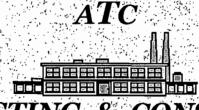
BAYFRONT MEDICAL CENTER

APPLICATION FOR TITLE V AIR OPERATION PERMIT

PREPARED FOR:

BAYFRONT MEDICAL CENTER 701 SIXTH STREET SOUTH ST. PETERSBURG, FLORIDA PINELLAS COUNTY

PREPARED BY:



AIR TESTING & CONSULTING

333 FALKENBURG ROAD, SUITE B-214 TAMPA, FLORIDA 33619

MEMORANDUM

RECEIVED

JAN 23 2006

TO: Jonathan Holtom, P.E.

FROM: Jason Waters, P.Ex

DATE: January 20, 2006

BUREAU OF AIR REGULATION

Jonathan, please find attached a Title V permit application (1030095-004-AV) we received from

SUBJECT: Bayfront Medical Center's Title V Renewal 1030095-004-AV - CAM issues

Bayfront Medical Center on January 12, 2006 (1 day late from being timely).

I am sending this application to you, so you can be involved from the beginning in addressing any potential CAM issues.

Thank You

HCL per AC of 2.92 JP4 (NSPS = 5. 94 JPY)
using Scrubber & Phof 7.0 × 85% efficient?
cossume only 80% putential & 14.5 JPY una would need to be = 70% to be under withy unca CAN vill be required! Muy be able to bland with USPS montoring regis. will wait to hear buch from Jim. M.

BAYFRONT MEDICAL CENTER

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1.0	Application Information
2.0	Facility Information
3.0	Facility Supplemental Information
	 01 – Facility Plot Plan 02 - Process Flow Diagram 03 – Precautions to Prevent Unconfined Emissions 04 – List of Insignificant Activities 05 - Applicable Requirements 06 - Compliance Report and Plan 07 – Equipment/Activities Regulated under Title VI
4.0	Emission Units
	1 – Hospital/Medical/Infectious Waste Incinerator

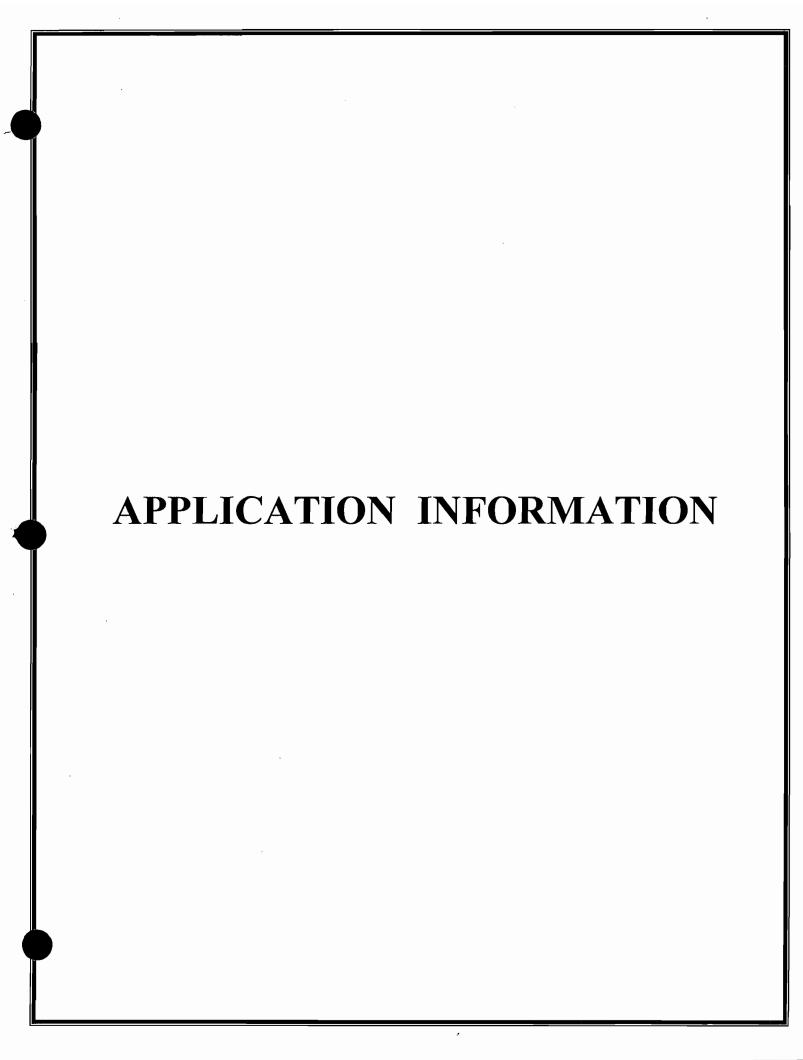
Supplemental Information

- 01 Process Flow Diagram
- 02 Fuel Specification
- 03 Control Equipment Description
- 04 Startup and Shutdown Procedures
- 05 Operation and Maintenance Plan
- 06 Applicable Requirements

2 - Boiler

Supplemental Information

- 01 Process Flow Diagram
- 02 Fuel Specification
- 03 Applicable Requirements





Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

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

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit - Use this form to apply for:

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

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

Lui	dentification of Facility					
1.	Facility Owner/Company Name: BAYFRON	T MEDICAL CEN	ITER			
2.	Site Name: BAYFRONT MEDICAL CENTER					
3.	Facility Identification Number: 1030095					
4.	Facility Location: Street Address or Other Locator: 750 5 th Av	venue South, St.				
	City: ST. PETERSBURG County: PI	NELLAS	Zip Code: 33701-4891			
5.	Relocatable Facility? Yes X No	6. Existing Title X Yes	V Permitted Facility? ☐ No			
Ar	oplication Contact					
1.	Application Contact Name: ROBERT FAIR	BURN – SYSTEN	I TECHNICIAN			
2.	Application Contact Mailing Address Organization/Firm: BAYFRONT MEDICA	L CENTER				
	Street Address: 750 5th Avenue South, S	St.				
	City: ST. PETERSBURG Sta	te: FLORIDA	Zip Code: 33701-4891			
3.	Application Contact Telephone Numbers					
	Telephone: (727) 893-6178 ext.	Fax: (727) 893	3-6943			
4.	Application Contact Email Address: robert.f	fairburn@baycare.c	org			
A	Application Processing Information (DEP Use)					
1.	Date of Receipt of Application:					
2.	Project Number(s):					
3.	PSD Number (if applicable):					
4.	Siting Number (if applicable):					
						

DEP Form No. 62-210.900(1) - Form

Effective: 06/16/03

Purpose of Application

This application for air permit is submitted to obtain:	(Check one)	
Air Construction Permit		
Air construction permit.		
Air Operation Permit Initial Title V air operation permit. Title V air operation permit revision. Title V air operation permit renewal. Initial federally enforceable state air operation permit ((PE) certification is required. Initial federally enforceable state air operation permit ((PE) certification is not required.		
Air Construction Permit and Revised/Renewal Title V	Air Operation Permit	
(Concurrent Processing) Air construction permit and Title V permit revision, including the second construction of the second con	cornorating the proposed project	
Air construction permit and Title V permit revision, inc		
Note: By checking one of the above two boxes, you requesting concurrent processing pursuant to Rusuch case, you must also check the following box:	lle 62-213.405, F.A.C. In	
☐ I hereby request that the department waive the prequirements of the air construction permit to act time frames of the Title V air operation permit.		
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DEP Form No. 62-210.900(1) - Form

Effective: 06/16/03

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
002	HOSPITAL WASTE INCINERATOR	AF2A	
003	BOILER	AF2B	
·—			
-			
_			

Apprication Processing Fee	
Check one: Attached - Amount: \$	X Not Applicable

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Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP. 1. Owner/Authorized Representative Name: 2. Owner/Authorized Representative Mailing Address... Organization/Firm Street Address: City: Zip Code: State: 3. Owner/Authorized Representative Telephone Numbers... Telephone: (ext. Fax: 4. Owner/Authorized Representative Email Address: 5. Owner/Authorized Representative Statement: I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Date

Signature

Effective: 06/16/03

Application Responsible Official Certification

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

DEP Form No. 62-210.900(1) - Form

Effective: 06/16/03 5

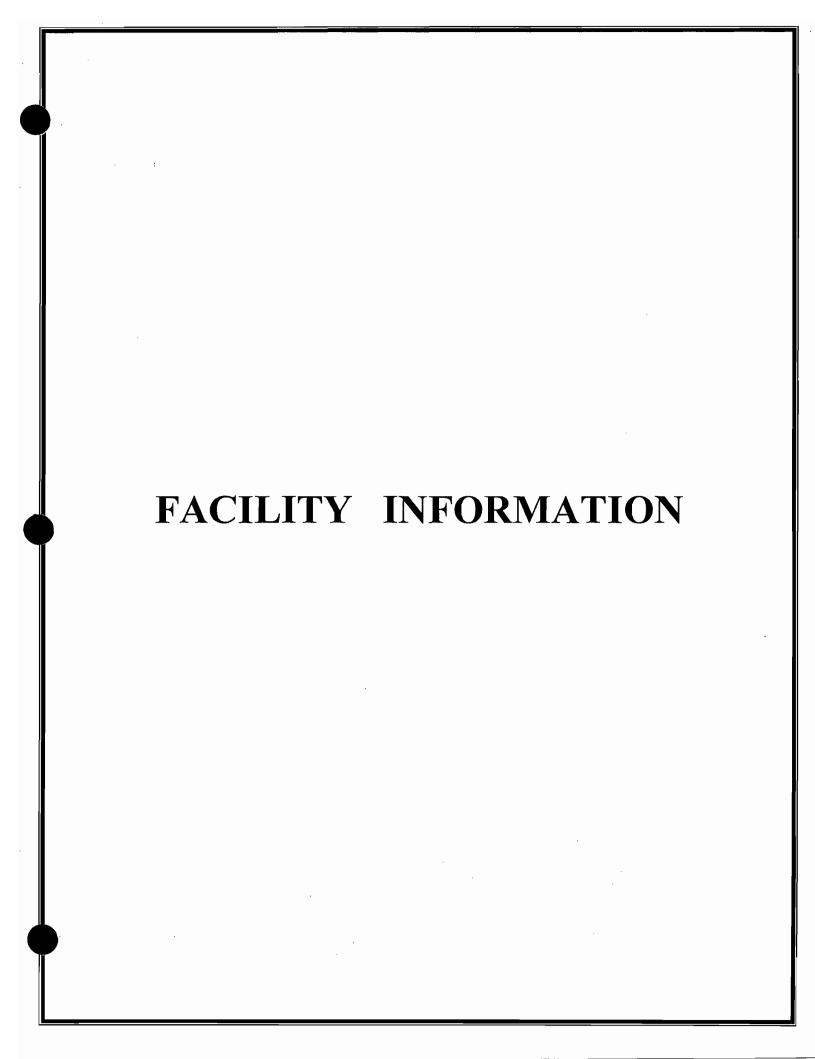
Pr	ofessional Engineer Certification			
1.	Professional Engineer Name: KENNETH E. GIVEN			
	Registration Number: 23203			
2.	Professional Engineer Mailing Address			
	Organization/Firm: AIR TESTING & CONSULTING			
	Street Address: 333 FALKENBURG RD., N. UNIT B-214			
	City: TAMPA State: FLORIDA Zip Code:33619			
3.	Professional Engineer Telephone Numbers			
	Telephone: (813)651-0878 ext. Fax: (813) 653-9082			
4.	Professional Engineer Email Address: airtest@verizon.net			
5.	Professional Engineer Statement:			
	I, the undersigned, hereby certify, except as particularly noted herein*, that:			
	(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and			
	(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.			
	(3) If the purpose of this application is to obtain a Title V air operation permit (check here, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.			
	(4) If the purpose of this application is to obtain an air construction permit (check here , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.			
	(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here x , 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 internation given in the corresponding application for air construction permit and with all provisions construct the permit. Signature No 23203 Date			
•	(seal)			

* Attach any exception to certification statement.

DEP Form No. 62.210.900(1) - Form

Effective: 06/16/03***

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A. GENERAL FACILITY INFORMATION

Facility Location and Type

1.	1. Facility UTM Coordinates Zone 17 East (km) 337.9 North (km) 3072.1			2. Facility Latitude/Longitude Latitude (DD/MM/SS) 27 ⁰ 45'54'' N Longitude (DD/MM/SS) 82 ⁰ 39'41'' W			
3.	3. Governmental Facility Code: Code: A			5. Facility Major Group SIC Code: 80 6. Facility SIC(s): 8062			
7.	Facility Comment:		•				
ı							

Facility Contact

1.	Application Contact Name: ROBERT FAIRBURN – SYSTEMS TECHNICIAN				
2.	Application Contact Mailing Address				
	Organization/Firm: BAYFRONT	MEDICAL	CENTER		
	Street Address: 750 5th Avenu	e South St.			
	City: St. Petersburg	State	: FLORIDA	Zip Code: 33701-4891	
3.	Application Contact Telephone Nu	mbers			
	Telephone: (727) 893-6178	ext.	Fax: (727) 89	93-6943	
4.	Facility Contact Email Address: ro	bert.fairbu	rn@baycare.org	7	

Facility Primary Responsible Official

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

		*						
1.	Facility Primary R	esponsib	ole Officia	l Name:				
2.	Facility Primary R Organization/Firm Street Address:	:	ole Officia	l Mailing Ad	ldress			
	City	y:		State:			Zip Code	:
3.	Facility Primary R	esponsib	ole Officia	l Telephone	Numbers			
	Telephone: ()	_	ext.	Fax:	()	-
4.	Facility Primary R	esponsit	ole Officia	l Email Add	ress:			

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Facility Regulatory Classifications

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

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

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DEP Form No. 62-210.900(1) - Form

Effective: 06/16/03

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	В	N
СО	В	N
H106 (HCL)	В	N
NOX	В	N
SO2	В	N
DIOX	В	N
PB	В	N
H027 (Cadmium)	В	N
H114 (Mercury)	В	N
		_

DEP Form No. 62-210.900(1) - Form Effective: 06/16/03

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B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

DEP Form No. 62-210.900(1) - Form

Effective: 06/16/03

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID:01 Previously Submitted, Date:				
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID:02 Previously Submitted, Date:				
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID:03 Previously Submitted, Date:				
Ad	Additional Requirements for Air Construction Permit Applications				
1.	Area Map Showing Facility Location: Attached, Document ID: Not Applicable (existing permitted facility)				
2.	Description of Proposed Construction or Modification: Attached, Document ID:				
3.	Rule Applicability Analysis: Attached, Document ID:				
4.	List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): Attached, Document ID: Not Applicable (no exempt units at facility)				
5.	Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.): Attached, Document ID: Not Applicable				
6.	Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.): Attached, Document ID: Not Applicable				
7.	Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.): Attached, Document ID: Not Applicable				
8.	Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.): Attached, Document ID: Not Applicable				
9.	Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.): Attached, Document ID: Not Applicable				
10	. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): Attached, Document ID: Not Applicable				

