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DEC 31 2013

DIVISION OF AIR
RESOURCE MANAGEMENT



INITIAL TITLE V AIR OPERATION PERMIT APPLICATION

INEOS New Planet BioEnergy

Permit Application

Prepared For: INEOS New Planet BioEnergy
925 74th Avenue SW
Vero Beach, FL 32968

Submitted By: Golder Associates Inc.
6026 NW 1st Place
Gainesville, FL 32607 USA

Distribution: 4 copies – FDEP
2 copies – INEOS New Planet BioEnergy
1 copy – Golder Associates Inc.

December 2013

123-87551-07

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APPLICATION FOR AIR PERMIT

LONG FORM



Department of Environmental Protection

Division of Air Resource Management APPLICATION FOR AIR PERMIT - LONG FORM

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I. APPLICATION INFORMATION

DIVISION OF AIR RESOURCE MANAGEMENT

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

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

Air Operation Permit – Use this form to apply for:

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

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: INEOS New Planet BioEnergy	
2. Site Name: Indian River County BioEnergy Facility	
3. Facility Identification Number: 0610096	
4. Facility Location... Street Address or Other Locator: 925 74th Avenue SW City: Vero Beach County: Indian River Zip Code: 32968	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Application Contact

1. Application Contact Name: Gary F. Phillips, HSSE Manager
2. Application Contact Mailing Address... Organization/Firm: INEOS New Planet BioEnergy LLC Street Address: 925 74th Avenue SW City: Vero Beach State: FL Zip Code: 32968
3. Application Contact Telephone Numbers... Telephone: (772) 794-7909 ext. Fax: (772) 794-7999
4. Application Contact E-mail Address: gary.phillips@ineos.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application: 12-31-13	3. PSD Number (if applicable):
2. Project Number(s): 0610096-006-AV	4. Siting Number (if applicable):

APPLICATION INFORMATION

Purpose of Application

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

Air Construction Permit

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

Air Operation Permit

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

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

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

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

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

Application Comment

This application is for Initial Title V Operating Permit for a waste-to-ethanol production facility that uses as its primary feedstock biomass, vegetative matter, yard waste, land clearing debris, untreated wood and similar materials from the Indian River County (IRC) Solid Waste Disposal District (SWDD) curbside collection program.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
001	Materials Handling Area		
002	Feedstock Dryers No. 1 and No. 2		
003	Gasification, Fermentation and Distillation Systems		
004	Distillation Unit Fugitive Emissions		
006	Vent Gas Boiler		
007	Tank Farm		
008	Loadout Flare		
010	Syngas Flare		
011	Emergency Equipment		

Application Processing Fee

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

APPLICATION INFORMATION

Owner/Authorized Representative Statement

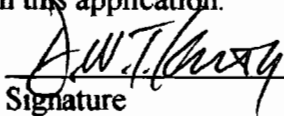
Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name :
2. Owner/Authorized Representative Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative Telephone Numbers... Telephone: () ext. Fax: ()
4. Owner/Authorized Representative E-mail Address:
5. Owner/Authorized Representative Statement: <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i> _____ Signature Date

APPLICATION INFORMATION

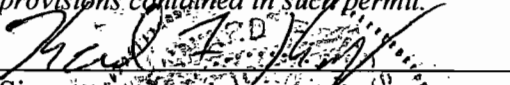
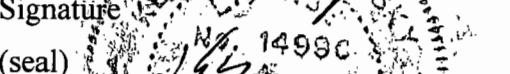
Application Responsible Official Certification

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

1. Application Responsible Official Name: David King, Site Director
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: INEOS New Planet BioEnergy LLC Street Address: 925 74th Avenue SW City: Vero Beach State: FL Zip Code: 32968
4. Application Responsible Official Telephone Numbers... Telephone: (772) 794-7905 ext. Fax: (772) 794-7999
5. Application Responsible Official E-mail Address: david.king@ineos.com
6. Application Responsible Official Certification: I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.  Signature _____ 12/30/13 Date _____

