONS ARE FOUND, NECESSARY ADJUSTMENT SHALL BE MADE, AFTER NOTIFYING OWNER.
  - CONTRACTOR SHALL REMOVE THE EXISTING SAF-T-CLIMB WIRE ROPE THAT IS ATTACHED TO THE LADDER RUNGS AND REPLACE IT WITH NEW 7/16" INCH DIAMETER STAINLESS STEEL WIRE ROPE FROM EL 92'-6" TO EL 184'-0".
  - ANY SURFACE AREA OF THE CHIMNEY DAMAGED PAINT FINISH DUE TO CONSTRUCTION SHALL BE REPAINTED BY THE CONTRACTOR. CONTRACTOR SHALL SUPPLY 5 GALLONS EACH OF THE FOLLOWING FOR TOUCH-UP PAINTING: TINDIECK CYCL SERIES 80 "CHILIAN RED", CE-10 AND "CLOUD", BF-82.



REFERENCE DRAWINGS:  
CONSOLIDATED CHIMNEY COMPANY:  
180x9" REINFORCED CONCRETE CHIMNEY-UNIT 7



AUG 5, 1994

THIS DOCUMENT IS THE PROPERTY OF EBASCO SERVICES INCORPORATED AND IS TO BE RETURNED UPON REQUEST. IT IS LOANED IN CONFIDENCE AND UPON THE CONDITION THAT NEITHER IT NOR THE INFORMATION CONTAINED IN IT WILL BE REPRODUCED, COPIED, DISCLOSED OR USED IN WHOLE OR PART EXCEPT FOR PURPOSES SPECIFIED IN WRITING BY EBASCO SERVICES INCORPORATED.

**CITY OF TALLAHASSEE**  
SAM O. PURDOM GENERATING STATION  
CONTINUOUS EMISSIONS MONITORING

**UNIT 7 CHIMNEY PLATFORM PLAN, SECTIONS AND DETAILS**

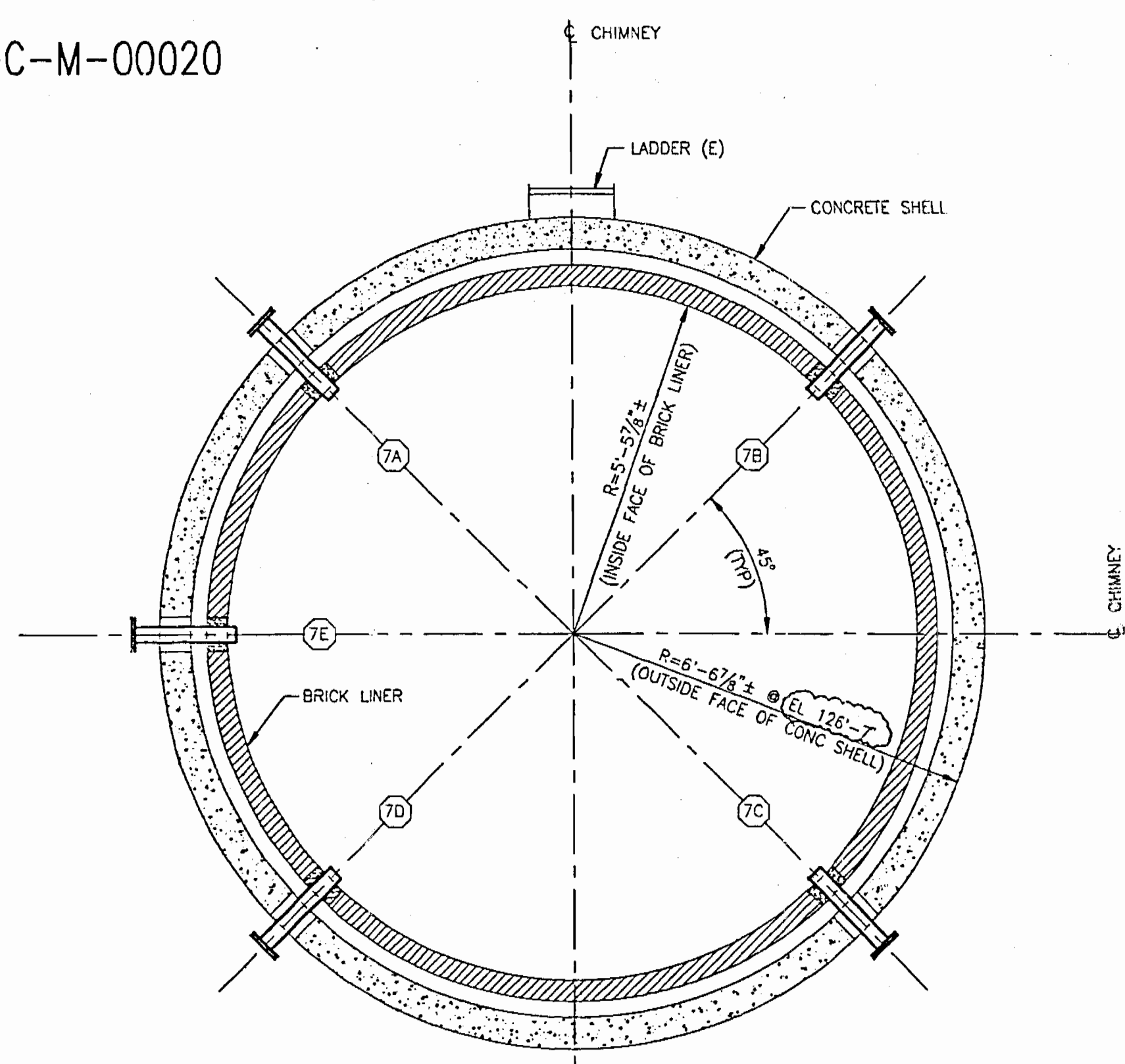
**EBASCO SERVICES INCORPORATED**  
145 TECHNOLOGY PARK, NORCROSS, GA. 30092-2979