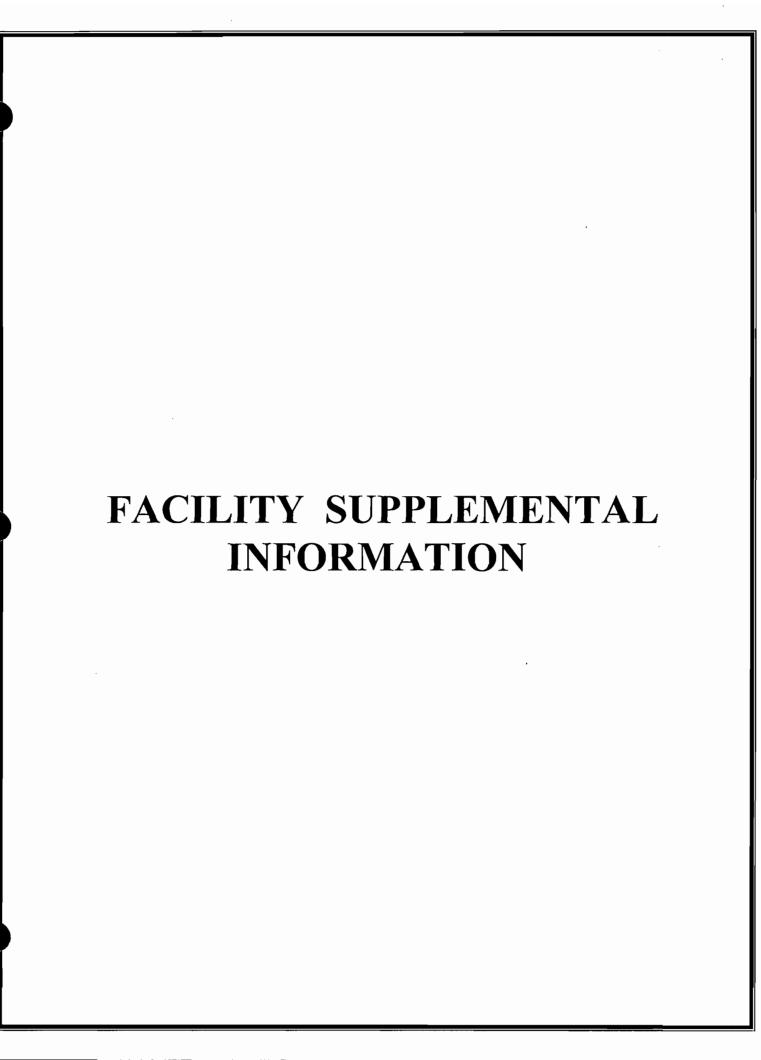
DEP Form No. 62-210.900(1) - Form

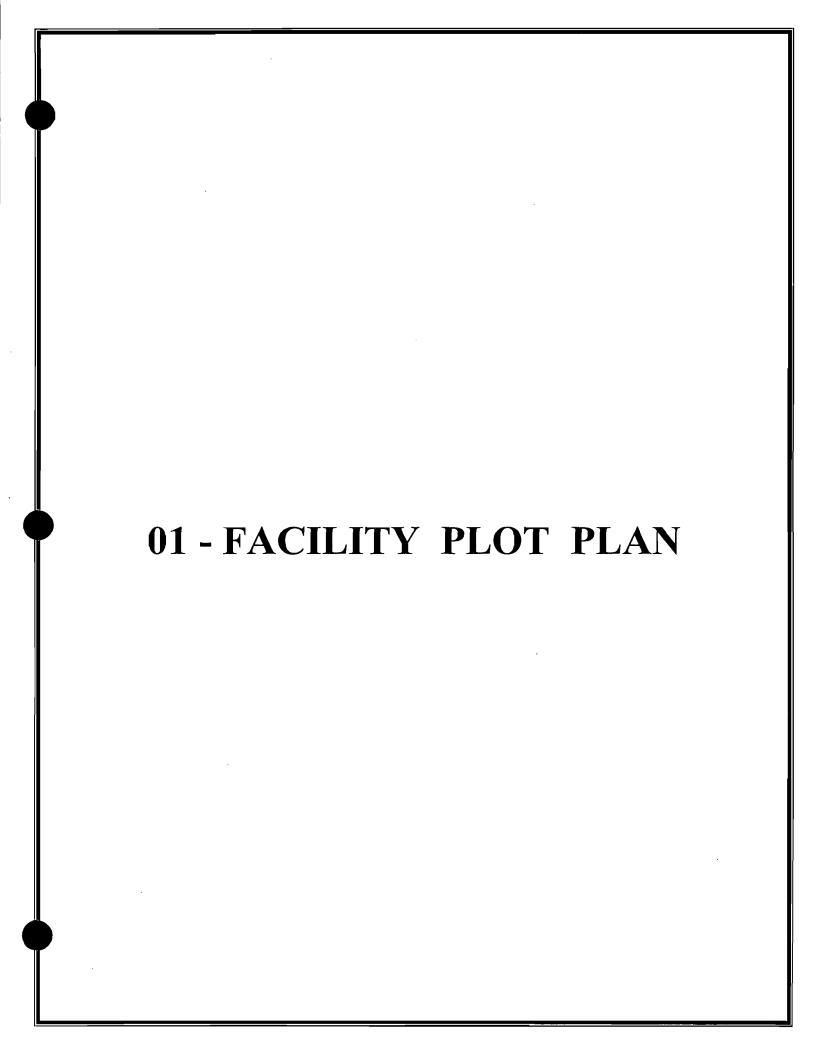
Effective: 06/16/03 11

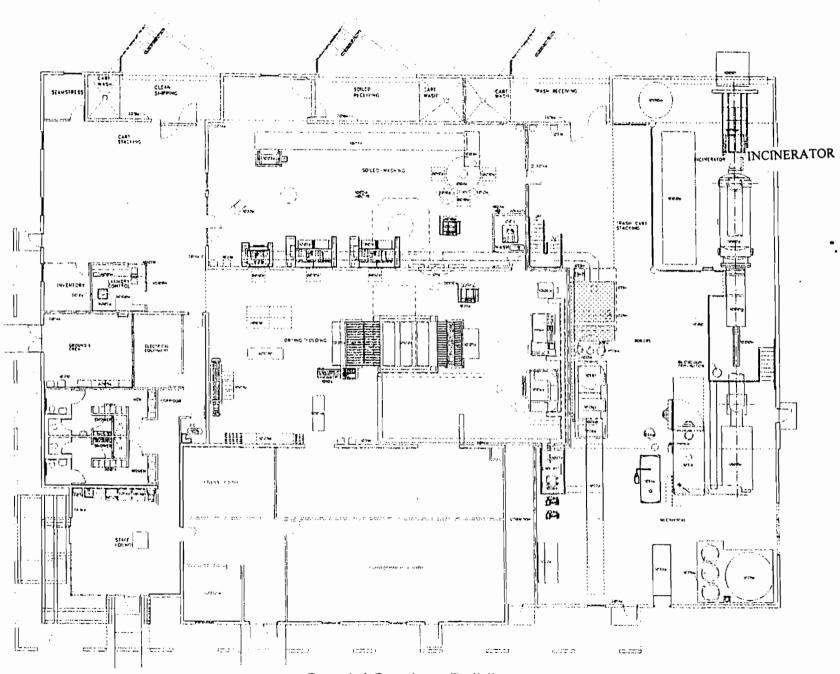
Additional Requirements for FESOP Applications 1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): Attached, Document ID: Not Applicable (no exempt units at facility) Additional Requirements for Title V Air Operation Permit Applications 1. List of Insignificant Activities (Required for initial/renewal applications only): X Attached, Document ID:04 Not Applicable (revision application) 2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought): X Attached, Document ID:05 Not Applicable (revision application with no change in applicable requirements) 3. Compliance Report and Plan (Required for all initial/revision/renewal applications): X Attached, Document ID:06 Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing. 4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only): X Attached, Document ID:07 Equipment/Activities On site but Not Required to be Individually Listed Not Applicable 5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only): X Not Applicable Attached, Document ID: 6. Requested Changes to Current Title V Air Operation Permit: X Not Applicable Attached, Document ID: Additional Requirements Comment

DEP Form No. 62-210.900(1) - Form

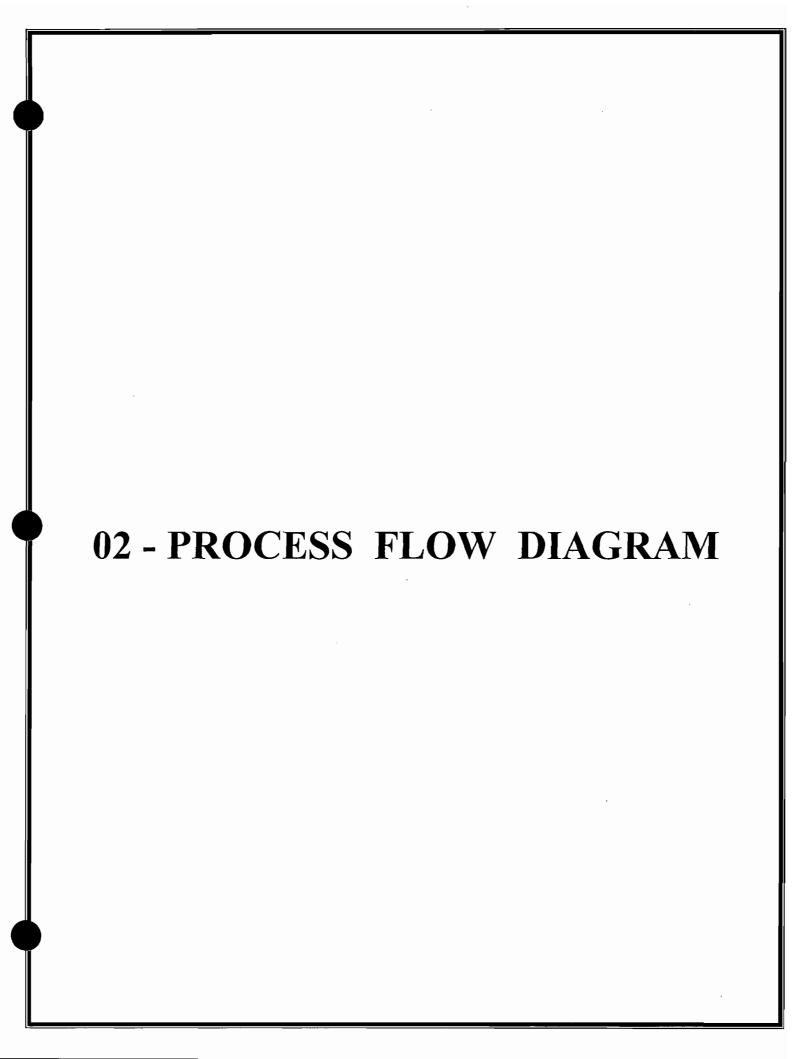
Effective: 06/16/03 12



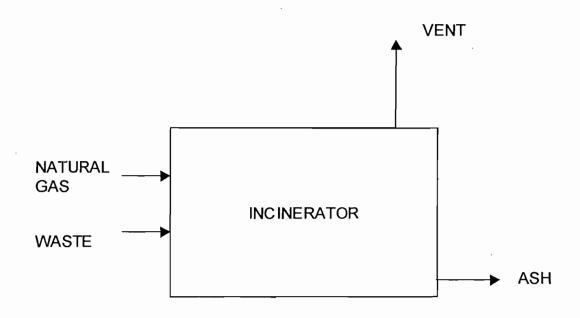


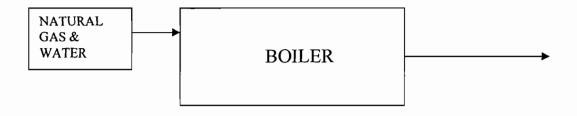


Special Services Building Bayfront Medical Center-St. Petersburg, Fl.



PROCESS FLOW – BAYFRONT MEDICAL CENTER





03 – PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Precautions to Prevent Emissions of Unconfined Particulate Matter

Bayfront Medical Center has taken and will continue to take reasonable precautions to prevent emissions of unconfined particular matter such as:

- Paving and maintenance of roads, parking areas and yards, when necessary.
- Application of water or non-hazardous chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
- Application of water or non-hazardous chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
- Removal of particulate matter from roads and other paved areas to prevent entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
- Landscaping or planting of vegetation.
- Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
- Confine abrasive blasting where possible.

04 - LIST OF INSIGNIFICANT ACTIVITIES

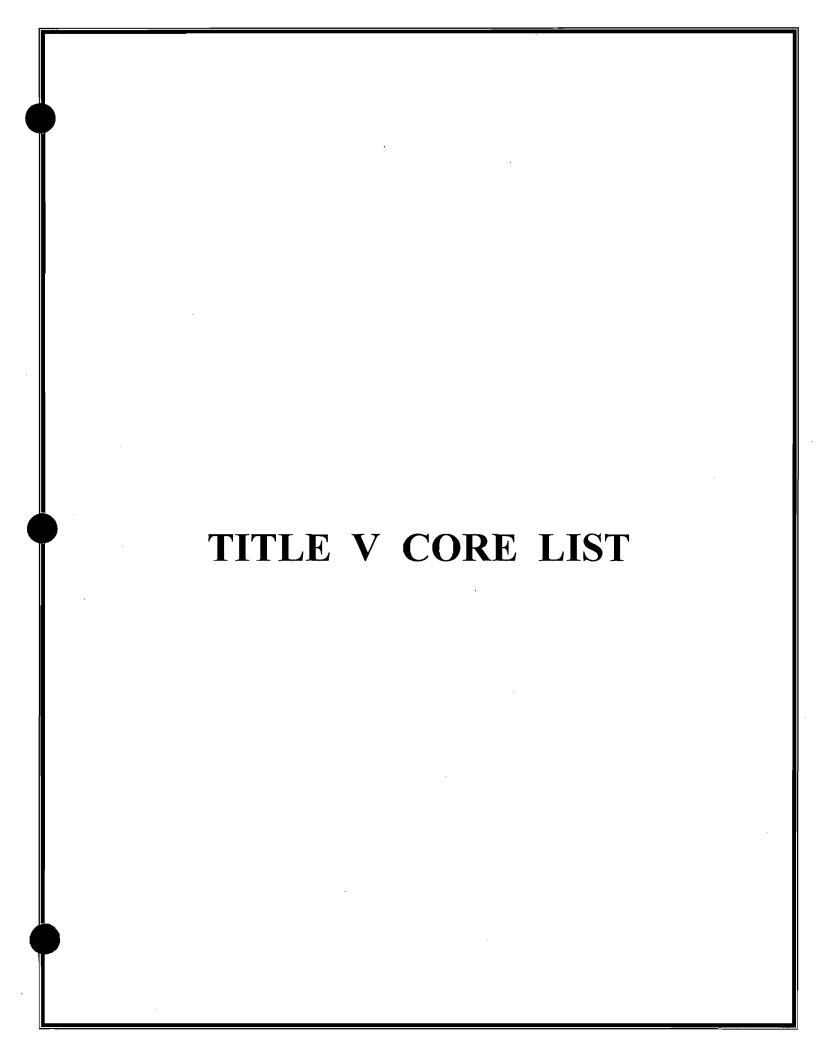
BAYFRONT MEDICAL CENTER LIST OF INSIGNIFICANT ACTIVITIES

LOCATION	PROCESS/ACTIVITY	EXPLANATION	
Engineering	Cooling Towers (2)	Estimated VOC <5 TPY	
Laboratories	Hoods, Sink Drain Vents	Exempt per 62-210.300(3)(a)15	
Plant-wide	Maintenance Activities	Estimated PM < 5 TPY	
Engineering	Laundry	Exempt per 62-210.300(3)(a)17	
Plant Wide	Compressors, Refrigeration System, Condensers	Sealed systems	
Engineering	NaOH Storage Tank	No emissions	
Plant Wide	Fire and safety equipment	Exempt per 62-210.300(3)(a)22	

05 – APPLICABLE REQUIREMENTS

List of Applicable Regulations

Federal: Title V Core List	
40 CFR 60, Subpart A	General Provisions
State:	See page 15
County: Section 58-128	O&M plan



Title V Core List

Effective: 03/01/02

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal:

(description)

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State:

(description)

CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS, effective 06-21-01

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits.

Title V Core List

- 62-210.350, F.A.C.: Public Notice and Comment.
- 62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
- 62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.

Effective: 03/01/02

- 62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.
- 62-210.360, F.A.C.: Administrative Permit Corrections.
- 62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
- 62-210.400, F.A.C.: Emission Estimates.
- 62-210.650, F.A.C.: Circumvention.
- 62-210.700, F.A.C.: Excess Emissions.
- 62-210.900, F.A.C.: Forms and Instructions.
- 62-210.900(1), F.A.C.: Application for Air Permit Title V Source, Form and Instructions.
- 62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
- 62-210.900(7), F.A.C.: Application for Transfer of Air Permit Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 08-17-00

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01

- 62-213.205, F.A.C.: Annual Emissions Fee.
- 62-213.400, F.A.C.: Permits and Permit Revisions Required.
- 62-213.410, F.A.C.: Changes Without Permit Revision.
- 62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
- 62-213.415, F.A.C.: Trading of Emissions Within a Source.
- 62-213.420, F.A.C.: Permit Applications.
- 62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
- 62-213.440, F.A.C.: Permit Content.
- 62-213.450, F.A.C.: Permit Review by EPA and Affected States
- 62-213.460, F.A.C.: Permit Shield.
- 62-213.900, F.A.C.: Forms and Instructions.
- 62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
- 62-213.900(7), F.A.C.: Statement of Compliance Form.

Title V Core List

Effective: 03/01/02

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99

62-297.310, F.A.C.: General Test Requirements.

62-297.330, F.A.C.: Applicable Test Procedures.

62-297.340, F.A.C.: Frequency of Compliance Tests.

62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.

62-297.350, F.A.C.: Determination of Process Variables.

62-297.570, F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

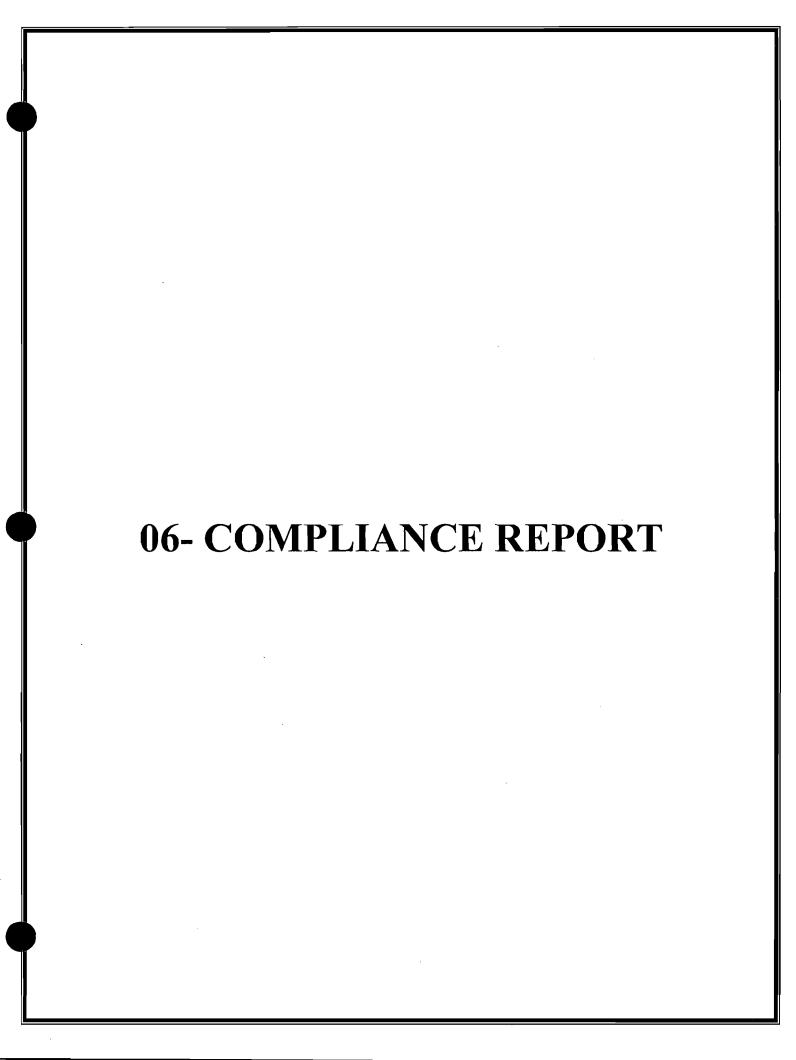
CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests

CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98

CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94

CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99

CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96



Compliance Report

Permit Number / Emission Unit	Compliance Status
1030095-003-AV HOSPITAL WASTE INCINERATOR	In compliance with all applicable requirements based on annual testing and AOR.
1030095-003-AV BOILER	In compliance with all applicable requirements based on annual testing and AOR.