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky Registration Number: 14996
2. Professional Engineer Mailing Address... Organization/Firm: Golder Associates Inc.** Street Address: 6026 NW 1st Place City: Gainesville State: FL Zip Code: 32607
3. Professional Engineer Telephone Numbers... Telephone: (352) 336-5600 ext. 21156 Fax: (352) 336-6603
4. Professional Engineer E-mail Address: kkosky@golder.com
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(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</i> <i>(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.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input checked="" type="checkbox"/> , 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.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/> , 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 <input type="checkbox"/> , 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.</i> <i>(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 <input type="checkbox"/> , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i> Signature:  Date: <u>12/27/13</u> (seal) 

* Attach any exception to certification statement.

**Board of Professional Engineers Certificate of Authorization #00001670.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 550.7 North (km) 3,051.3		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 27/35/10 Longitude (DD/MM/SS) 80/28/55	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 28	6. Facility SIC(s): 2869
7. Facility Comment :			

Facility Contact

1. Facility Contact Name: Gary F. Phillips, HSSE Manager
2. Facility Contact Mailing Address... Organization/Firm: INEOS New Planet BioEnergy LLC Street Address: 925 74th Avenue SW <div style="display: flex; justify-content: space-between; margin-top: 5px;"> City: Vero Beach State: FL Zip Code: 32968 </div>
3. Facility Contact Telephone Numbers: Telephone: (772) 794-7909 ext. Fax: (772) 794-7999
4. Facility Contact E-mail Address: gary.phillips@ineos.com

Facility Primary Responsible Official

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

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: <div style="display: flex; justify-content: space-between; margin-top: 5px;"> City: State: Zip Code: </div>
3. Facility Primary Responsible Official Telephone Numbers... Telephone: () ext. Fax: ()
4. Facility Primary Responsible Official E-mail Address:

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.	<input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2.	<input type="checkbox"/> Synthetic Non-Title V Source	
3.	<input checked="" type="checkbox"/> Title V Source	
4.	<input type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5.	<input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6.	<input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7.	<input type="checkbox"/> Synthetic Minor Source of HAPs	
8.	<input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9.	<input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10.	<input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11.	<input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12.	Facility Regulatory Classifications Comment: <p>The two shredder and trammel engines in the Material handling Area (EU 001) are subject to 40, CFR 60 Subpart IIII and 40 CFR 63, Subpart ZZZZ.</p> <p>Gasification, fermentation, and Distillation Systems (EU 003) are subject to 40 CFR 60, Subpart VVa.</p> <p>Vent gas Boiler is currently subject to 40 CFR 60 Subpart AAAA if syngas is produced from MSW.</p> <p>The product storage tank and the denaturant storage tank in the Tank Farm (EU 007) are subject to 40 CFR 60 Subpart Kb.</p> <p>Natural gas-fired emergency generator in the Emergency Equipment (EU011) is subject to 40 CFR 60 Subpart JJJJ.</p>	

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	B	N
PM10	B	N
PM2.5	B	N
VOC	SM	N
SO2	SM	N
NOx	SM	N
CO	SM	N
Pb	B	N
H114	B	N
H106	SM	N
H027	B	N
D/F	B	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

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

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C1</u> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C3</u> <input type="checkbox"/> Previously Submitted, Date: _____

Additional Requirements for Air Construction Permit Applications NA

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

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for FESOP Applications

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

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities: (Required for initial/renewal applications only)
 Attached, Document ID: **INPB-FI-CV1** Not Applicable (revision application)
2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought)
 Attached, Document ID: **INPB-FI-CV2**
 Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications)
 Attached, Document ID: **INPB-FI-CV3**
Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____
 Equipment/Activities Onsite but Not Required to be Individually Listed
 Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only)
 Attached, Document ID: _____ Not Applicable
6. Requested Changes to Current Title V Air Operation Permit:
 Attached, Document ID: _____ Not Applicable