SCALE 1/2"=1'-0" UN	APPROVED	DATE 12-29-93
DEPT. CIVIL	DR. G. FRANK	MARK H. SOUSA
CH. J. SMITH	FK	CTAL-PDM7-C-S-00021

ATTENTION: ANY REVISION TO THIS DRAWING MUST BE MADE BY COMPUTER AIDED DESIGN



CTAL-PDM7-C-M-00020

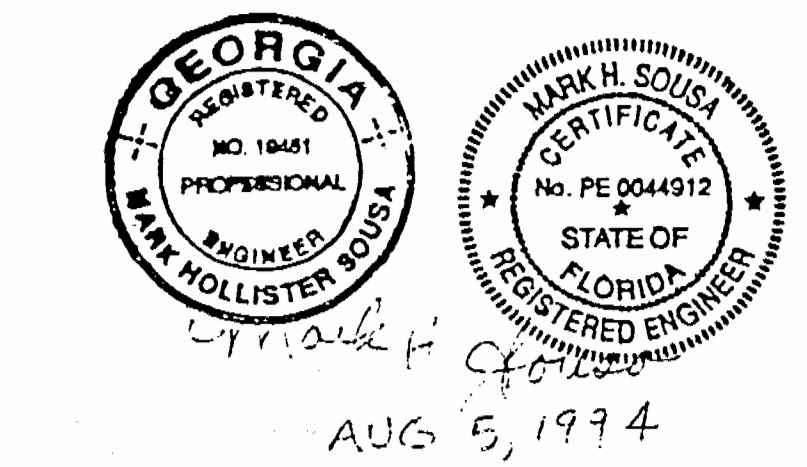


PLAN - PORT ARRANGEMENT AT EL. 126'-7"  
TOP OF CHIMNEY FOUNDATION EL. 9'-6"