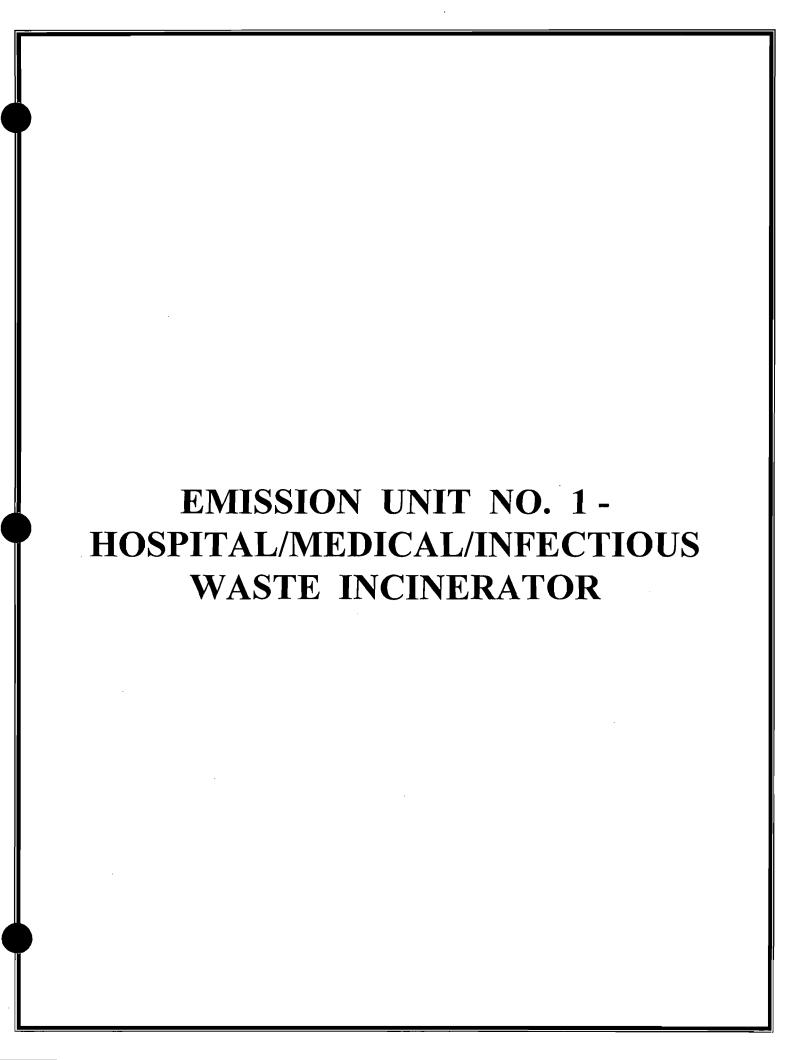
07 – EQUIPMENT / ACTIVITIES REGULATED UNDER TITLE VI

EQUIPMENT REGULATED UNDER TITLE VI

Main Facility

Chillers #1 - 7
Manufacturer - Trane
Refrigerant - Freon 123

EMISSION UNITS INFORMATION



INCINERATOR PROCESS DESCRIPTION

Bayfront Medical Center operates a Joy Energy Systems, Inc., Model 1500 TE, Serial number 15-TE-91-20, natural gas fired dual-chamber incinerator, with the capacity to burn 1,500 pounds per hour of hospital waste. The maximum natural gas heat input is 5.34 MMBTU/hr. The incinerator exhaust is fitted with a waste heat recovery boiler and a Calvert Flux Force/Condensation collision Scrubber system (Model FC, Serial No. 1280). Dilute sodium hydroxide, at approximately pH 7, is used for the scrubbing liquid. An emergency "dump" stack can bypass both the scrubber and boiler.

Waste is charged through an air lock by a hydraulic ram system. A water seal "quench" tank controls ash removal dust. Both systems operate during incinerator use. Secondary chamber temperature is continuously recorded on daily circular charts, and must be maintained above 1800°F prior to and during waste processing.

A. GENERAL EMISSIONS UNIT INFORMATION

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or

Title V Air Operation Permit Emissions Unit Classification

	renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)						
	 The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit. The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit. 						
]	Emissions Unit Description and	<u>Status</u>					
	. Type of Emissions Unit Addre	ssed in this Section	on: (Check one)				
	X This Emissions Unit Inform	nation Section ad	dresses, as a single em	issions unit, a single			
	process or production unit,	-	-	e air pollutants and			
	which has at least one defin	•	,	::			
	This Emissions Unit Inform process or production units (stack or vent) but may also	and activities wh	nich has at least one de				
	This Emissions Unit Inform			iccione unit one or			
	more process or production						
	2. Description of Emissions Unit Addressed in this Section: Dual chamber hospital waste incinerator						
	B. Emissions Unit Identification	Number: 002		_			
4	H. Emissions 5. Commence Unit Status Code: A Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit? Yes X No			
			80				
9	Package Unit:						
-	Manufacturer: Joy Energy Systems Model Number: 1500TE						
\vdash	10. Generator Nameplate Rating: MW						
-	11. Emissions Unit Comment:						

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EMISSIONS UNIT INFORMATION Section [1] of [2]

Emissions Unit Control Equipment

_	
1.	Control Equipment/Method(s) Description:
	The incinerator's secondary chamber is a direct flame after burner where CO and VOC emissions are burned. The incinerator exhaust emissions are controlled by an Calvert Flux Force/ Condensation Collision Scrubber System (Model FC, Serial No. 1280). Dilute sodium hydroxide, at approximately pH 7, is used for scrubbing liquid to remove acid gases.
2.	Control Device or Method Code(s): 021, 053, 070

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B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Through	put Rate:	•
2.	Maximum Production Rate:	-	
3.	Maximum Heat Input Rate:	million Btu/hr	
4.	Maximum Incineration Rate: 1	500 pounds/hr	
	1	18 tons/day	
5.	Requested Maximum Operatir	ng Schedule:	
		hours/day	days/week
		weeks/year	7300 hours/year
6.	Operating Capacity/Schedule	Comment:	
ļ			

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EMISSIONS UNIT INFORMATION

Section [1]

of [2]

C. EMISSION POINT (STACK/VENT) INFORMATION (Optional for unregulated emissions units.)

Emission Point Description and Type

Identification of Point on Plot Plan or Flow Diagram: Incinerator		2. Emission Point Type Code: 1			
Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: ID Numbers or Descriptions of Emission Units with this Emission Point in Common:					
4. ID Numbers or Descriptio					
5. Discharge Type Code:	6. Stack Height	t: 5 feet	7. Exit Diameter: 2 feet		
8. Exit Temperature: 132°F	<u>-</u>		10. Water Vapor: 5 %		
11. Maximum Dry Standard Flow Rate: 2700 dscfm		12. Nonstack Emission Point Height: feet			
13. Emission Point UTM Coordinates Zone: East (km): North (km):		14. Emission Point Latitude/Longitude Latitude (DD/MM/SS) Longitude (DD/MM/SS)			
15. Emission Point Comment	15. Emission Point Comment:				
			-		

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EMISSIONS UNIT INFORMATION Section [1] of [2]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

Segment Description (Pro Burning of Hospital Wast	• • •			
2. Source Classification Cod	le (SCC):	3. SCC Units:		
5-02-001-01		Tons	Bur	med
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6.	Estimated Annual Activity
0.75	63	00		Factor:
7. Maximum % Sulfur:	8. Maximum	% Ash:	9.	Million Btu per SCC Unit:
10. Segment Comment:				_ ·
_	of waste hurned to	o be about 10 00	() Rt	u/lb
No. 9 – estimate average of waste burned to be about 10,000 Btu/lb				

Segment Description and Rate: Segment 2 of 2

1.	Segment Description (Pro- Natural Gas	cess/Fuel Type):				
					· 	
2.	Source Classification Cod 1-05-001-06	e (SCC):	3. SCC Units: MMCF Bur			
4.	Maximum Hourly Rate: 0.0051	5. Maximum 37.23			Estimated Annual Activity Factor:	
7.	Maximum % Sulfur:	8. Maximum	% Ash:	9.	Million Btu per SCC Unit: 1050	
10	10. Segment Comment:					
	10. Segment Comment: Maximum hourly rate is based on burner design of 5.34 MMBtu/hr. Maximum yearly rate based on 7300 hrs.					

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E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	053		EL
СО	021	,	EL
DIOX	053		EL
PB (Lead)	053		EL
NOX			EL
SO2	070	053	EL .
VOC	021		NS
H027 (Cadmium)	053		EL
H114 (Mercury)	053		EL
H106 (HCL)	070	053	EL
!			

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POLLUTANT DETAIL INFORMATION Page [1] of [9]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1.	. Pollutant Emitted: PM 2. Total Percent Efficiency of Control:			ency of Control:
3.	Potential Emissions:		4. Synth	netically Limited?
		tons/year	XYe	<u></u>
5.	Range of Estimated Fugitive Emissions (as	applicable):		
!	to tons/year			
6.	Emission Factor:0.015 gr/dscf			7. Emissions Method Code:
	ference: 40CFR 60, Subpart Ce			0
8.	Calculation of Emissions:			
	0.015 gr/dscf x 2700 dscfm x 60 min/hr x lb 0.347 lb/hr x 7300hrs/yr x ton / 2000lbs = 1.	_	47 lb/hr	
9.	Pollutant Potential/Estimated Fugitive Emiss	sions Comment	:	
Al	lowable Emissions Allowable Emissions 1 c	of <u>1</u>		
1.	Basis for Allowable Emissions Code: RULE	2. Future Eff Emissions		te of Allowable
3.	Allowable Emissions and Units: 0.015 gr/dscf		t Allowat ' lb/hour	ole Emissions: 1.267 tons/year
5.	Method of Compliance: EPA Method 5 or 29 or 26A	1		· · · · · ·
6.	Allowable Emissions Comment (Description	of Operating N	Method):	

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EMISSIONS UNIT INFORMATION Section [1] of [2]

POLLUTANT DETAIL INFORMATION Page [2] of [9]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1.	Pollutant Emitted: CO	2. Total Percent Efficiency of Control:			
3.	Potential Emissions:		4. Synth	netically Limited?	
	0.471 lb/hour 1.72	2 tons/year	XYe	s 🔲 No	
5.	Range of Estimated Fugitive Emissions (as	applicable):			
	to tons/year				
6.	Emission Factor:40 ppmv			7. Emissions	
ъ.	Communication (Co. Co.)			Method Code:	
	ference: 40CFR 60, Subpart Ce			0	
8.	Calculation of Emissions:				
	40 ppmv x 2700 dscfm x 60 min/hr x 28 lbs/mole x lb-mole / 385 dscf x $10^{-6} = 0.471$ lb/hr 0.471 lb/hr x 7300 hrs/yr x ton / 2000lbs = 1.72 tons/yr				
	0.471 10/11 X 7500 1115/y1 X 10117 2000105 1	1.72 tolls/yl			
9.	Pollutant Potential/Estimated Fugitive Emis	sions Comment	:		
Al	lowable Emissions Allowable Emissions 10	of <u>1</u>			
1.	Basis for Allowable Emissions Code:			te of Allowable	
	RULE	Emissions			
3.		_		ole Emissions:	
_	40 ppmv	0.4/1	lb/hour	1.72 tons/year	
5.	Method of Compliance: EPA Method 10				
	EPA Method To				
6	Allowable Emissions Comment (Description	n of Operating N	Method):		
0.	The Hard Emissions Common (Bescription	. or operating it	iiiiiiiiii.		

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POLLUTANT DETAIL INFORMATION Page [3] of [9]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1.	Pollutant Emitted: H106 (HCL)	2. Total Percent Efficiency of		
		C	Control:	93%
3.	Potential Emissions:			etically Limited?
	1.49 lb/hour 5.44	tons/year	X Ye	s 🗌 No
5.	Range of Estimated Fugitive Emissions (as	applicable):		
	to tons/year			
6.	Emission Factor:100 ppmv		1	7. Emissions
				Method Code:
Re	ference: 40CFR 60, Subpart Ce			0
8.	Calculation of Emissions:			
	100 2700 1 6 60 1 7 25 5 1	1 / 1 11	1 /205	1 C 10-6 1 40
11. /	100 ppmv x 2700 dscfm x 60 min/hr x 35.5 l	bs/mole x lb-mo	ole / 385 c	$1801 \times 10^{3} = 1.49$
lb/	nr 1.49 lb/hr x 7300 hrs/yr x ton / 2000lbs = 5.4	Atongha		
	1.49 lo/m x /300 lns/yl x loll / 2000los = 3.4	4 (0115/y)		
9.	Pollutant Potential/Estimated Fugitive Emis	sions Comment:		
A 11	Isaackii, Essississaa Allassakii, Pasississa 1	. C 1		
	lowable Emissions 1 o			
1.	Basis for Allowable Emissions Code:			te of Allowable
	RULE	Emissions	:	
3.	Allowable Emissions and Units:	4. Equivalent		ole Emissions:
	100 ppmv or 93% reduction	1.49 1	b/hour	5.44 tons/year
5.	Method of Compliance:			- · · - ·
	EPA Method 26 or 26A			
6.	Allowable Emissions Comment (Description	n of Operating M	1ethod):	

POLLUTANT DETAIL INFORMATION Page [4] of [9]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1.	Pollutant Emitted: DIOX	2. Total Perce	ent Efficie	ency of Control:
	Potential Emissions: 1.27 x 10 ⁻⁶ lb/hour 4.64 x ns/year		4. Synth X Yes	etically Limited? s \text{No}
5.	Range of Estimated Fugitive Emissions (as to tons/year	applicable):		
	Emission Factor: 125 nanograms / dscm (55g	gr/10 ⁹ dscf)		7. Emissions Method Code:
Re	ference: 40CFR 60, Subpart Ce			0
	Calculation of Emissions: 55gr/10 ⁹ dscf x 2700 dscfm x 60 min/hr x lb 1.27 x 10 ⁻⁶ lb/hr x 7300 hrs/yr x ton / 2000l	$bs = 4.64 \times 10^{-6}$	tons/yr	b/hr
9.	Pollutant Potential/Estimated Fugitive Emis	sions Comment:	•	

Allowable Emissions 1 of 1

1.	Basis for Allowable Emissions Code: RULE		Future Effective Da Emissions:	ate of Allowable
3.	Allowable Emissions and Units: 125 nanograms / dscm (55gr/10 ⁹ dscf)	4. E	Equivalent Allowa x 10 ⁻⁶ lb/hour	ble Emissions: 4.64 x 10 ⁻⁶ tons/year
5.	Method of Compliance: EPA Method 23			
6.	Allowable Emissions Comment (Description	of Op	perating Method):	

EMISSIONS UNIT INFORMATION Section [1] of [2]

POLLUTANT DETAIL INFORMATION Page [5] of [9]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted: SO2	2. Total Percent Efficie	ency of Control:			
3. Potential Emissions:		netically Limited?			
	0 tons/year X Ye	es No			
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):				
6. Emission Factor: 55 ppmv		7. Emissions Method Code:			
Reference: 40CFR 60, Subpart Ce		0			
8. Calculation of Emissions:					
55 ppmv x 2700dscfm x 60 min/hr x 64 lbs/n 1.48 lb/hr x 7300 hrs/yr x ton / 2000lbs = 5.4	55 ppmv x 2700dscfm x 60 min/hr x 64 lbs/mole x lb-mole / 385 dscf x 10 ⁻⁶ = 1.48 lb/hr 1.48 lb/hr x 7300 hrs/yr x ton / 2000lbs = 5.40 tons/yr				
9. Pollutant Potential/Estimated Fugitive Emissions Comment:					
Allowable Emissions Allowable Emissions 1	of 1				
Basis for Allowable Emissions Code: RULE	2. Future Effective Da Emissions:	ate of Allowable			
3. Allowable Emissions and Units: 55 ppmv	4. Equivalent Allowal	ole Emissions: 5.40 tons/year			
5. Method of Compliance: EPA Method 6					
6. Allowable Emissions Comment (Description of Operating Method):					

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POLLUTANT DETAIL INFORMATION
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2. Total Percent Efficiency of Control:

4. Synthetically Limited?

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1. Pollutant Emitted: NOX

3. Potential Emissions:

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

4.84 lb/hour 17.6	7 tons/year	X Yes	∐ No		
5. Range of Estimated Fugitive Emissions (as applicable):					
to tons/year	;				
6. Emission Factor: 250 ppmv		7.	Emissions		
			Method Code:		
Reference: 40CFR 60, Subpart Ce			0		
8. Calculation of Emissions:			•		
250 ppmv x 2700 dscfm x 60 min/hr x 46 lbs/mole x lb-mole / 385 dscf x $10^{-6} = 4.84$ lb/hr 4.84 lb/hr x 7300 hrs/yr x ton / 2000lbs = 17.67 tons/yr r					
9. Pollutant Potential/Estimated Fugitive Emis	· · · · · · · · · · · · · · · · · · ·				
9. 1 onutant 1 otential/Estimated Fugitive Emis	SIONS COMMEN	•			
Allowable Emissions 1	of <u>1</u>				
Basis for Allowable Emissions Code: RULE	2. Future Ef Emission	fective Date of steets:	f Allowable		
3. Allowable Emissions and Units:	4. Equivaler	nt Allowable I	Emissions:		
250 ppmv	4.84	lb/hour	17.67 tons/year		
5. Method of Compliance: EPA Method 7E	L		·		
-					
6. Allowable Emissions Comment (Description of Operating Method):					
•		,			

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POLLUTANT DETAIL INFORMATION
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2. Total Percent Efficiency of Control:

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1. Pollutant Emitted: H207 (Cadmium)

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

	65%			
3. Potential Emissions:	4. Syn	thetically Limited?		
0.0016 lb/hour .0058	8 tons/year XY	es 🔲 No		
5. Range of Estimated Fugitive Emissions (as	applicable):			
to tons/year				
6. Emission Factor: 0.16mg/dscm (0.07gr/10 ³	dscf)	7. Emissions		
n a 40 gpn (0 g 1 4 g		Method Code:		
Reference: 40CFR 60, Subpart Ce		0		
8. Calculation of Emissions:				
$0.07 \text{gr}/10^3 \text{ dscf x } 2700 \text{dscfm x } 60 \text{ min/hr x}$	lh /7000ama - 0 0016 lh/	L.,		
0.0016 lb/hr x 7300 hrs/yr x ton / 2000lbs =	<u> </u>	111		
0.0010 long x 7500 maryi x ton 7 2000los	.0050 tons/y1			
O. Dallada ad Dada adi al/Cadina da d Caratina Cari	oio no Comenciante			
9. Pollutant Potential/Estimated Fugitive Emis	sions Comment:			
Allowable Emissions 1 o		-		
1. Basis for Allowable Emissions Code:	2. Future Effective D	Date of Allowable		
RULE	Emissions:			
3. Allowable Emissions and Units:	4. Equivalent Allowa			
0.16mg/dscm (0.07gr/10 ³ dscf) or 65% removal	0.0016 lb/hour	.0058 tons/year		
5. Method of Compliance: EPA Mehtod 29				
LI A Wichiod 29				
6. Allowable Emissions Comment (Description of Operating Method):				
The second secon				

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2. Total Percent Efficiency of Control:

85%

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

1. Pollutant Emitted: H114 (Mercury)

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

3. Potential Emissions:	4. Synthetically Limited?			
0.00555 lb/hour 0.0203	tons/year XYes No			
5. Range of Estimated Fugitive Emissions (as	applicable):			
to tons/year				
6. Emission Factor: 0.55mg/dscm (0.24 gr/10 ³	dscf) 7. Emissions			
	Method Code:			
Reference: 40CFR 60, Subpart Ce	0			
8. Calculation of Emissions:				
0.24 gr/10 ³ dscf x 2700dscfm x 60 min/hr x	_			
0. 00555 lb/hr x 7300 hrs/yr x ton / 2000lbs	= 0.0203 tons/yr			
9. Pollutant Potential/Estimated Fugitive Emiss	sions Comment:			
Allowable Emissions 1 o	f <u>1</u>			
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable			
RULE	Emissions:			
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
$0.55 \text{mg/dscm} \ (0.24 \text{ gr/}10^3 \text{ dscf})$ or	0.00555 lb/hour 0.0203 tons/year			
85% removal				
5. Method of Compliance:				
EPA Method 29				
6. Allowable Emissions Comment (Description of Operating Method):				

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POLLUTANT DETAIL INFORMATION Page [9] of [9]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted: PB (Lead)	2. Total Percent Efficient 70%	ency of Control:
3. Potential Emissions: 0.0120 lb/hour 0.043	8 tons/year 4. Synth X Ye	netically Limited? s No
5. Range of Estimated Fugitive Emissions (as to tons/year	applicable):	
6. Emission Factor: 1.2 mg/dscm (0.52 gr/10 ³	dscf)	7. Emissions Method Code:
Reference: 40CFR 60, Subpart Ce		0
8. Calculation of Emissions: 0.52 gr/10 ³ dscf x 2700dscfm x 60 min/hr x 0.0120 lb/hr x 7300 hrs/yr x ton / 2000lbs =	0.0438 tons/yr	hr
9. Pollutant Potential/Estimated Fugitive Emis	ssions Comment:	

Allowable Emissions Allowable Emissions 1 of 1

Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 1.2 mg/dscm (0.52 gr/10 ³ dscf) or 70% removal	4. Equivalent Allowable Emissions: 0.0120 lb/hour 0.0438 tons/year
5. Method of Compliance: EPA Method 29	
6. Allowable Emissions Comment (Description	of Operating Method):

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EMISSIONS UNIT INFORMATION

Section [1]

of [1]

G. VISIBLE EMISSIONS INFORMATION

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

<u>Visible Emissions Limitation:</u> Visible Emissions Limitation <u>1</u> of <u>1</u>

1. Visible Emissions Subtype: VE5	2. Basis for Allowable Opacity: X Rule	her
3. Allowable Opacity:		
Normal Conditions: 5% E	xceptional Conditions:	% min/hour
Maximum Period of Excess Opacity Allow	ea:	mm/nour
4. Method of Compliance: Method 9		
5. Visible Emissions Comment:		
		•
Visible Emissions Limitation: Visible Emiss	ions Limitation of	
1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: Rule Ot	: her
3. Allowable Opacity:		
1 * *	xceptional Conditions:	%
Maximum Period of Excess Opacity Allow	•	min/hour
4. Method of Compliance:		
4. Method of Comphance.		
5. Visible Emissions Comment:		
5. Visiole Emissions Comment.		
·		

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H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor 1 of 6

1. Parame	ter Code: CHARGE RATE	2.	Pollutant(s):	
3. CMS R	equirement:	X	Rule	Other
Man	r Information Data logger ufacturer: Campbell Scientific Number: 23SX		Serial Numbe	er:
5. Installa	tion Date:	6.	Performance Spe	cification Test Date:
	nous Monitor Comment: Data logger to display the one-minute readings.	colle	ects and stores inf	Formation. Dell computer
Continuou	s Monitoring System: Continuous	Mon	itor <u>2</u> of <u>6</u>	
1. Parame	ter Code: `EMP – SECONDARY CHAMBER		2. Pollutant(s):	
3. CMS R	equirement:	X	Rule	Other
Man	r Information Data logger ufacturer: Campbell Scientific			
	Number: 23SX		Serial Numbe	
5. Installa	tion Date:		6. Performance	Specification Test Date:
	ious Monitor Comment: Data logger to display the one-minute readings.	colle	ects and stores inf	Formation. Dell computer

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EMISSIONS UNIT INFORMATION Section [1] of [2]

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

Continuous Monitoring System: Continuous Monitor 3 of 6

1.	Parameter Code: TEMP – FLUE GAS	2.	Pol	lutant(s):	
3.	CMS Requirement:	X	Rul	e	Other
4.	Monitor Information Data logger Manufacturer: Campbell Scientific Model Number: 23SX			Serial Numbe	er:
5.	Installation Date:	6.	Per	formance Spe	cification Test Date:
7.	Continuous Monitor Comment: Data logger is used to display the one-minute readings.	· col	lects	and stores inf	ormation. Dell computer
<u>Co</u>	ontinuous Monitoring System: Continuous	Mo	nitor	<u>4</u> of <u>6</u>	
1.	Parameter Code: SCRUBBER - PH		2.	Pollutant(s):	
3.	CMS Requirement:	X	Rul	2	Other
4.	Monitor Information Data logger Manufacturer: Campbell Scientific				
	Model Number: 23SX			Serial Numbe	r:
5.	Installation Date:		6.	Performance	Specification Test Date:
7.	Continuous Monitor Comment: Data logger is used to display the one-minute readings.	· col	lects	and stores inf	ormation. Dell computer

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EMISSIONS UNIT INFORMATION Section [1] of [2]

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

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

<u>Continuous Monitoring System:</u> Continuous Monitor <u>5</u> of <u>6</u>

1.	Parameter Code: SCRUBBER – FLOW RATE	2. Pollutant(s):
3.	CMS Requirement:	X Rule
4.	Monitor Information Data logger Manufacturer: Campbell Scientific	· .
	Model Number: 23SX	Serial Number:
5.	Installation Date:	6. Performance Specification Test Date:
7.	Continuous Monitor Comment: Data logger is used to display the one-minute readings.	r collects and stores information. Dell computer
<u>Co</u>	ontinuous Monitoring System: Continuous	Monitor <u>6</u> of <u>6</u>
1.	Parameter Code: SCRUBBER - DP	2. Pollutant(s):
3.	CMS Requirement:	Rule Other
4.	Monitor Information Data logger Manufacturer: Campbell Scientific	
	Model Number: 23SX	Serial Number:
5.	Installation Date:	6. Performance Specification Test Date:
7.	Continuous Monitor Comment: Data logger is used to display the one-minute readings.	r collects and stores information. Dell computer

EMISSIONS UNIT INFORMATION

Section [1]

of [2]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	 Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: 01 Previously Submitted, Date 		
2.	Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: 02 Previously Submitted, Date		
3.	Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: 03 Previously Submitted, Date		
4.	Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: 04 Previously Submitted, Date Not Applicable (construction application)		
5.	Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: 05 Previously Submitted, Date Not Applicable		
6.	Compliance Demonstration Reports/Records Attached, Document ID:		
-	Test Date(s)/Pollutant(s) Tested:		
	X Previously Submitted, Date: October '05		
	Test Date(s)/Pollutant(s) Tested: September '05 - PM, CO, SO2, NOX, HCL, Cd, Hg, Pb, D/F, VE		
	To be Submitted, Date (if known):		
	Test Date(s)/Pollutant(s) Tested: Not Applicable		
	Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.		
7.	Other Information Required by Rule or Statute Attached, Document ID: X Not Applicable		

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EMISSIONS UNIT INFORMATION

Section [1]

of [2]

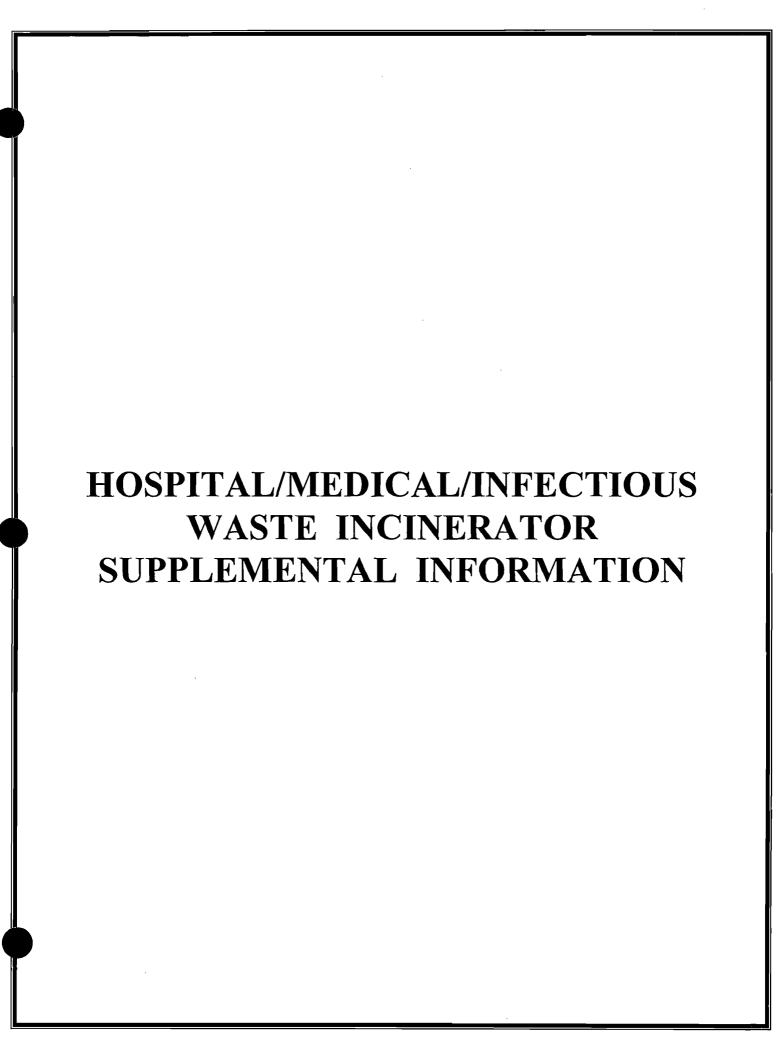
Additional Require	ments for Air Construction	Permit Applications

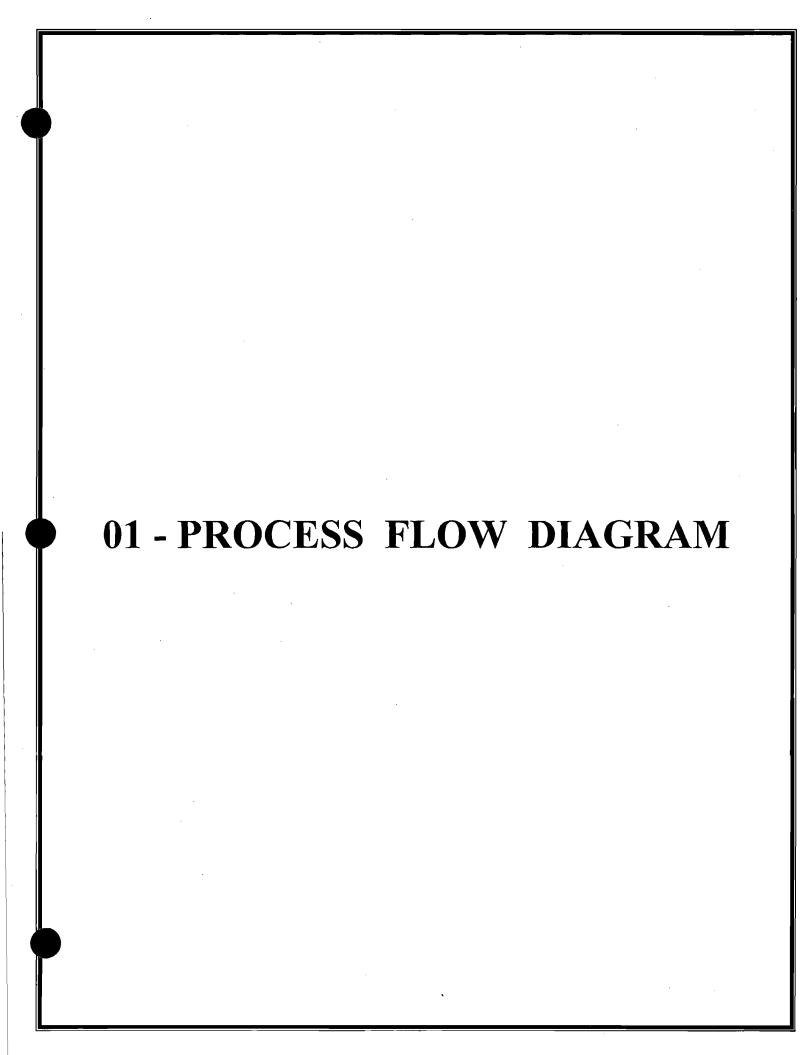
1.	Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7),								
	F.A.C.; 40 CFR 63.43(d) and (e)) Attached, Document ID: Not Applicable								
2	Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and								
۷٠.	Rule 62-212.500(4)(f), F.A.C.)								
	Attached, Document ID: Not Applicable								
3.	Description of Stack Sampling Facilities (Required for proposed new stack sampling								
	facilities only)								
	Attached, Document ID: Not Applicable								
Ad	ditional Requirements for Title V Air Operation Permit Applications								
1.	Identification of Applicable Requirements								
	X Attached, Document ID: <u>06</u>								
2. (Compliance Assurance Monitoring								
	Attached, Document ID: X Not Applicable								
3	Alternative Methods of Operation								
	Attached, Document ID: X Not Applicable								
4.	Alternative Modes of Operation (Emissions Trading)								
	Attached, Document ID: X Not Applicable								
5.	Acid Rain Part Application								
	Certificate of Representation (EPA Form No. 7610-1)								
	Copy Attached, Document ID:								
	Acid Rain Part (Form No. 62-210.900(1)(a))								
	Attached, Document ID:								
	Previously Submitted, Date:								
	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)								
	Attached, Document ID:								
	Previously Submitted, Date:								
	New Unit Exemption (Form No. 62-210.900(1)(a)2.)								
	Attached, Document ID:								
	Previously Submitted, Date:								
	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:								
	Previously Submitted, Date:								
	☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) ☐ Attached, Document ID:								
	Previously Submitted, Date:								
	Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)								
	Attached, Document ID:								
	Previously Submitted, Date:								
	X Not Applicable								