C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

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

1. Acid Rain Program Forms:

Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable (not an Acid Rain source)

Phase II NO_x Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable

New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable

2. CAIR Part (DEP Form No. 62-210.900(1)(b)):

Attached, Document ID: _____ Previously Submitted, Date: _____

Not Applicable (not a CAIR source)

Additional Requirements Comment

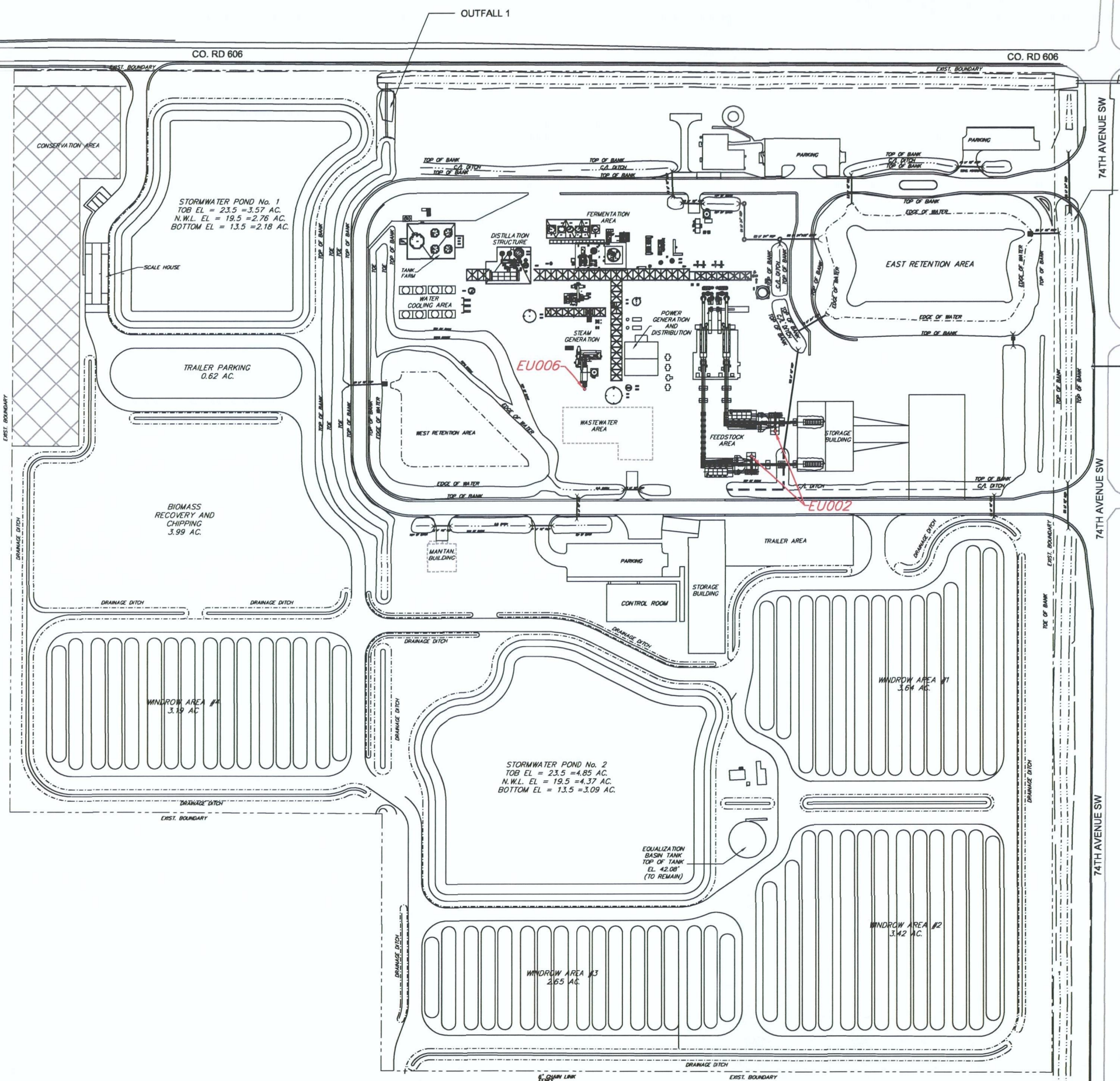
NSPS Subpart AAAA is currently applicable to the vent gas boiler if syngas is produced from MSW.