CONTINUOUS EMISSIONS MONITORING (CEM) PORT SCHEDULE						REV NO	DATE	REVISION	DR	CH	APPROVED	
PORT IDENTIFICATION	NOMINAL DIAMETER	ELEVATION (GOLD POSITION)	CEM FUNCTION	PORT DETAIL	REMARKS	1	1-5-94	REVISED: U1 EPA SAMPLE PORT ELEVATIONS	LW	JJS	FK	M.SOUSA
7A	4"	126'-7"	EPA SAMPLING	A	NEW PORT	2	8-5-94	REVISED PER CONSTRUCTION DOCUMENTS ADDED (4) STN STL PORT COLLAR. REVISED (B) 4 (CS, FS) ELEV. (4) 4.3 (MS) CORE DRILL DIAMETER (4) 4.4 (MS) BOOT DETAIL (G) 8 (NOTE 10).	TN	JJS	FK	M.SOUSA
7B	4"	126'-7"	EPA SAMPLING	A	NEW PORT							
7C	4"	126'-7"	EPA SAMPLING	A	NEW PORT							
7D	4"	126'-7"	EPA SAMPLING	A	NEW PORT							
7E	4"	127'-4"	GAS PROBE	A	NEW PORT							

- NOTES:
- DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH EBASCO SPECIFICATION CTAL-2416-C-01.
  - STEEL SHALL BE IN ACCORDANCE WITH ASTM A36, UNLESS NOTED OTHERWISE.
  - STAINLESS STEEL (SS) PIPE SHALL BE IN ACCORDANCE WITH ASTM A312, TYPE 316L, STAINLESS STEEL (SS) PLATES SHALL BE IN ACCORDANCE WITH ASTM A182, TYPE 316L.
  - STAINLESS STEEL (SS) PIPE FLANGES SHALL BE ANSI CLASS 150 LB AND SHALL BE IN ACCORDANCE WITH ASTM A182, TYPE 316L.
  - FOR WELDING OF STAINLESS STEEL TO STAINLESS STEEL, ELECTRODES SHALL BE ANS/AWS A5.9, CLASS ER316L OR A5.4, CLASS E316L. FOR WELDING OF STAINLESS STEEL TO CARBON STEEL (CS), ELECTRODES SHALL BE ANS/AWS A5.9, CLASS ER309 OR A5.4, CLASS E309.
  - STAINLESS STEEL (SS) MACHINE BOLTS SHALL BE IN ACCORDANCE WITH ASTM A320, GRADE B8. NUTS SHALL BE IN ACCORDANCE WITH ASTM A194, GRADE 8.
  - ALL ADHESIVE ANCHORS SHALL BE HILTI HIT C-100 WITH HAS SS RODS AS MANUFACTURED BY HILTI, INC. OR APPROVED ALTERNATE. ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ADHESIVE ANCHORS SHALL BE PROVIDED WITH 1 HEAVY HEX SS NUT AND 1 STANDARD SS WASHER.
  - ALL CARBON STEEL SURFACES SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
  - ALL ELEVATIONS LOCATING PORTS ARE BASED ON THE BRICK LINER IN THE "COLD POSITION".
  - GROUT FOR PORT OPENINGS SHALL BE SECAR 41 AS MANUFACTURED BY LEFARGE CALCIUM ALUMINATES, OR APPROVED ALTERNATE, AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - (E) DENOTES EXISTING.
  - UPON COMPLETION OF CONSTRUCTION, ANY TEMPORARY LUGS WELDED TO EXISTING STEEL SHALL BE REMOVED AND THE EXISTING STEEL SURFACE GROUND SMOOTH AND REPAINTED WITH ZINC-RICH ORGANIC PRIMER AND A FINAL COAT TO MATCH THE EXISTING PAINT.
  - ANY SURFACE AREA OF THE CHIMNEY WITH DAMAGED PAINT FINISH DUE TO CONSTRUCTION SHALL BE REPAINTED BY THE CONTRACTOR. CONTRACTOR SHALL SUPPLY 5 GALLONS EACH OF THE FOLLOWING FOR TOUCH-UP PAINTING: INEMEC CRYL SERIES 60 "CHILLIAN RED", CE-10 AND "CLOUD", BF-B2.

REFERENCE DRAWINGS:  
180'-9" REINFORCED CONCRETE CHIMNEY-UNIT 7



THIS DOCUMENT IS THE PROPERTY OF EBASCO SERVICES INCORPORATED AND IS TO BE RETURNED UPON REQUEST. IT IS LOANED IN CONFIDENCE AND UPON THE CONDITION THAT NEITHER IT NOR THE INFORMATION CONTAINED IN IT WILL BE REPRODUCED, COPIED, DISCLOSED OR USED IN WHOLE OR PART EXCEPT FOR PURPOSES SPECIFIED IN WRITING BY EBASCO SERVICES INCORPORATED.