DEP Form No. 62-210.900(1) - Form

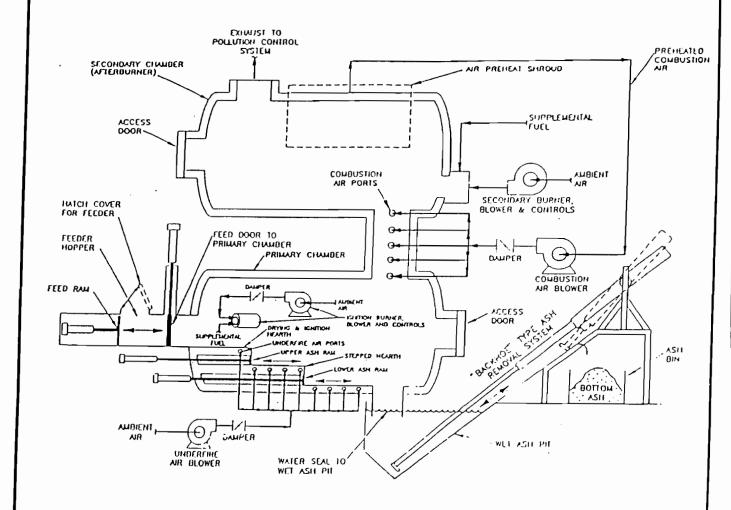
EMISSIONS UNIT INFORMATION Section [1] of [2] Additional Requirements Comment

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CONTROLLED-AIR INCINERATOR



INCINERATOR

02 - FUEL SPECIFICATION

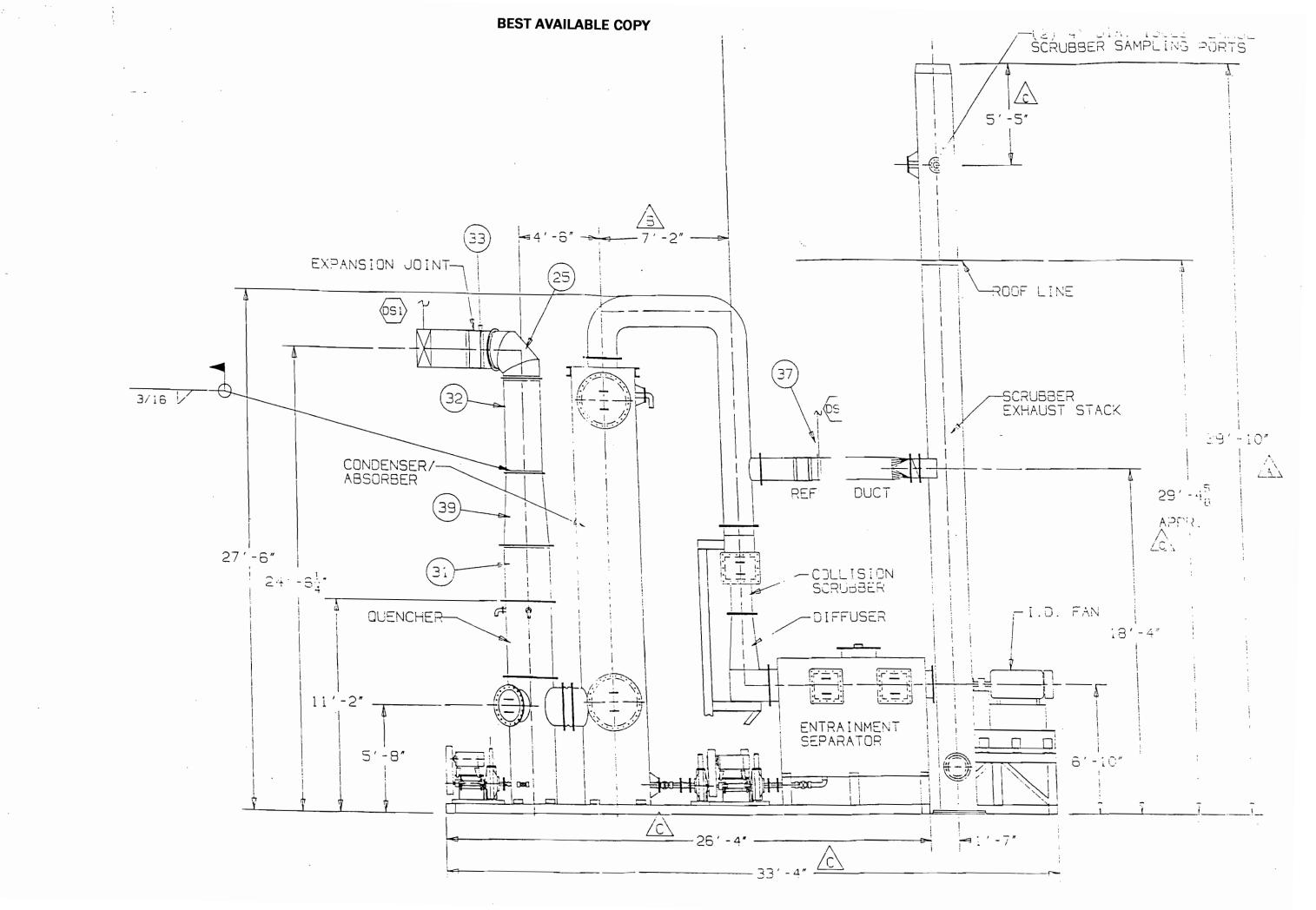
FGT SYSTEM CHROMATOGRAPHS

Spot Analysis of Natural Gas for Delivery in Florida

Date				Time
	4/5/	00		11:31 AM

	Perry	Perry	Brooker	Gainsville	West Palm	
	36" Stream #1	30" Stream #2	24" Stream	8" Stream	24" Stream	_
	Mole%	Mole%	Mole%	Mole%	Mole%	_
Components	 .					
Hexane	0.0470	0.0659	0.0553	0.0598	0.0571	-
Propane	0.3025	0.3695	0.3348	0.2250	0.3776	_
Iso-Butane	0.0763	0.0929	0.0834	0.0526	0.0876	_
N-Butane	0.0711	0.0810	0.0734	0.0471	0.0798	_
Iso-Pentane	0.0274	0.0354	0.0303	0.0201	0.0302	_
N-Pentane	0.0171	0.0224	0.0186	0.0135	0.0194	
Nitrogen	0.2644	0.4139	0.3467	0.2591	0.3618	<u>-</u>
Methane	96.9132	95.6349	96.0777	97.0133	95.8773	···
C02	0.7133	0.7202	0.7155	0.7654	0.6672	***
Ethane	1.5675	2.5638	2.2642	1.5441	2.4420	_
Totals	100.0000	100.0000	100.0000	100.0000	100.0000	_
Btu	1027.7	1036.5	1033.3	1024.9	1036.0	Dry Btu/cf @ 14.7
Gravity	0.5777	0.5850	0.5822	0.5767	0.5832	Real Relative Den
Total Sulfur	4.4984	2.0907	1.7440			PPM
	0.2811	0.1307	0.1090			Grains/hcf
Current H2O	0.0000		0.8287		2.1064	Lbs. Per MMcf

03 - CONTROL EQUIPMENT DESCRIPTION



04 – STARTUP AND SHUTDOWM PROCEDURES

JOY 1500TE MEDICAL WASTE INCINERATOR BAYFRONT MEDICAL CENTER BFM 91-235

PRE-START UP CHECKLIST

ASSUME POWER IS OFF, GAS OFF, SCRUBBER NOT RUNNING.

- 1) OPEN THE LOWER CHAMBER DOOR
- *CAUTION* DO NOT OPEN LOWER CHAMBER DOOR IF INCINERATOR HAS NOT BEEN SECURED FOR AT LEAST 24 HOURS. IF INCINERATOR IS HOT, A VISUAL INSPECTION OF THE LOWER CHAMBER CAN BE MADE THROUGH THE VIEWPORT.
 - a) Check for refractory damage
 - b) Check for clinker formation
- c) Close door and tighten down. (Ensure limit switch contact)
- 2) CHECK WATER LEVEL IN THE ASH PIT
 - a) If low, use manual bypass to fill. Ensure water to ash pit is turned on,
 - b) Check ash plow position. Also check plow for structural damage and hydraulic leaks in hoses and cylinders.
 - c) Check hydraulic fluid level in resovoir.
 - d) Leave ash plow switch in the OFF position. As it takes several hours before ash will reach the end of the lower chamber, the INCINERATOR OPERATOR will determine when to start the ash plow.
- 3) IF GAS VALVE WAS TURNED OFF
 - a) Check gas guage to see if gas pressure was maintained. If pressure has dropped, soap check fuel system for leaks.
 - b) Turn gas valve on.
 - c) Reset low gas pressure switches.
- 4) IF GAS VALVE WAS LEFT ON
 - a) Reset low gas pressure switches.
- 5) CHECK AT LEAST 3 UNDERFIRE AIR PORTS ON EACH SIDE OF THE UNIT
 - a) If blocked, rod out all air ports.
- 6) CHECK FOR DEBRIS IN BLOWER INLETS
- a) Once a month , take air filters off of blowers and clean out.

- CHECK LIMIT SWITCHES ON CHARGING DOOR
- a) See that they are not bent or broken, flip for spring return action.
- 8) CHECK ALL HYDRAULIC HOSES AND CYLINDERS FOR LEAKAGE OR DAMAGE
- 9) CHECK HATCH LIMIT SWITCHES
- 10) CHECK RAM LIMIT SWITCHES
- 11) CHECK INTERNAL RAM LIMIT SWITCHE
 - a) Check encoder wheel for contact, material lodgging, ect.
- 12) CHECK HYDRAULIC RESOVIOR FLUID LEVEL
- 13) CHECK STACK CAP HYDRAULIC LINES AND CYLINDERS FOR LEAKAGE
- 14) CHECK BOILER SIGHT GLASS FOR WATER LEVEL

SCRUBBER START-UP

PRE-START UP CHECKLIST

- 1) CHECK FOR LEAKS IN SYSTEM
- 2) TURN POWER SWITCH ON
 - a) Normally, the main breaker to the scrubber panel will be left on due to the fact the 120v power supply to the O2 system comes from this breaker / transformer.
- PUSH THE MASTER RESET ON THE SCRUBBER CONTROL PANEL
- 4) MAKE SURE THE WATER SUPPLY SYSTEM TO THE SCRUBBER IS ON
- a) This would include ensuring that the booster pump is on and a minimum of 40psi is being sent to the scrubber.
- 5) MAKE SURE I.D. FAN DAMPERS ARE ON THE CLOSED POSITION
- 6) OPEN FAN DRAIN, ALLOW ANY WATER BUILD UP TO DRAIN OFF, THEN CLOSE.
- CHECK CAUSTIC TANK LEVEL
 - a) Inspect entire piping system for the caustic injection for leaks.
- 8) CHECK DRAIN VALVES TO ALL SCRUBBER TOWERS AND ENSURE THEY ARE CLOSED

- 9) ENSURE THE MANUAL VALVES ON THE SUCTION SIDE OF THE PUMPS ARE OPEN FULLY
- 10) CHECK THE LEVELS IN EACH OF THE SUMPS
- a) Quencher sump level settings: Low level = 32"

High level = 44"

Norm level = 38"

b) Condenser Absorber sump level settings:

Low level = 38"

High level = 44"

Norm level = 41"

c) Entrainment separator sump level settings:

Low level = 24"

High level = 30"

Norm level = 27"

d) System blowdown PH settings:

Low ph = 6

 $High\ ph = 9$

Norm ph = 8

4 miliamp = 10

20 miliamp = 8

e) Condenser absorber sump ph settings:

Low ph = 5

 $High\ ph = 7$

Norm ph = 6

4 miliamp = 8

20 miliamp = 4

- * CAUTION * ANYTIME THE ph SENSOR IS NOT SUBMERGED IN WATER, THE BLACK CAPS MUST BE MOISTENED AND REPLACED ON THE ENDS OF THE SENSORS.
- f) Quencher skin temp sttings:

High temp =

High High =

g) Condenser absorber inlet temp settings:

High temp = 145

High High = 155

h) Scrubber inlet temp settings:

High temp = 145

 $High\ High = 155$

i) Entrainment separator outlet temp settings:

High temp = 145

 $High\ High = 155$

11) TURN EACH PUMP SWITCH ON THE SCRUBBER CONTROL PANEL TO THE ON POSITION

*** DO NOT START THE I.D. FAN ***

- 12) CHECK REFLUX DUCT AND ACTUATOR / POSITIONER FOR PROPER OPERATION
 - a) Put UDC 3000 draft controller in manual
- b) Run up and down arrows and observe movement on valve and at reflux duct
- c) Put controller back into automatic
- 13) ENSURE THE FRESH WATER SEAL FLUSH TO EACH RECIRC PUMP IS ON
 - * NOTE * THE PRESSURE READING ON EACH SEAL FLUSH PRESSURE GUAGE SHOULD BE 10 - 15 PSI GREATER THAN THE DISCHARGE PRESSURE OF THE PUMP
- 14) ENSURE COOLING TOWER FAN AND PUMP DISCONNECTS ARE TURNED ON
- * NOTE * THESE DISCONNECTS ARE LOCATED ON THE ROOF
- 15) CHECK WATER LEVEL IN COOLING TOWER SUMP
- * NOTE * THIS TOWER IS SUPPLIED WITH EFFLUENT WATER VIA AN AUTOMATIC FLOAT VALVE. A LOSS OF EFFLUENT PRESSURE DURING THE NIGHT WITH THE MANUAL BLOWDOWN VALVE LEFT OPEN COULD DRAIN THE TOWER
- 16) CHECK CHEMICAL SUPPLY TO TOWER (405 / 430)
- 17) TURN MANUAL BLOWDOWN FROM SUMP 1/2 OPEN
- 18) CHECK THE FLOW RATES THROUGH EACH FLOW METER TO THE PROPER SETTINGS
 - a) Quencher fresh water flow setting: Flow rate GPM = 3
 - b) Entrainment separator fresh water make up flow: Flow rate GPM = 1/2 to 1
 - c) Scrubber recirc flow setting: Flow rate GPM = 90
 - d) Condenser absorber recirc flow: Flow rate GPM = 155
 - e) Continous system blowdown flow setting: Flow rate GPM = 3 to 4
 - * NOTE * SYSTEM BLOWDOWN MAY NEED TO BE INCREASED TO OBTAIN A WATER BALANCE THROUGHOUT THE SCRUBBER SYSTEM

- 19) ACHIEVE A WATER BALANCE BETWEEN EACH VESSEL IN THE MAIN SCRUBBER SYSTEM
 - a) Adjust slightly the manual make-up / blowdown valves between the respective vessels. These valves are located off the pump discharge side of each recirc pump
- 20) TURN COOLING TOWER FAN ON
- 21) ENSURE ID FAN DAMPER IS CLOSED
 - * NOTE * STACK CAP ON THE INCINERATOR SHOULD BE FULLY OPEN AT THIS POINT AND WILL NOT CLOSE UNTIL THE ID FAN HAS BEEN STARTED AS LONG AS THE STACK CAP IS IN AUTOMATIC
- 22) TURN ID FAN ON
 - * NOTE * AFTER THE ID FAN IS AT FULL SPEED, ADJUST THE DAMPER TO MAINTAIN A DIFFERENTIAL PRESSURE BETWEEN 45 TO 55 "WC

INCINERATOR START-UP

- 1) TURN MAIN BREAKER ON
 - * NOTE * THIS BREAKER SHOULD NEVER BE SECURED AS IT SUPPLIES POWER TO THE SCRUBBER PANEL
- 2) TURN POWER SWITCH TO THE ON POSITION (HATCH WILL OPEN)
 - * NOTE * THIS SWITCH IS USUALLY LEFT ON TO KEEP THE STACK CAP CLOSED AT NIGHT
 - a) The stack cap & hydraulic pump should both be in the automatic position.
- 3) RESET RELAY IN BOILER PANEL ON WASTE HEAT BOILER
- a) Check water level in sight glass, feed pump line up, main & aux. steam valves should be open, sliencer should be lined up.
- 4) CHANGE CHARTS IN RECORDERS (Ensure charts match the time on the NEMTRON clock on the incinerator control panel)
- 5) THE NEMATRON SHOULD READ "NO ALARMS ACTIVE". IF THE SCREEN READS:

SCRUBBER FAILURE: CHECK ID FAN & PUMPS ON SCRUBBER

BOILER FAILURE: CHECK RELAY RESET & HIGH PRESSURETROL RESET

6) IF THE SCREEN READS "NO ALARMS ACTIVE", PUSH THE START BUTTON

- 7) FLAMEPORT AIR & UNDERFIRE AIR DRIVES WILL RAMP UP TO PREPURGE THE UNIT (PREPURGE IS 90 SECONDS)
- a) The motorized valve in the FPA inlet opens.
- b) Fail switch for flameport air must close.
- c) Pressure switch in underfire air system must close.

8) PREPURGE FAILURE

- a) Check UFA & FPA drives (speed), see if Hz is above 40.
- b) Check blower motors, see if they are turning.
- c) Check Input card:

#1 (C-5) for flameport air

#1 (A-4) for underfire air

- d) If motorized valve on flameport does not open, this will cause a pre-purge failure.
- 9) PRE-HEAT
- a) Lower and upper burners will light.
- * NOTE * STACK CAP WILL CLOSE AUTOMATICLY
- b) Lower chamber temp setpoint is controlled at 1450 F. The lower chamber burners will cycle during pre-heat.
- c) Upper chamber burner temp is set at 1800 F.
- * NOTE * THE UPPER CHAMBER TEMP WILL SLOWLY RISE TO AROUND 1837 F BEFORE COMMING STABLE ENOUGH TO MAINTAIN THROUGH WARM-UP DELAY TIMING OF 10 MIN.