An air construction permit application has been submitted to the FDEP to remove the NSPS applicability. This application is currently under review.

ATTACHMENT INPB-FI-C1

FACILITY PLOT PLAN

G:\PROJECTS\Ineos_BioIncinerator_Facility\River_Facility\AirPermitModification\Figures\1238755107_D001_SITE_LAYOUT.dwg | Layout: TB-Report-PS-B | Modified: hmar 12/18/2013 3:06 PM | Plotted: hmar 12/18/13 | Jacksonville, FL



LEGEND

WATER FEATURES AND SURFACE BODIES

NOTES

- 1) NO POTABLE WATER WELLS ON OR WITHIN THE 500 FT OF THE SITE.

REFERENCES

- 1) DRAWING BASED ON INEOSKEY.DWG PROVIDED BY CLIENT ON MAY 5TH, 2013



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RWW
PROJECT						

**INEOS NEW PLANET BIOENERGY
TITLE V APPLICATION**

TITLE
SITE PLAN



PROJECT No.	123-8755107	FILE No.	123-8755107_D001
DESIGN	KMS	05/09/13	SCALE AS SHOWN
CADD	NRL	12/18/13	ATTACHMENT INPB-FI-C1
CHECK	SM	12/18/13	
REVIEW	SM	12/18/13	