CITY OF TALLAHASSEE  
SAM O. PURDOM GENERATING STATION  
CONTINUOUS EMISSIONS MONITORING

UNIT 7 CHIMNEY PORTS  
ARRANGEMENT AND DETAILS

EBASCO SERVICES INCORPORATED

SCALE 1/2"=1'-0" UN

APPROVED: [Signature] DATE JULY 22, 1993

DEPT. CIVIL

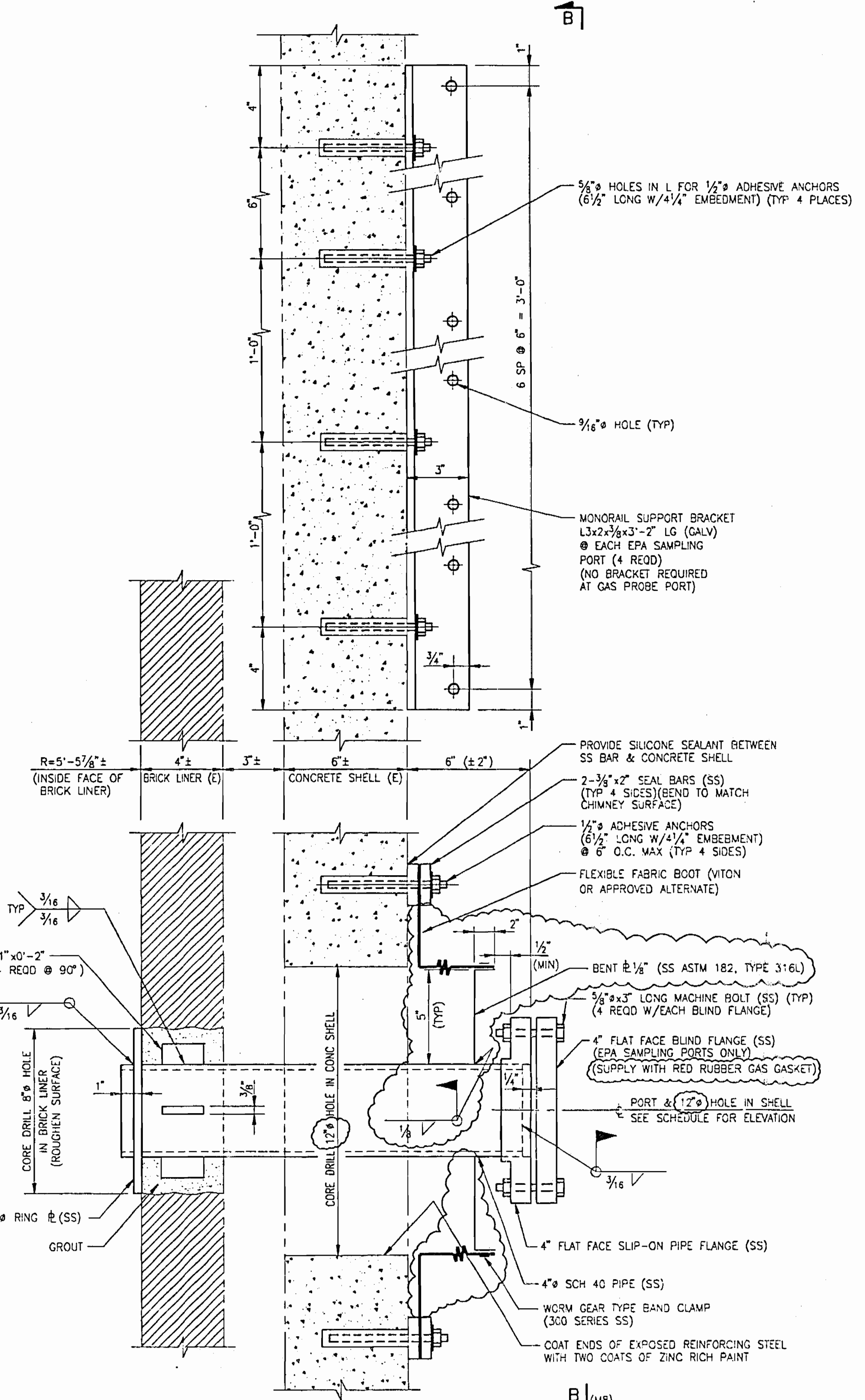
DR. T. NORRIS

CH. J. SMITH

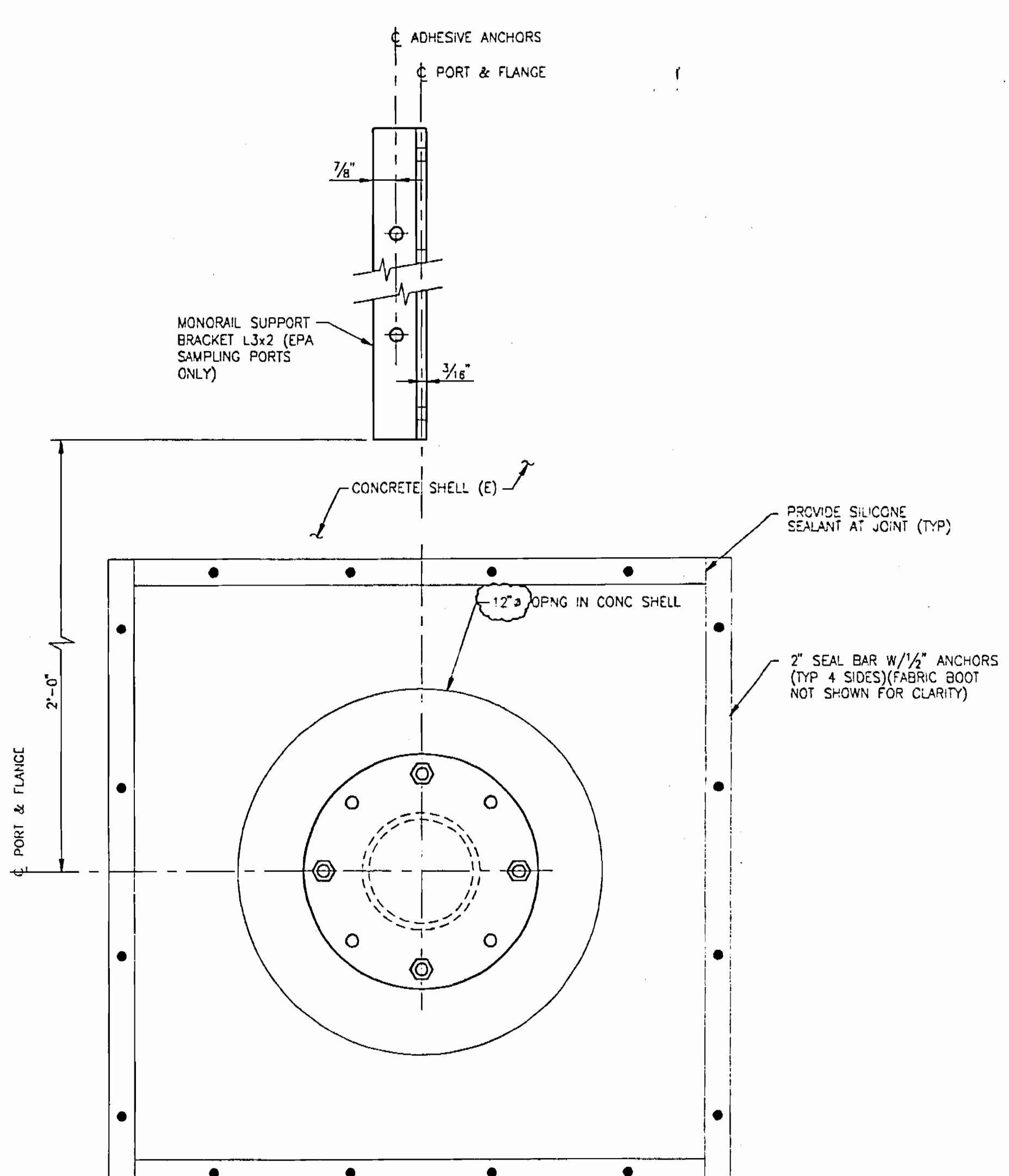
MARK H. SOUSA

F. KLEBAN

CTAL-PDM7-C-M-00020



PORT DET A  
ELEVATION - EPA SAMPLING PORT  
ELEVATION - GAS PROBE PORT  
3"=1'-0"