10) BURNER FAILURE

- a) If a burner failure occurs, reset (3) times. The burner reset is the RED button on the main control panel above the GREEN burner run lamps.
- b) If burner continues to fail, open the control cabinet door and observe the U.V. RED lamp (flame signal) located on the TERVCON in the upper right hand corner. If the burner tries for pilot and you see a flickering or intermedent pilot, adjust the pilot gas needle valve located on the burner pilot mixer.
- c) If no flame signal is present at all, do the following:
 - 1) Remove spark plug form mixer and check spark.
 - 2) If spark is good, loosen the nut holding the needle valve in place, have a second person reset the burner, when you hear the pilot solenoid valve energize, screw the needle valve slowly counter clockwise while looking into the burner observation glass, (needle valve starting place is about 4 to 4 1/2 turns counter clockwise from full close). You will see the pilot through the glass. Adjust the pilot to obtain as long and hard of a pilot as possible. Screw the locking nut down and tighten.

- d) If you still cannot obtain a pilot, you must remove the connecting gas and air lines from the pilot mixing valve, then remove the mixing valve from the burner and clean.
- 11) BURNER WILL NOT FIRE. (NO GREEN LIGHT ON TERVCON)
- a) Check signal from controller: TC-L (TC-201) Input No.2 Al Lower burner TC-U1(TC-203) Input No.2 A3 Upper burner
- b) Check low fire start:
 Input card No.1 C1 Upper burner
 Input card No.3 B5 Lower burner No. 1
 Input card No.3 B6 Lower burner No. 2
- c) Check cleanout door on upper and lower chambers: Input card No.1 A7 Lower chamber Input card No.1 C2 Upper chamber
- * NOTE * TOUCHSCREEN DEVICE STATUS WILL ALSO DISPLAY THIS
- d) Check low gas pressure switch.
- e) Check high gas pressure switch:
 Input card No.3 B2 Upper burner
 Input card No.3 B3 Lower burner No. 1
 Input card No.3 B4 Lower burner No. 2
- f) Check low air pressure switch:
 Input card No.3 A8 Upper burner
 Input card No.3 A4 Lower burner No. 1
 Input card No.3 A6 Lower burner No. 2
- 12) TEMPERTURE WILL SLOWLY RISE IN UPPER CHAMBER AS UNIT CONTINUES TO PREHEAT.
 - a) Boiler inlet and outlet temps will slowly rise.
 - * NOTE * TOUCHSCREEN SHOULD DISPLAY PRE-HEAT
- 13) WHEN PREHEAT SETPOINT IS REACHED, A PRE-WARM UP MESSAGE WILL BE DISPLAYED ON THE TOUCHSCREEN.
 - a) 1800 F required in the upper chamber must be maintained for a timed period (10 min) before introducing material into the unit.
- 14) PLACE MATERIAL INTO HOPPER AND CLOSE HATCH BY PUSHING THE "LOAD" BUTTON ON THE MAIN CONTROL PANEL.

The load time count will be displayed on the front of the Nematron screen. This count is normally set at 390 sec. or six and 1/2 min. If the charging door is fully closed, the feed ram at the home position, the stack cap is closed, and the boiler and scrubber safeties are made, the time count will begin. When the count reaches zero, the GREEN load pushbutton will light up. The charging door will then open, the feed ram will move forward and then retract to a point just clear of the

charging door. The charging door will then close, the water spray will energize for 2 to 3 seconds. The ram feeder will then retract to its home position and the hopper hatch will open.

15) IT IS IMPORTANT TO LOAD THE HOPPER AS QUICKLY AS POSSIBLE ON START UP.

The pre-load count holds the flameport and underfire air out until 4 loads are introduced into the lower chamber. This allows for enough gases to be driven off of the material in order to use FP and UF air. The internal ram is released after the initial 4 loads are introduced into the unit.

16) INTRODUCING MATERIAL INTO THE UNIT.

As material is introduced into the unit over a period of time the draft may need an adjustment. To do this, the ID fan inlet valve (dampers), must be adjusted to maintain a proper differential pressure across the ventura of the collision scrubber. The pressure drop should read between 55 and 60 "WC.

- 17) TEMPERATURE DROP IN UPPER CHAMBER BELOW 1800 F.
 The program timer, (load timer), will stop counting and a low temp. indicator will appear under TC-204 on the touchscreen.
 Causes of this could be:
 - a) Too much air thru flameport.
 - b) Burner pressure drop (gas).
 - c) Too high of a draft pulling heat from the unit.
 - d) Very low BTU value or wet waste in the waste stream.

18) RECYCLE.

Events that will cause a feed recycle are:

- a) Fire in the hopper that is detected by the UV scanner.
- b) Material falls under the charging door.
- c) Charging door jams on closing.
- d) Feed ram does not complete forward stroke.
- e) A hard small object wedges between ram feeder and charging door seal.
- f) UV detector gets wet and shorts out.
- * NOTE * IF THE SYSTEM RECYCLES MORE THAN 3 TIMES IN A ROW, YOU SHOULD TURN THE HYDRAULIC PUMP CONTROL SWITCH TO THE MANUAL POSITION AND OPEN THE HATCH. USE EXTREME CAUTION AND RAISE THE CHARGING DOOR UP ENOUGH TO OBSERVE THE SEATING AREA. CLEAN ANY DEBRIS FROM THE SEAL WITH A LONG METAL ROD, CLOSE THE DOOR, AND PLACE THE SWITCH BACK IN AUTOMATIC.

CONDITIONS AND RESPONSES DURING BURNING PERIOD

- 1) TEMPERATURE TOO LOW IN LOWER CHAMBER.
 - a) The temperature should range from 1450 F to 1850 F in the lower chamber. There is a problem if the temperature drops below 1400.
- b) Wet, non-combustable material can cause low temperature. Less material input and longer interval between loads will help. Select higher and dryer material until temps. come up. Mix wet or low BTU material with high and dry material.
- c) Low temp. in lower chamber usually causes greater aux. fuel
- d) If none of the above will solve the problem, put unit into burndown and after burndown, start over.
- 2) TEMPERATURE IN UPPER CHAMBER TOO HIGH.
- a) The temperature should range from 1865 F to 2050 F.
 Temperatures in excess of 2150 F are a problem as they can cause refractory damage.
- b) Not enough air throughout flameport, or, a combination of too much air and too much burner, (wrong upper burner setting), will cause this. Over feeding and not enough material burning in the lower chamber will also cause this.
- c) Stop feeding unit for 2 to 3 time cycle periods. This will allow the lower chamber temps to rise and the upper chamber temps to fall.
- d) Check the modulation setpoint on the flameport air and upper burner. The flameport air setting should always be higher than the upper burner setting.
- e) Try to mix waste so that you are not just feeding high BTU value material into the unit.
- TEMPERATURE IN LOWER CHAMBER TOO HIGH.
 - a) Temperature in the lower chamber should be between 1450 F and 1850 F.
- b) Underfeeding or skipping load cycles will cause higher temps.
- * NOTE * IF YOU UNDERFEED THE UNIT FOR 2 OR MORE HOURS, YOU SHOULD STOP FEEDING, ALLOW THE TEMP IN THE LOWER CHAMBER TO PEAK AND FALL BACK TO UNDER 1500 F, THEN PLACE THE INTERNAL RAM IN MANUAL AND PUSH THE PILE TO THE END OF THE CHAMBER. YOU MAY THEN RESUME FEEDING THE UNIT.
- c) Improper underfire air settings. (Too much air)
- * NOTE * CHECK UNDERFIRE AIR ALARM SETPOINTS, THEY SHOULD BE SET AT 2300 A1S1 AND 1450 A2S1. IF YOU ARE FEEDING AT REGULAR LOAD CYCLES AND PROPER WEIGHT AND TEMPS ARE STILL TOO HIGH, LOWER UNDERFIRE AIR SETPOINT (OUTLOLIM IN CONTROL GROUP).

- d) Infiltration air. (Leaks)
- e) Very high BTU value material.
- f) Check pit water level. If the level is low, just covering the bottom of the dropout chute, ash falling into the pit may cause the water to bounce, causing breaks in the water seal and allowing air to be sucked into the lower chamber.

* NOTE * THE DROPOUT CHUTE SHOULD BE CHECKED MONTHLY FOR DAMAGE.

- 4) TEMPERATURE IN UPPER CHAMBER TOO LOW.
- a) Flameport air blower delivering too much air.
- b) Temp in lower chamber too high.
- c) Main burner setpoint too low or burner not firing properly.
- d) Draft set too high, (too negative). This occurs normally during pre-heat or underloading.
- e) Check setpoint on flameport air. It should be at least 25 F above burner setpoint, if not, raise flameport air setpoint 50 F.
- f) Check lower chamber temperature. If it is low, go to response for "TEMP TOO LOW IN LOWER CHAMBER".
- g) Check modulation setpoint on lower burner. It should read 1850 F to 1910 F. Raise setpoint if lower that 1850 F. REMEMBER BURNER SETPOINT & FLAMEPORT AIR RELATIONSHIP! You may also have to raise the flameport air setpoint.
- h) If the draft is set properly, usually the pressure drop will draw the heat from the lower chamber. If the pressure reading is over .35" WC avg. you can lower the setpoint on the pressure controller located on the scrubber panel. Lower this setpoint very slowly, (.05 max at a time), and do not go below -.15" WC.
- i) Check the stack cap several times a week for leaks. If there are leaks, the ID fan can draw cold air down the stack and cool the upper chamber. Usually, you will notice a jump in the 02 if this happens.

INCINERATOR SHUTDOWN

- 1) GOING INTO BURNDOWN.
 - a) After the last load has cycled into the lower chamber, you must enter the "BURNDOWN DELAY TIME". The rule of thumb is 15 min. for every hour of waste feeding. You will have to make adjustments to this time to find what works best.
 - b) After you have entered the burndown time, press the "TIMED STOP" button to start the burndown. The screen will flash "IN BURNDOWN" and show the countdown time.
 - c) During burndown, the internal ram will stroke normally for the amount of time you have entered for the burndown. At the end of this time, the computer will add whatever time has been calculated and entered into the NEMTRON to the burndown and begin adding inches to the legath of the stroke until the

entire lower chamber has been swept clean. There is no set time for the final stroke. This time is calculated each day depending on the type and amount of materials being burned.

- * NOTE * TO ABORT THE BURNDOWN PROCESS, PRESS THE START BUTTON.
- * NOTE * SECURE THE CHEMICAL FEED PUMPS TO THE SCRUBBER DURING THE LAST HOUR OF BURNDOWN. THIS PREVENTS THE THE PUMPS FROM OVERSHOOTING THE ph SETPOINTS.
 - d) After burndown is complete, the burners will de-energize, the stack cap will open, and the touchscreen will display "SYSTEM OFF".
 - * NOTE * ONCE THE SYSTEM IS OFF, PLACE THE STACK CAP IN THE CLOSED POSITION. IF THE SYSTEM WAS MANUALLY SECURED, YOU WILL HAVE TO PUSH THE RESET BUTTON ON THE WASTE HEAT BOILER, THEN PLACE THE HYDRAULICS IN MANUAL AND THE STACK CAP TO THE CLOSED POSITION. ONCE THE CAP CLOSES, PLACE THE HYDRAULICS BACK IN AUTOMATIC.
 - e) The scrubber should run for at least 20 min. after the unit has shut down. This is to purge the breeching, boiler & scrubber gas as well as allowing the temperature of the scrubber to come down.
 - f) Once the burndown period has elapsed, secure the ID fan first.
- * CAUTION * DO NOT SECURE THE FAN DAMPERS UNTIL THE FAN HAS STOPPED COMPLETLY.
 - g) Observe the sump levels and tempreatures. Allow the levels to fill to normal and the tempreatures to drop below 100 F. before securing the pumps.
 - h) Once the sump levels are at normal and the tempreatures have dropped below 100 F., secure the cooling tower fan and pumps.
- * NOTE * DO NOT SECURE THE MASTER SWITCH ON THE CONTROL PANEL AS IT SUPPLIES POWER TO THE O2 INDICATOR.
 - i) Finally, secure the fresh water supply to the scrubber and close the system blowdown bypass valve or the towers will drain.

SECURING THE WASTE HEAT BOILER

- 1) DAILY.
 - a) If the boiler is going to be off line less than 24 hours, it can be left in it's normal run configuration of:

 1) Main steam valve open

- a) If the boiler will be down for more than 24 hours:1) Main steam valve closed

 - 2) Aux steam valve open
 - 3) Sliencer header valve open
 - 4) Feed water inlet valve open
 - 5) Chemical feed valve open
 - 6) Air soot blowers left on
 - 7) Automatic surface blow turned off
 - 8) Feed pump placed in the off position, secure the discharge valve
 - 9) Chemical feed pumps plugged in

05 – OPERATION AND MAINTENANCE PLAN

SECTION 7

MAINTENANCE AND SERVICE

MAINTENANCE AND SERVICE

General Inspection Notes

<u>Air Ports</u> - Inspect all air ports, especially the underfire air ports, frequently. Keep underfire air ports clean and free of clinker build-up and pluggage.

<u>Vessel and Stack</u> - Note surface condition of all "hot" surfaces. Any white spot or discoloration may indicate loss of refractory inside and should be followed by an immediate inspection. Should refractory damage be present, refer to the Refractory Section in this manual for repair procedures.

<u>Control Panels</u> - Keep enclosure, lights, switches and other components clean. Keep panels securely closed.

<u>Fuel Trains and Burners</u> - Keep free from any build-up of dirt and ashes. Keep vent ports clean on all valves, regulators and safety switches. On oil fired burners, periodic checking and removal of any carbon build-up should be observed. Investigate for sources of fuel leakage as required.

Refractory - Refer to the Refractory Section within this manual. Reasonable care will insure a useful life for the refractory. The refractory contained within your unit represents one of the most expensive components and should be treated with respect. Avoid subjecting the refractory to any rapid changes of temperature, undue abrasion or physical shock. When manually cleaning the interior of the incinerator avoid using pointed tools or physical shock. Do not hit or gouge the refractory. Never spray water onto a hot refractory surface. Inspect the upper combustion chamber at least twice a year and vacuum out any loose fly ash that may have accumulated on the floor area. Avoid charging large amounts of any inorganic material into the incinerator. This material will not burn but will greatly increase the clinker forming tendencies in the lower chamber and may result in refractory contamination with subsequent damage.

Ram Feeders - Inspect feeder hatch pinch point often. Keep debris from this area when loading. Clean out any debris which may fall behind the ram. Buildup of debris in these areas can cause equipment malfunction and damage.

Ash Hoe - Keep all moving part surfaces cleaned and well lubricated. Inspect rollers, bearings and wheels often for proper adjustment and wear.

MAINTENANCE AND LUBRICATION GUIDE

For Incinerator and Related Equipment

In order to keep your equipment operating properly and to avoid down-time, you should establish a preventative maintenance and lubrication schedule. This schedule, when performed properly and carried out on time, will help to prolong the life of your incinerator and equipment. This section contains a recommended preventative maintenance and service guide and also a recommended lubrication schedule. Please note that some items listed may not pertain to your equipment.