**ATTACHMENT INPB-FI-C2
PROCESS FLOW DIAGRAM**

INEOS BIO ETHANOL PROCESS

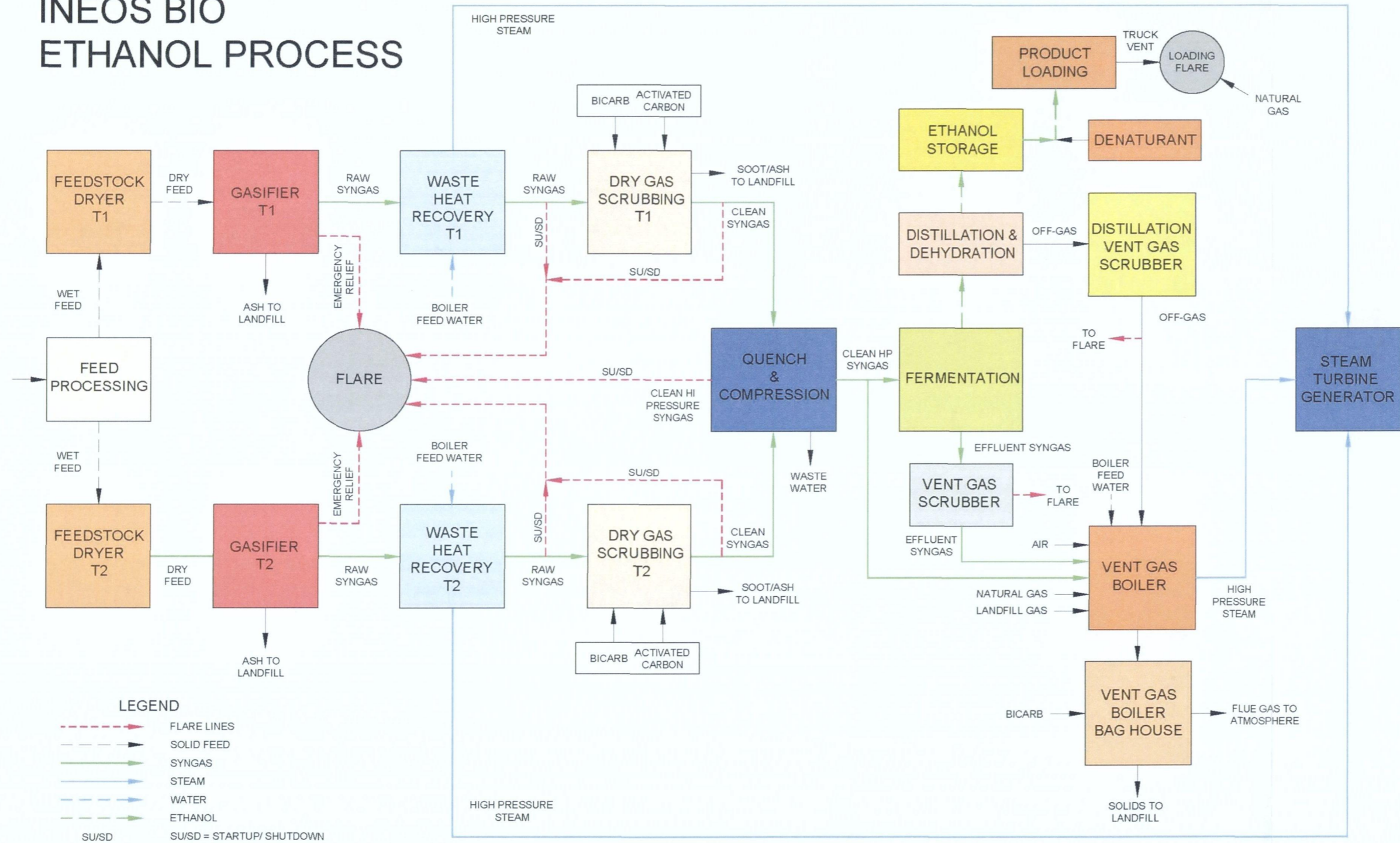


Figure INPB-FI-C2
Process Flow Diagram

Source: Golder, 2013.

Y:\Projects\2012\123-87551 IneosAir Permitting\Initial Title V Permit (AV)\Attach\INPB-FI-C2.docx



ATTACHMENT INPB-FI-C3

**PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER**

ATTACHMENT INPB-FI-C3
PRECAUTIONS TO PREVENT EMISSIONS OF
UNCONFINED PARTICULATE MATTER

The facility has small amounts of unconfined particulate matter (PM) as a result of the operation of the facility and shall take the following precautions in accordance with Rule 62-296(4)(c) to prevent emissions from unconfined PM:

- All normally travelled roads on the site shall be paved
- Access paths used exclusively for maintenance purposes may be unpaved.
- Speed limit signs will be posted.
- The unpaved areas of the facility shall be maintained and either sodded or landscaped as necessary.
- The conveyor systems outside of the materials handling area shall be fully enclosed.
- Hoods, fans, filters or similar equipment shall be used to contain, capture or vent particulate matter.
- The ash shall be wetted before being stored in the ash handling roll-off bins.
- Paint removal
- Limiting access to plant property by unnecessary vehicles

ATTACHMENT INPB-FI-CV1
LIST OF INSIGNIFICANT ACTIVITIES

ATTACHMENT INPB-FI-CV1

LIST OF INSIGNIFICANT ACTIVITIES

A list of existing units and/or activities that are considered to be insignificant and are exempted from Title V permitting under Rule 62-213.430(6) is presented below. The exempt activities listed are also those activities that are included in Rule 62-210.300(3)(a) that would not exceed the thresholds in Rule 62-213.430(6)(b)3.