SECT B (NS)  
3"=1'-0"

A:\CTAL\PC\CIVIL\STRUCTURE\PDM7-000.DWG Mod. 8/2/94, 7:20:24, NORRIS, C3063, 5414.123, 1807 400...

Boiler 7 at the Sam O. Purdom Generating Station (EU11) requires stack sampling on an annual basis. As such, permanent stack testing facilities have been installed on the unit's exhaust stack. All test facilities are in accordance with Rule 297.310(6), Florida Administrative Code (F.A.C.). These facilities also meet any Occupational Safety and Health Administration (OSHA) Safety and Health Standards described in 29 CFR Part 1910, Subparts D and E. Testing equipment which is not permanently mounted, such as safety harnesses and electrical outlets will be made available to sampling personnel during each sampling event. Detailed drawing are attached.



**ATTACHMENT EU11-05**

---

The City of Tallahassee follows best operational practices in the startup and shutdown of the boilers at the Purdom Generating Station. Under normal conditions, standard operating guidelines are followed for startup and shutdown of the boilers. Under any abnormal condition of operation, best operational practices are followed to minimize emissions and to minimize the duration of any excess emissions.

**ATTACHMENT EU11-06**

---

Boiler No. 7 (EU11) located at the Purdom Generating Station has a maximum heat input capacity of 621 mmBtu/hour and produces 44 MW electricity. The alternative methods of operation (AMO) associated with the steam generator are related to the fuel type being fired and the operating rate. The current AMOs include the following:

Natural Gas - Up to Maximum Rate of 621 mmBtu/hour

Fuel Oil Firing - Up to Maximum Rate of 621 mmBtu/hour

Fuel Grade No. 6 (residual fuel oil)

Distillate Fuel Oils

On-Spec Used Oil

Co-firing any combination any combination of Fuel Oil No. 6, Distillate Fuel Oils, On-Spec Used Oil, or Natural Gas up to 621 mmBtu/hr.

**ATTACHMENT EU11-07**

---

The additional requirements are included within the attached current state operating permit (AO65-242831). Specific Conditions which have already been addressed have been crossed out. The attached requirements are contained in a State of Florida Operating Permit, which is not federally enforceable. These requirements are not subject to the definition of "applicable requirements".

**Revision Requests**

The City of Tallahassee has requested a revision to the conditions outlined in Specific Condition No. 4 for Boiler No. 5 and Boiler No. 6 (Attachments EU09-07 and EU10-07). The City of Tallahassee does not propose that the revision be applied to Boiler No. 7.

**Specific Condition No.4 - The City of Tallahassee requests to maintain the current requirements outlined in Special Condition No. 4 for Boiler No. 7, specifically the SO<sub>2</sub> allowable emission rate of 1.87 mmBtu/hr.**

PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: A065-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

1. The attached General Conditions are part of this permit.
2. The maximum allowable heat input rate is for Boilers 5 and 6 is 300 MMBtu/hour per boiler. The maximum allowable heat input rate for Boiler 7 is 621 MMBtu/hour. Testing of particulate emissions shall be conducted with the source operating at capacity. Capacity is defined as 90 to 100% of the maximum allowable heat input rate for the fuel or mix of fuels being burned. If it is impracticable to test at capacity, then sources may be tested at less than capacity; if the source is tested at less than capacity subsequent source operation is limited to 110% of the test capacity until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the Department.
3. The maximum hours of operation are 24 hours/day, 7 days/week, and 52 weeks/year. The Permittee shall maintain an operation log available for Department inspection certifying the total hours of operation annually.