Some recommended tools needed for maintenance are:

- 1) 8" adjustable wrench
- 2) Allen wrench pack
- 3) 1 pair of channel lock pliers
- 4) 1 regular screw driver
- 5) 1 0-30" pressure gauge
- 6) 1 0-15 psi pressure gauge

SCHEDULED PREVENTIVE MAINTENANCE

- 1. Hourly
- 2. Daily
- 3. Weekly
- 4. Bi-Weekly
- 5. Monthly
- 6. Semi-annually
- 7. Annually
- 8. Lubrication Guide

INCINERATOR PRE-STARTUP CHECKLIST

INCINERATOR COMPONENT	PROCEDURE	
Chart Recorders	Install charts in recorders. Ensure charts are signed and dated and are set to the correct time by the Nemtron clock.	
Limit switches	Inspect for freedom of operation and any obstructing debris.	
Door seals	Inspect for wear, fit and air leakage.	
Hydraulic system	Check fluid level and for leaks.	
Water quench pit	Check level, add ash sinker as needed.	
Waste heat boiler	Ensure main & aux stops are open. Sliencer is lined up and feedwater & chemical lines are lined up.	
Feed pumps	Ensure feed discharge to the boiler is lined up & pump is set to AUTO.	
Gas	Ensure gas to the incinerator is on & Low pressure trips are reset.	
DA Tank	Ensure proper water level and temperature.	
Scrubber	Ensure booster pump is on & proper water level in all towers before starting.	
ID Fan	Ensure damper is closed for start up and that fan casing has been drained.	
Reset switches	Ensure gas and boiler reset switches have been set.	
Chart recorders	Double check chart recorders to ensure that they are tracking the correct time.	
Date:	Signature:	

HOURLY:	DATE:			
Incinerator Component:	Procedure:			
Ash Removal Hoe	Inspect and clean as required			
Water Quench Pit	Inspect water level and fill as required. Keep water level control box clean.			
Viewport Lower Chamber Inspection	Verify temperature by color. Check burn rate by height of pile. Spot problem wastes. See chart below.			
Feeder	Remove dragback material from housing. Keep hatch cover closing ledges clean. Keep wheel tracks clean.			
Charging Door	Inspect for complete closing of the door.			
PLC/Touchscreen	Check status of incinerator.			
TEMPERATURE COLOR SPECTRUM Color Approx.Temp				
Black 400 - 999 Red 1000 - 1499	·			
Orange 1500 - 1999 Yellow 2000 - 2199 White 2200 - Greater	,			
NOTE 1: POTENTIAL REFRACTORY PR	OBLEMS IF CONTAMINANTS ARE PRESENT.			
NOTE 2: POTENTIAL CLINKER PROBL	EMS IN LOWER CHAMBER.			
PRIMARY CHAMBER RANGE: 900 - 1900 Degrees F				
SECONDARY CHAMBER RANGE: 1500 -	· 2200 Degrees F			
Initial Below:				
700 0800 0900 1000 1100 1200 130	00 1400 1500 1600 1700 1800 1900 2000 21			

DAILY:	DATE:		
Incinerator Component:	Procedure:		
Thermocouples	Check operation of the thermocouples.		
Underfire air ports	Inspect and clean as required. Rod out ports on T and TE chambers.		
Limit switches	Inspect for freedom of operation and obstructing debris.		
Door seals	Inspect for wear, closeness of fit, and air leakage.		
Hydraulic system	Check fluid level. Add if needed.		
Water quench pit	Add chemicals as needed.(Ash Sinker)		
Check failsafe stackcap or hot valve operation	Trip emergency dump to atmosphere. This should be done each day or at change of shifts.		
Hearth	Inspect for and remove clinkers before start up. Also inspect underfire air tube holes.		
Lower chamber	Manually clean ash from inside of unit. SEE NOTE 1		
NOTE 1: SINCE IT IS IMPOSSIBLE TO ENTER THE LOWER CHAMBER UNTIL IT HAS COOLED, PLACE THE HYDRAULIC SYSTEM ON MANUAL AND SWEEP THE LOWER CHAMBER WITH THE INTERNAL RAM.			
Signature:			

WEEKLY:	DATE:
Incinerator Component:	Procedure:
Ash hoe, Internal Ram, freestanding equipment	Check anchor bolts to see that they are tight and in place. Lubricate rollers on ash hoe.
Heat recovery boiler tubes	Inspect and clean as required.
Blower intakes	Inspect for accumulations of lint, debris. Clean as required.
Burner flame rods	Inspect and clean as required.
Electrical panel	Clean panel cooling fans and filters
U.V. Scanner flame sensors	Inspect and clean as required.
Charging door	Gasket in place and intact. Door refractory in place. Does door rest on refractory on hearth.
Water quench pit	Verify water seal
Ram feeder	Lubricate slides. Check water sprays for proper operation and excessive amounts of water.
Modutrol motor or damper linkage	Check for slippage, proper operation
Internal ram	Inspect for ash build up beneath hearths and under the ram.
	Signature:

BIWEEKLY:	DATE:	
Incinerator Component:	Procedure:	
Hydraulic systems	Check hydraulic fluid level and add fluid as required.	
Fuel trains and burners	Inspect and clean as required. Investigate any source of fuel leakage	
Control panels	Inspect and clean as required. Keep panel securely closed and free of dirt to prevent electrical malfunction.	
Hydraulic fluid	Inspect for discoloration, contamination, and viscosity. Replacement fluid should be JES 1111-01. (See hydraulic section in section 6)	
	CAUTION: Severe damage can result to hydraulic seals if other hydraulic fluids are used.	
	Signature:	

MONTHLY	DATE:	
Incinerator Component:	Procedure:	
External surface of incinerator and stack	Inspect external "HOT" surfacs. White spots or discoloration may indicate a loss of refractory.	
Refractory	Inspect and repair minor wear areas with plastic refractory material.	
Internal ram face	Inspect for wear. These stainless steel faces may wear out in 1 to 5 years depending on service.	
Upper / Secondary combustion chamber	Inspect and vacuum any particulate matter that has accumulated on the chamber floor.	
Gas meter	Record gas usage to see if burners are set properly.	
Burner pilots	Inspect and adjust as required. Clean mixing oriface, ignitor, & spark plug.	
Internal ram	Remove ash dragback from housing.	
Hydraulics	Inspect for hose wear.	
Underfire air ports, Cleaning system	Remove end cover from underfire air tubes and with a flashlight, check for excessive material buildup. If so, remove the port cleaning system from the tubes and clean out all the foreign material.	
	Signature:	

SEMI-ANNUAL	DATE:		
Incinerator Component:	Procedure:		
Hot external surfaces	Inspect and paint with high tempreture paint as required.		
Ambient external surfaces	Inspect and paint with equipment enamel as required.		
Flameport air	Check air inlets and clean if necessary.		
Burner filter / sliencer	Clean filter per North American bulletin 2923 located in the component section of the manual.		
	Signature:		

ANNUAL	DATE:
Incinerator Component:	Procedure:
Spark arrestor	Check connections for mounting security. Cchek screen for holes. Check top screen for mounting integrity.
Structural steel	Inspect chambers, breeching, stack, and hearth steel for corrosion.
	Signature:
	•

8. LUBRICATION GUIDE

Grease fittings are supplied on many of the appliances/pieces of equipment that make up your JES incineration system. Some components will require lubrication more often than others.

Below is a list, by assembly, of the different possible locations requiring grease, the type of grease recommended, and the lubrication interval. A grease application guide is supplied to tell the proper way to grease each type of bearing or piece of equipment.

See grease recommendation chart for type of grease (i.e., Grease Rec #1, Grease Rec #2, etc.)

Lubrication Guide

1) Ram feeder

- a. Wheels with nylon insert Weekly (Grease Rec #1 or Grease Rec #2)
- b. Bearings (hatch) Weekly (Grease Rec #1 or Grease Rec #2)
- c. Slide rails Weekly (Grease Rec #5)
- d. Needle/roller (wheels) Weekly (Grease Rec #1 or Grease Rec #2)

2) Ash hoe

- a. Carriage wheels Weekly (Grease Rec #1)
- b. Hoe rollers Weekly
 (Grease Rec #1 or Grease Rec #2)
- c. Spherical bearings Weekly (Grease Rec #1 or Grease Rec #2)
- d. Chain drive bearings Monthly (Grease Rec #1 or Grease Rec #2)
- e. Chain Semi-annually (Grease Rec #4)
- f. Gear reducer Check semi-annually, change annually (Grease Rec #6 or Grease Rec #7)

3) Internal ram

- a. Spherical rod eye Monthly (Grease Rec #1 or Grease Rec #2)
- b. Rollers/wheels Weekly
 (Grease Rec #1 or Grease Rec #2)
- c. Chain drive bearings Bi-weekly (Grease Rec #1 or Grease Rec #2)
- d. Chain Semi-annually (Grease Rec #4)
- e. Gear reducer Change oil after first 50 hours of operation (Grease Rec #6 or Grease Rec #7)
- f. Gear coupling Check semi-annually, change grease every 1000 hours of operation or yearly, whichever comes first (Grease Rec #1 or Grease Rec #2)
- g. Slide rail (on chain driven ram) Weekly (Grease Rec #5)
- 4) Charging door
 - a. Spherical rod eye Monthly (Grease Rec #3)
- 5) Cleanout door
 - a. Hinge bearing Monthly (Grease Rec #3)
- 6) Blower bearings (High speed) (F.P. Air and I.D. fans) See grease application guide.
 - a. Chicago Monthly (Grease Rec #1 or Grease Rec #2)
 - b. American fan Monthly (Grease Rec #1 or Grease Rec #2)
 - c. Cincinnati Monthly
 (Grease Rec #1 or Grease Rec #2)
 - d. Buffalo I.D.Fan Monthly (Grease Rec #1 or Grease Rec #2)

- d. Spherical bearings (charging door, internal ram) grease under no-load conditions, rotate bearings if possible and re-grease.
- Couplings (Steelflex) (on chain drive internal ram, etc.) pack spaces between and around the grid with as much lubricant as possible and wipe off excess with top of grid. Slide cover halves with seals onto hubs and position lube holes 180° apart (90° for sizes 1150 through 1170). Re-lubrication annually -remove lube plugs and install lube fitting in one hole. Fill with lubricant until an excess appears at open lube hole; insert plug. Continue procedures until the plugs have been inserted.
- 5) Slide rails (internal ram, ram feeder) apply to top of slide rail sliding surface. Apply full length of slide.

Grease Application

PLEASE NOTE: It is very important not to overgrease. This is especially true if the bearings are equipped with extended grease lines. In this case, it is best to give the bearing just one "shot" of grease periodically.

1) Motors - All electric motors come in pre-greased by the factory. The re-lubrication schedule is as follows for 1800 rpm.

<u>HP</u>	Std Duty 8 hrs/day	Severe Duty 24 hrs/day	High ambients Extreme duty
1 1/2 - 7 1/2	5 yrs	3 yrs	9 mos.
10 - 40	3 yrs	1 yr	4 mos.
50 - 150	1 yr	6 mos.	3 mos.

For motors running at 3600 rpm, use one half of the above times. (Grease Rec #1 or Grease Rec #2)

Fractional horsepower or motors without grease ports - Disassemble motor and clean bearings thoroughly, repack each bearing 1/3 full with grease.

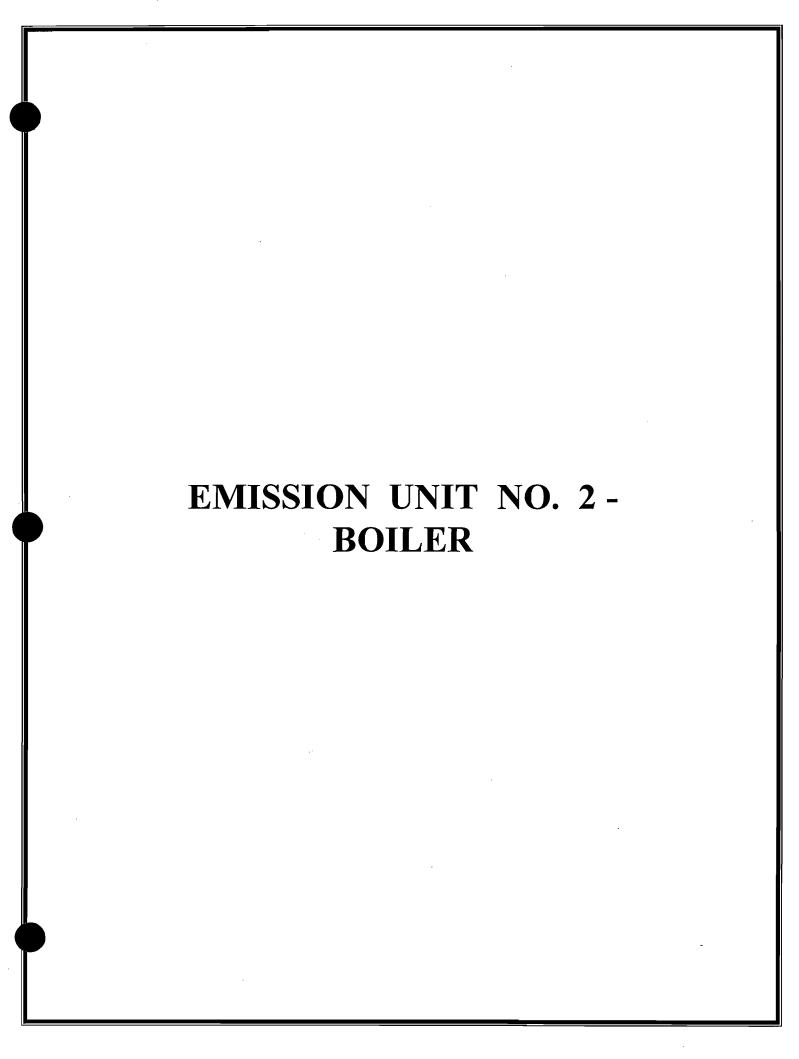
Motors have pipe plugs or grease fittings should be relubricated while warm and standing still. Replace one plug on each shield with grease fitting. Remove other plug for grease relief. Use low pressure grease gun to pump in grease until new grease appears in the relief hole. Run motor for 10 minutes to expel excess grease. Replace plug in relief hole.

- 2) Gear reducers fill half full of oil when unit is mounted level and horizontal. Fill plugs to be mounted horizontal.
 - * Change oil after first 50 hours and then at 1000 hour intervals.
- 3) Roller bearings (Dodge, Morse, McGill, Fafnir, Linkbelt)
 - a. Low speed bearings (hatch, ram wheels, ash hoe wheels, etc.) bearings should be pumped full of grease.
 - b. High speed bearings (fans, high speed shafts) bearings should be filled to 1/3 to 1/2 full. Grease should be installed while the shaft is rotating. The grease should be pumped in slowly until a slight bead forms around the seals. This bead, in addition to acting as an indicator of adequate relubrication, provides additional protection against the entry of foreign matter.
 - c. Split case bearings (large bearings on kiln drive, etc.) Pack the lower half of the bearing one-half full. After installing cap and seals, slowly grease while running at operating speeds until fresh grease appears at both seals.

06 - APPLICABLE REQUIREMENTS

List of Applicable Regulations

State: 62-296.401(4)(b)	PM and HCL standards	
62-296.401(4)(d)	Design, operating, monitoring and operator	
62-296.401(4)(e)	Test Methods and Procedures	
62-296.401(4)(f)	Frequency of testing	
62-296.401(4)(g)	Continuous emissions Monitoring	
62-297	Stationary Sources – Emissions Monitoring	
62-204.800(8)(d)	State adoption of 40CFR 60 Subpart Ce	
Federal: 40 CFR 60, Subpart Ce	Existing Hospital/Medical/Infectious Waste Incinerators	
40 CFR 60, Subpart Ee	New (Constructed after June 20, 1996) Hospital/Medical/Infectious Waste Incin.	



A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1.	1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)				
	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.				
En	nissions Unit	Description and Sta	atus .		
1.	Type of Emis	ssions Unit Addresse	ed in this Section	on: (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 o		nd activities wh	ich has at least one de	finable emission point
	This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.				
2.	2. Description of Emissions Unit Addressed in this Section: Cleaver Brooks Boiler				
3.	Emissions U	nit Identification Nu	mber: 003		
4.	Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: 80	8. Acid Rain Unit? Yes No
9.	9. Package Unit: Manufacturer: Cleaver Brooks Model Number: CB 700-300				
10	Manufacturer: Cleaver Brooks Model Number: CB 700-300 10. Generator Nameplate Rating: MW				
	11. Emissions Unit Comment:				

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EMISSIONS UNIT INFORMATION Section [2] of [2]

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:	
N/A	
·	
2. Control Device or Method Code(s): N/A	

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B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1.	Maximum Process or Throughput Rate:		
2.	Maximum Production Rate:		
3.	Maximum Heat Input Rate: 12.6 million Btu/hr (2)		
4.	Maximum Incineration Rate:	pounds/hr	
-		tons/day	
5.	Requested Maximum Operati	ng Schedule:	
		hours/day	days/week
		weeks/year	8760 hours/year
6.	Operating Capacity/Schedule Comment:		
		•	

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EMISSIONS UNIT INFORMATION

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C. EMISSION POINT (STACK/VENT) INFORMATION (Optional for unregulated emissions units.)

Emission Point Description and Type

2. Emission Point Type Code:		
ommon:		
ameter:		
feet		
Vapor:		
12. Nonstack Emission Point Height: feet		
14. Emission Point Latitude/Longitude		
Latitude (DD/MM/SS) Longitude (DD/MM/SS)		

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EMISSIONS UNIT INFORMATION Section [2] of [2]

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1.	Segment Description (Process/Fuel Type): Burning of Natural Gas				
2.	Source Classification Code (SCC):		3. SCC Units:		
	1-05-001-06		MMCF Burned		
4.	Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity	
	0.012	105.12		Factor:	
7.	Maximum % Sulfur:	8. Maximum % Ash:		9. Million Btu per SCC Unit: 1050	
10.	10. Segment Comment:				
	Maximum hourly rate is based on burner design of 12.6 MMBtu/hr. Maximum yearly rate				
	based on 8760 hrs. This is based on one boiler, there are two identical boilers.				

Segment Description and Rate: Segment 2 of 2

1.	Segment Description (Proc Burning of #2 Fuel Oil	cess/Fuel Type):			
2.	Source Classification Code (SCC): 1-03-005-01		3. SCC Units: Mgal Burned		
4.	Maximum Hourly Rate: 0.087	5. Maximum Annual Rate: 762		6.	Estimated Annual Activity Factor:
7.	Maximum % Sulfur: 0.05	8. Maximum 9	% Ash:	9.	Million Btu per SCC Unit: 135

10. Segment Comment:

Maximum hourly rate is based on burner design of 12.6 MMBtu/hr. Maximum yearly rate based on 8760 hrs. This is based on one boiler, there are two identical boilers.