Brief Description of Emissions Units and/or Activities:

- Miscellaneous new and used oil drums in storage building
- Portable diesel generators (wheel mounted)
- Internal combustion engines of vehicles used for transportation of passengers or freight
- Vacuum pumps in laboratory operations
- Equipment used for steam cleaning
- Belt or drum sanders having a total sanding surface of 5 square feet or less
- Laboratory equipment used exclusively for chemical or physical analyses
- Brazing, soldering, or welding equipment
- Fire and safety equipment
- Petroleum lubrication systems
- Degreasing units
- Non-halogenated solvent storage and cleaning operations
- Surface coating operations
- Steam turbine lube oil vents
- Miscellaneous steam and condensate vents
- Sealed drums and containers
- Natural gas metering station
- Compressed gas bottles
- Compressed air systems
- Storage & use of water treatment chemicals
- Water treatment systems
- Parts washer (aliphatic hydrocarbon solvent)
- Miscellaneous painting activities
- Water treatment chemicals
- Water treatment sulfuric acid tote
- Water treatment sodium hydroxide tote
- Miscellaneous electrical equipment
- Miscellaneous enclosed oil filled equipment (two gasifier hydraulic system – 70 gallon; compressor – 550; turbine lube oil – 850 gallon)
- Enclosed transformers (6 – approx.. 400 gallon)
- Storage of bottled gases
- Cooling tower
- Fuel Oil Tanks (two-500 gallon; one-300 gallon)

- Gasoline Tank (300 gallon)
- Used Oil Tanks (two - 150 gallon)
- Fire Pump Fuel Oil Tank (250 gallon)
- 20 yard Roll-off Containers for Gasifier Slag and Ash
- Containers for fabric filter ash
- Dry chemical containers and Handling

ATTACHMENT INPB-FI-CV2
IDENTIFICATION OF APPLICABLE REQUIREMENTS

ATTACHMENT INPB-FI-CV2
IDENTIFICATION OF APPLICABLE REQUIREMENTS
TITLE V CORE LIST

Effective: 03/01/02

(Updated based on current version of FDEP Air Rules)

[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 60, Subpart AAAA: Standards of Performance for Small Municipal Waste Combustion Units.
- 40 CFR 60, Subpart Kb: Standards of Performance for Volatile Organic Storage Liquid Storage Vessels.
- 40 CFR 60, Subpart VVa: Standards of Performance for Equipment leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI)
- 40 CFR 60, Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
- 40 CFR 60, Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
- 40 CFR 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

- 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.
- 40 CFR 98, Subpart A: Mandatory Reporting of Greenhouse Gases.
- 40 CFR 98, Subpart C: General Stationary Combustion Sources.
- 40 CFR 98, Subpart D: Electricity Generation.

State: **(description)**

CHAPTER 62-4, F.A.C.: PERMITS, effective 02-16-12

- 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 03-28-12

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.
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.
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, F.A.C.: Emissions Computation and Reporting.
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 03-28-12**CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION**, effective 02-16-12

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.

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 02-16-12

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 02-16-12

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

62-297.310(4), F.A.C.: Applicable Test Procedures.

62-297.310(7), F.A.C.: Frequency of Compliance Tests.

62-297.310(6), F.A.C.: Repaired Stack Sampling Facilities.

62-297.310(5), F.A.C.: Determination of Process Variables.

62-297.510(8), 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 10-06-08

CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 10-12-08

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

**ATTACHMENT INPB-FI-CV3
COMPLIANCE REPORT AND PLAN**

**ATTACHMENT INPB-FI-CV3a
COMPLIANCE REPORT AND PLAN**

INEOS Bio certifies that the waste biomass-to-ethanol production facility in Vero Beach, Florida, as of the date of this application, is in compliance with each applicable requirement addressed in this Title V air permit renewal application, except as described in the attached Compliance Plan.

I, the undersigned, am the responsible official as designated in Chapter 62-213, F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

Compliance statements for this facility will be submitted on an annual basis to FDEP, on or before March 1 of each year.