4. The maximum allowable emission rate for each pollutant per source is as follows:

<u>Pollutant</u>	<u>FAC Rule</u>	<u>Allowable Emission Rate</u>
VE	17-296.405 17-210.700	20% opacity * 60% during Excess Emissions
PM	17-296.405 17-210.700	0.1 lbs/MMBtu heat input * 0.3 lbs/MMBtu heat input during Excess Emissions**
SO <sub>2</sub>	17-296.405	1.87 lbs/MMBtu heat input R

\* except for one two-minute period per hour of not more than 40% opacity

\*\* Emissions of particulate matter shall not exceed 0.1 (normal operations) and 0.3 (during excess emissions) lbs/MMBtu heat input when firing fuel oil. No particulate matter limit shall apply when firing natural gas.

The excess emissions provisions of F.A.C. Rule 17-210.700 shall apply during periods of startup, shutdown and malfunctions.

**PERMITTEE:**

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

**SPECIFIC CONDITIONS:**

5. Emissions tests for the following pollutants for each source shall be performed annually between July 1 and September 30, in accordance with the test methods and frequency indicated below, with notification to the Department 15 days prior to testing. The test results must provide reasonable assurance that the source is capable of compliance at the permitted maximum heat input rate. ~~The tests shall be conducted using the maximum fuel oil/natural gas ratio to be used during the subsequent operating year.~~ For good cause, the Permittee may request an extension of a compliance test due date. However, inadequate planning of testing does not constitute good cause for an extension of the compliance test due date. The test report documentation must be submitted to the Department within 45 days after completion of testing.

<u>Pollutant</u>	<u>Frequency</u>	<u>Test Method</u>
VE*	Annually, during normal operation Annually, during excess emissions, when applicable	DEP 9 DEP 9
PM*, *1	Annually Annually, during excess emissions, when applicable	EPA 1, 2, 3 and 5, or 17 ✓ EPA 1, 2, 3 and 5, or 17

\* shall be conducted using the maximum fuel oil to gas ratio in use during the current test year

\*1 No particulate tests shall be required in any federal fiscal year in which the fossil fuel steam generator did not burn fuel oil for more than 400 hours, other than during startup.

The VE test shall be conducted during one of the P.M. test runs. Test reports shall comply with F.A.C. Rule 17-297.570, Test Reports. The Department can require special compliance tests in accordance with F.A.C. Rule 17-297.340(2).

6. If fueled 100% by oil the sulfur content of the oil shall not exceed 1.8% sulfur by weight. Records of fuel sulfur content shall be kept and made available for Department inspections.

7. Satisfactory ladders, platforms, and other safety devices as well as necessary parts shall be provided, maintained, and made available as necessary to facilitate compliance inspections.

8. An annual operation report [DEP Form 17-210.900(4) attached] shall be submitted by March 1 each year. The attached form shall be reproduced by the Permittee and used for future annual submittals.



PERMITTEE:

City of Tallahassee  
Sam O. Purdom Power Plant

I.D. Number: 10TLH65000105,06,07  
Permit/Certification Number: AO65-242831  
Date of Issue: March 8, 1994  
Expiration Date: March 1, 1999

SPECIFIC CONDITIONS:

9. In accordance with F.A.C. Rule 17-213, a Major Air Pollution Source Annual Operation Fee Form [DEP Form 17-213.900(11) attached] must be completed and submitted with appropriate fee between January 15 and March 1 of each year. If the Department has not received the fee payment by March 1, the Department shall impose, in addition to the fee, a penalty of 50 percent of the amount of the fee, plus interest on such amount computed in accordance with s. 200.807, Florida Statutes. The Department may revoke any major air pollution source operation permit if it finds that the permit holder has failed to pay timely and required annual operation license fee, penalty or interest. The attached form shall be reproduced by the Permittee and used for future annual submittals. The completed form and appropriate fees must be submitted to the Department of Environmental Protection, Title V (Facility I.D. Number), 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

10. An application to renew this permit shall be submitted prior to December 31, 1998.

11. The permanent source identification number for these point sources are:

10TLH65000105 - Boiler 5  
10TLH65000106 - Boiler 6  
10TLH65000107 - Boiler 7

Please cite these numbers on all test reports and other correspondence specific to a permitted point source.