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EMISSIONS UNIT INFORMATION [2]

Section [2]

of

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	·		NS
CO			NS
NOX			NS
SO2			NS
VOC			NS
		_	
		_	

POLLUTANT DETAIL INFORMATION Page [1] of [1]

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

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

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

1. Pollutant Emitted:	2. Total Percent Efficie	ency of Control:			
NOx					
3. Potential Emissions:	4. Synth	etical <u>ly</u> Limited?			
1.74 lb/hour 7.6	2 tons/year Ye	es X No			
5. Range of Estimated Fugitive Emissions (as	applicable):				
to tons/year					
6. Emission Factor: 20 lbs/MGal		7. Emissions			
		Method Code:			
Reference: SCC 1-03-005-01		3			
8. Calculation of Emissions:					
20 lbs / MGal x 0.087 MGal/hr = 1.74 lbs/l					
1.74 lbs/hr x 8,760 hrs/yr x ton / 2000 lbs = 7.62 tons / yr					
P. Pollutant Potential/Estimated Fugitive Emissions Comment:					
NOx is only pollutant with potential to emit over 5 tons per year					

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POLLUTANT DETAIL INFORMATION Page [1] of [1]

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

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

Allowable Emissions of

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

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F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

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

Allowable Emissions of

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

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EMISSIONS UNIT INFORMATION Section [2] of [2]

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1.	Visible Emissions Subtype: VE20	2. Basis for Allowable Rule	Opacity: Other
3.	Allowable Opacity: Normal Conditions: 20% Ex Maximum Period of Excess Opacity Allower	ceptional Conditions: ed: 6 min/hour	27 %
4.	Method of Compliance: Method 9		
5.	Visible Emissions Comment: Rule 62-296.406(1), F.A.C.		
<u>Vi</u>	sible Emissions Limitation: Visible Emission	ons Limitation of _	
1.	Visible Emissions Subtype:	2. Basis for Allowable Rule	Opacity: Other
	Allowable Opacity:	Rule	
3.	Allowable Opacity: Normal Conditions: % Ex	Rule	Other

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H. CONTINUOUS MONITOR INFORMATION N/A

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

<u>Co</u>	ontinuous Monitoring System: Continuous	Monitor	of	_
1.	Parameter Code:	2. Pol	llutant(s):	
3.	CMS Requirement:	Ru	ıle	Other
4.	Monitor Information Manufacturer:			
	Model Number:		Serial Numbe	r:
5.	Installation Date:	6. Per	rformance Spec	cification Test Date:
<u>Co</u>	ontinuous Monitoring System: Continuous	Monitor	of	_
	Parameter Code:		of of Pollutant(s):	_
	Parameter Code:		Pollutant(s):	Other
3.	Parameter Code:	2.	Pollutant(s):	
3.	Parameter Code: CMS Requirement: Monitor Information	2.	Pollutant(s):	Other
3.	Parameter Code: CMS Requirement: Monitor Information Manufacturer: Model Number:	2.	Pollutant(s): lle Serial Numbe	Other

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EMISSIONS UNIT INFORMATION

Section [2] of [2]

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: 01 Previously Submitted, Date
2.	Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) X Attached, Document ID: 02 Previously Submitted, Date
3.	Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date N/A
4.	Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date Not Applicable (construction application)
5.	Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date Not Applicable
6.	Compliance Demonstration Reports/Records Attached, Document ID: Test Date(s)/Pollutant(s) Tested: Previously Submitted, Date: October '05 Test Date(s)/Pollutant(s) Tested: September '05 - To be Submitted, Date (if known): Test Date(s)/Pollutant(s) Tested: Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
.7.	Other Information Required by Rule or Statute Attached, Document ID: X Not Applicable

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EMISSIONS UNIT INFORMATION

Section [2]

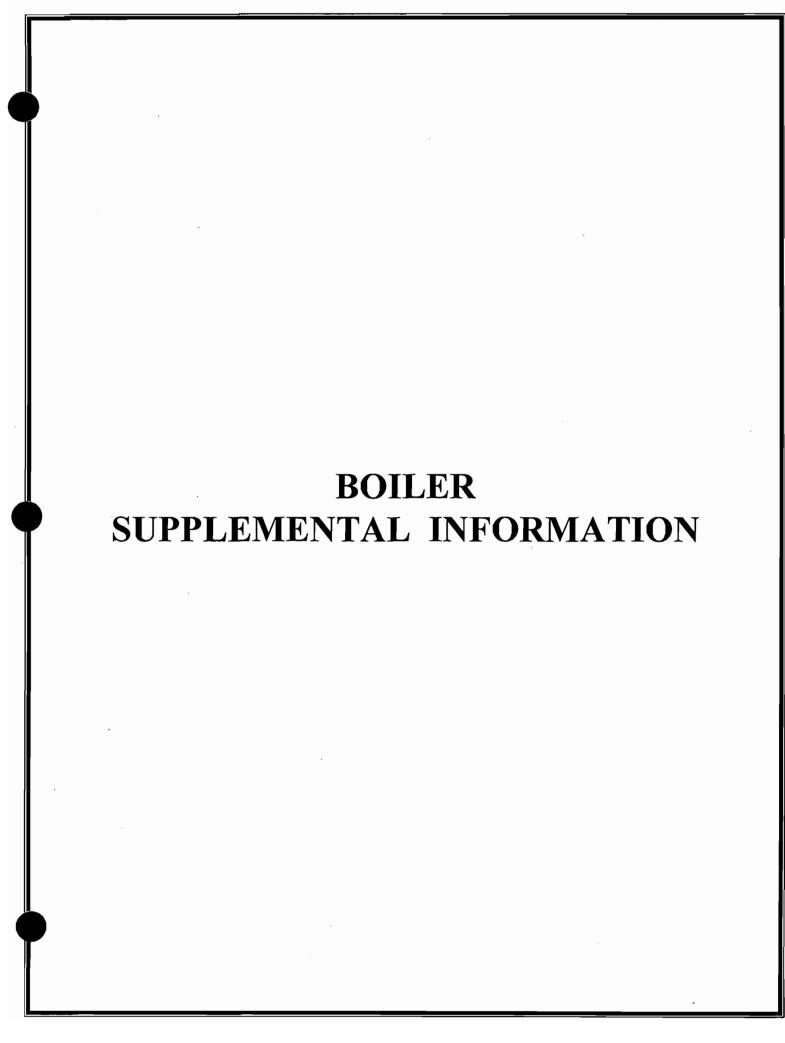
of [2]

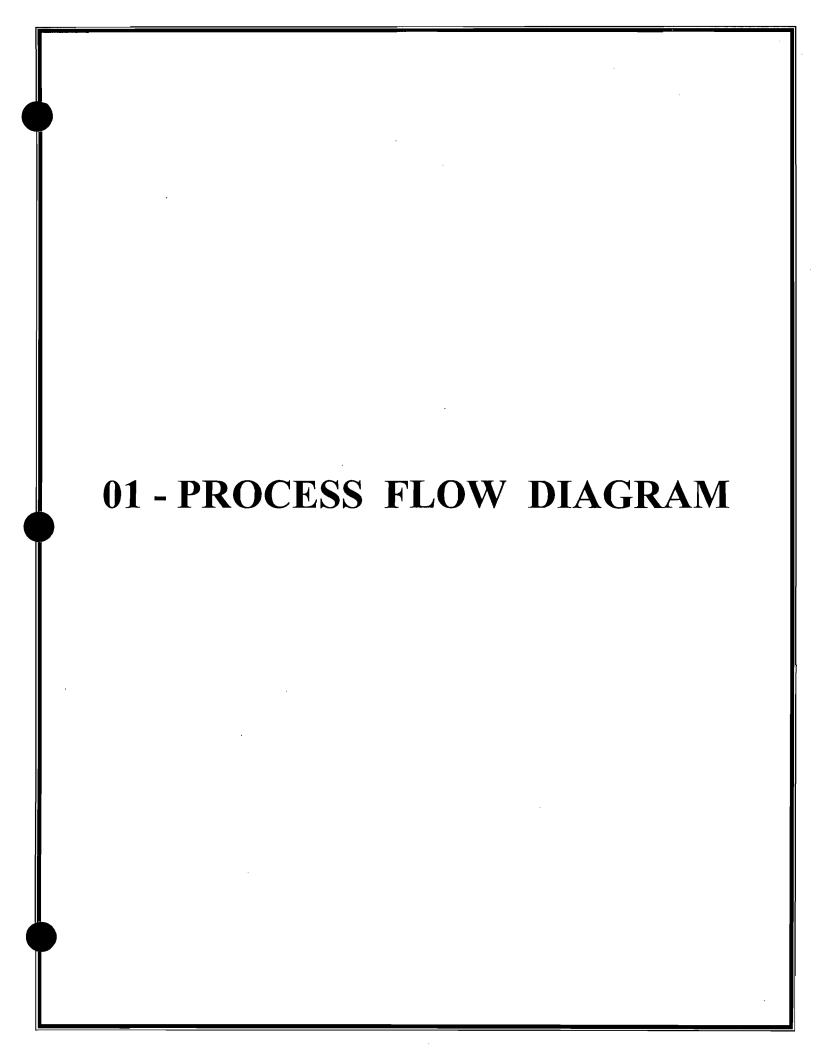
Additional Requirements for Air Construction Permit Applications

1.	Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7),
	F.A.C.; 40 CFR 63.43(d) and (e))
	Attached, Document ID: Not Applicable
2.	Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and
	Rule 62-212.500(4)(f), F.A.C.) Attached, Document ID: Not Applicable
2	
٤.	Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
	Attached, Document ID: Not Applicable
Ad	ditional Requirements for Title V Air Operation Permit Applications
1.	Identification of Applicable Requirements
	X Attached, Document ID: 03
2.	Compliance Assurance Monitoring
	Attached, Document ID: X Not Applicable
3.	Alternative Methods of Operation
	Attached, Document ID: X Not Applicable
4.	Alternative Modes of Operation (Emissions Trading)
	Attached, Document ID: X Not Applicable
5.	Acid Rain Part Application
	Certificate of Representation (EPA Form No. 7610-1)
	Copy Attached, Document ID:
	Acid Rain Part (Form No. 62-210.900(1)(a))
	Attached, Document ID: Previously Submitted, Date:
	Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
	Attached, Document ID:
	Previously Submitted, Date:
	New Unit Exemption (Form No. 62-210.900(1)(a)2.)
	Attached, Document ID:
	Previously Submitted, Date:
	Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
	Attached, Document ID: Previously Submitted, Date:
	Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
	Attached, Document ID:
	Previously Submitted, Date:
	Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
	Attached, Document ID:
	Previously Submitted, Date:
	X Not Applicable

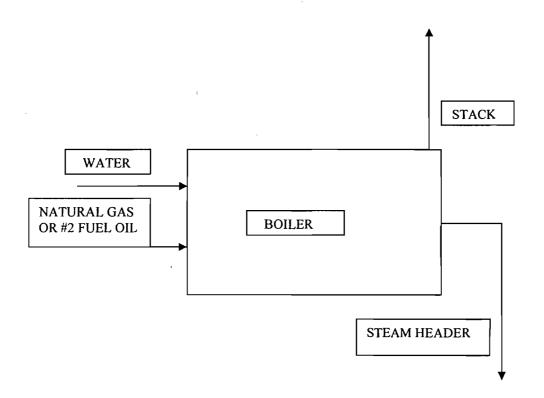
DEP Form No. 62-210.900(1) - Form

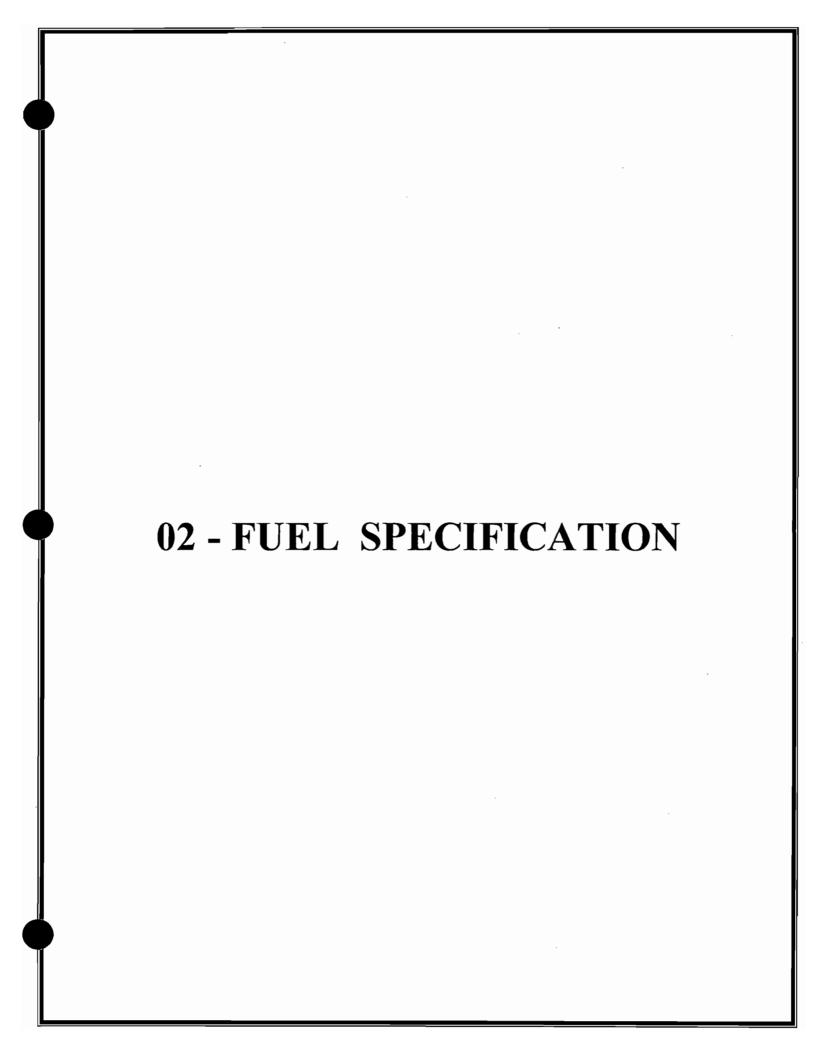
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BOILER PROCESS FLOWSHEET





FGT SYSTEM CHROMATOGRAPHS

Spot Analysis of Natural Gas for Delivery in Florida

Date	Time
4/5/00	11:31 AM

	Perry	Perry	Brooker	Gainsville	West Palm	
	36" Stream #1	30" Stream #2	24" Stream	8" Stream	24" Stream	_
	Mole%	Mole%	Mole%	Mole%	Mole%	_
Components	~					
Hexane	0.0470	0.0659	0.0553	0.0598	0.0571	_
Propane	0.3025	0.3695	0.3348	0.2250	0.3776	
Iso-Butane	0.0763	0.0929	0.0834	0.0526	0.0876	_
N-Butane	0.0711	0.0810	0.0734	0.0471	0.0798	_
Iso-Pentane	0.0274	0.0354	0.0303	0.0201	0.0302	_
N-Pentane	0.0171	0.0224	0.0186	0.0135	0.0194	
Nitrogen	0.2644	0.4139	0.3467	0.2591	0.3618	_
Methane	96.9132	95.6349	96.0777	97.0133	95.8773	_
C02	0.7133	0.7202	0.7155	0.7654	0.6672	_
Ethane	1.5675	2.5638	2.2642	1.5441	2.4420	_
Totals	100.0000	100.0000	100.0000	100.0000	100.0000	_
Btu	1027.7	1036.5	1033.3	1024.9	1036.0	Dry Btu/cf @ 14.7
Gravity	0.5777	0.5850	0.5822	0.5767	0.5832	Real Relative Der
Total Sulfur	4.4984	2.0907	1.7440			PPM
	0.2811	0.1307	0.1090			Grains/hcf
Current H2O	0.0000		0.8287		2.1064	Lbs. Per MMcf

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Diesel, Heating and Marine Fuel Specifications

Property	Test Method ASTM	#2 Diesel Fuel	California Reformulated Test Diesel	#1 Diesel Fuel	#2 Heating Fuel	Marine
						MGO/DMA
Appearance		Clear to tan or Red Dye ²	Clear or Red Dye ²	Clear to Tan or Red Dye ²	Red Dye	Red Dye
Cetane No., Min.	D 613	40	481	40		40
Cloud Point, * F, Min	D 2500	Seasonal by location	Seasonal by location	Seasonal by location		
Pour Point, * F. Min.	D 97				22	22
Viscosity, ⇔t at 40 ° C, Min to-Max.3	D 455	1.9 - 4.1	2.0 -4.1	1.3-2.4		1.4 - 5.5
Gravity, API Min.	D 4502		33 - 39		30	27.4
Copper Strip Corrosion, Max.	D 130	No. 3	No. 3	No. 3	No. 3	i
Fiash Point, PMCC, *F:	D 93					
Land		125	130	100	100	
Marine		140				140
Cistillation, *F:	D 86					
Initial Boiling Point, Min- to-Max.			340–400	550	540-640	
90% Recovered Min-to- Max. ³		540-640	580-660			
Sulfur, % Mass, Max;	D 2622					
On Road (EPA)		0.05		0.50		
Off Road (High Sulfur)		0.50			0.50	
Vehicle (CARE)			0.0501			1.5
Non-vehicle (High S)			0.50			
Aromatics, Volume %	D 1319	35	101		1	

Notes:

^{1.} CARB regulation limits the aromatics to 10-volume % maximum based on 90 day averaging or per CARB certified "afternate diesel" formulation. CARB aiternate formulations specify the sulfur, catanaromatics, nitrogen and PNA limits. The supplier must confirm that the product is certified per Title Code of Regulations, Sections 2281 and 2282. CARB originally designated D 1319 as the required aromatics. The CARB diesel limits and D 1319 are expressed in volume %. Unfortunately D 1319 designed for diesel fuel and has poor reproducibility. For this reason, CARB later allowed the use of test, D 5186, D 5186 results come in mass %. Therefore, D 5186 results must be converted to volu CARB approved equation: D 1319 (volume %) = 0.916(D 5186 (mass %)) + 1.33. If the D 5186 test

03 - APPLICABLE REQUIREMENTS

List of Applicable Regulations

Federal: 40 CFR 60, Subpart Dc	Small boiler guidelines
State: 62.296.406	Steam Generators Under 250 MMBTU/hr