12. The Department telephone number for reporting problems, malfunctions or exceedances under this permit is (904) 444-8300, day or night, and for emergencies involving a significant threat to human health or the environment is (904) 488-1320. For routine business, use telephone number (904) 444-8300 during normal working hours.

Expiration Date:

March 1, 1999

Issued this 8<sup>th</sup> day of March,  
1994.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

  
BOBBY A. COOLEY  
District Director

**ATTACHMENT EU11-08**

---

# Phase II Permit Application

For more information, see Instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is:  New  Revised

**STEP 1**  
Identify the source by plant name, State, and ORIS code from NADB

<b>Sam O. Purdom</b>	<b>FL</b>	<b>689</b>
Plant Name	State	ORIS Code

**STEP 2**  
Enter the boiler ID# from NADB for each affected unit, and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e

Compliance Plan				
a	b	c	d	e
Boiler ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	Repowering Plan	New Units  Commence Operation Date	New Units  Monitor Certification Deadline
7	Yes	No		
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

**STEP 3**  
Check the box if the response in column c Step 2 is "Yes" for any unit

## Sam O. Purdom

Plant Name (from Step 1)

Phase II Permit - Page 2

**STEP 4**  
Read the standard requirements and certification, enter the name of the designated representative, and sign and date

### Standard Requirements

#### Permit Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the permitting authority; and
  - (ii) Have an Acid Rain Part.

#### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

#### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

#### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

#### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
  - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75;
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

### Sam O. Purdom

Plant Name (from Step 1)

#### Recordkeeping and Reporting Requirements (cont.)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

#### Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.

(5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.

(6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

(7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;


(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

#### Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Rob E. McGarrah, Production Superintendent	
Signature		Date December 15, 1995

**STEP 5 (optional)**  
Enter the source AIRS  
and FINDS identification  
numbers, if known

AIRS
FINDS

# Acid Rain Program

## Instructions for Phase II Permit Application

(40 CFR 72.30- 72.31 and Rule 62-214.320, F.A.C.)

*The Acid Rain Program regulations require the designated representative to submit an Acid Rain part application for Phase II for each source with an Acid Rain unit. A complete Phase II part application is binding on the owners and operators of the Acid Rain source and is enforceable in the absence of a permit until the permitting authority either issues a permit with an Acid Rain part to the source or disapproves the application.*

Please type or print. The alternate designated representative may sign in lieu of the designated representative. If assistance is needed, contact the permitting authority.

**STEP 1** NADB is the National Allowance Data Base for the Acid Rain Program. To obtain the database on diskette, call the Acid Rain Hotline at (202) 233-9620. This data file is in dBase format for use on an IBM-compatible PC. It requires 2 megabytes of hard drive memory. If the unit is not listed in NADB, use the plant name, ORIS Code, and Boiler ID listed on the certificate of representation for the plant.

**STEP 2** The monitor certification deadline is determined in accordance with 40 CFR 75.4. If the commence operation date or monitor certification date changes after the Phase II permit is issued, the source must submit a request for an administrative permit amendment.

**STEP 5** "AIRS" is the Aerometric Information Retrieval System operated by EPA's Office of Air Quality Planning and Standards. The AIRS number for a source has 12 digits. "FINDS" is the Facility Indexing System. It provides an Agency-wide ID number to cross-identify facilities in all EPA data systems. Please enter these numbers if they are available; this step is optional.

### Submission Instructions

For Initial Phase II permit applications: If, by **November 15, 1995**, the State or local jurisdiction (e.g., District, County, or City) in which the source is located has both (1) an acid rain program identified in a Federal Register notice as acceptable to the Administrator and (2) an operating permits program granted full or interim approval by the Administrator in a Federal Register notice, mail this form and three copies to that state or local authority. If not, mail this form and one copy to the EPA regional office and two copies to the State or local jurisdiction in which the source is located.

If you have questions regarding this form, contact your local, State, or EPA regional representative, or call EPA's Acid Rain Hotline at (202) 233-9620.