D. Wilkoy
Signature, Responsible Official

12/30/13
Date

ATTACHMENT INPB-FI-CV3

COMPLIANCE PLAN FOR INDIAN RIVER COUNTY BIOENERGY FACILITY

Applicable Requirements

Air Construction Permit No. 0610096-004-AC authorized construction for the waste biomass-to-ethanol production Indian River County BioEnergy Facility, which includes a material handling area (EU001), feedstock dryer Nos. 1 and 2 (EU002), gasification, fermentation, and distillation systems (EU003), a vent gas boiler (EU006), a tank farm (EU007), loadout flare (EU008), syngas flare (EU010), and emergency equipment including an emergency generator and an emergency fire pump (EU011). Construction is complete and the facility is operating since July 31, 2013. A Title V air operating permit is required for the regular operation of the facility and as required by Rule 62-213.420(1)(a), the Title V permit application must be submitted within 180 days after completing the required work and commencing operation. The Title V application for the facility is therefore due by December 31, 2013. In this permit application, INEOS New Planet Bioenergy (INPB) is applying for the Title V air operating permit for the facility. Permit No. 0610096-004-AC requires initial compliance tests to demonstrate initial compliance with the applicable emissions standards for certain emission units. The following initial compliance tests are required:

- Feedstock Dryer Nos. 1 and 2 – visible emissions (VE) and volatile organic compounds (VOC)
- Vent Gas Boiler – VE, VOC, particulate matter (PM). Note that tests for dioxins/furans, cadmium, lead, mercury, and hydrogen chloride are not required until syngas is generated from MSW is combusted.
- Loadout Flare and Syngas Flare – VE

These initial compliance tests have been scheduled in January 2014.

Compliance Plan

While the facility began initial operation, the uniqueness of the biological ethanol production process has not allowed consistent operation that would allow the scheduling and performance of compliance testing required for some of the facility's emission units. INPB has scheduled the compliance tests to be conducted in January, 2014. INPB will submit the test results to FDEP within 45 days after completion of the tests.

EMISSIONS UNIT INFORMATION

Section [1]

Materials Handling Area

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [1]

Materials Handling Area

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

2. Description of Emissions Unit Addressed in this Section:
Materials Handling Area

3. Emissions Unit Identification Number: **001**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: July 31, 2013	7. Emissions Unit Major Group SIC Code: 28
--	--------------------------------	--	--

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

- Acid Rain Unit
- CAIR Unit

9. Package Unit:
Manufacturer:

Model Number:

10. Generator Nameplate Rating:

11. Emissions Unit Comment:

This emission unit includes tipping floor, front-end loaders, biomass storage area, MSW storage area, conveyor systems, and relocatable shredding, screening and processing equipment (two shredders and two trammel screens) that are used in feedstock receiving, handling, storage, and processing operations.

EMISSIONS UNIT INFORMATION

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Materials Handling Area

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:
Dust Suppression - Traffic Control (feedstock delivery vehicles accepted between 7 am and 7 pm, posted speed limit signs)

2. Control Device or Method Code: **108**

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [1]

Materials Handling Area

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:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr	
	tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment:		

EMISSIONS UNIT INFORMATION

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Materials Handling Area

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

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

EMISSIONS UNIT INFORMATION

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Materials Handling Area**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Industrial; Distillate Oil (ultra-low sulfur diesel); Reciprocating (Shredder and screen engines)		
2. Source Classification Code (SCC): 2-02-001-02	3. SCC Units: 1000 Gallons Burned	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 99,216	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.015	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum annual fuel use for the two shredder engines limited to combined total of 82,368 gallons and for the two screen engines limited to combined total of 16,848 gallons on a 12-month rolling basis per Permit No. 0610096-004-AC.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Industrial Processes; Pulp and Paper Products; Bulk Handling and Storage- Wood/Bark; Stockpiles		
2. Source Classification Code (SCC): 3-07-004-02	3. SCC Units: Tons of material processed	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 226,300	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Material handling at biomass stockpiles consists of yard waste, land clearing debris, untreated wood and MSW. Maximum annual rate based on 630 ton/day.		

EMISSIONS UNIT INFORMATION

Section [1]
 Materials Handling Area

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	108		EL
NOx			EL
CO			EL

EMISSIONS UNIT INFORMATION

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Materials Handling Area

POLLUTANT DETAIL INFORMATION

Page [1] of [3]
Particulate Matter- PM

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.38 lb/hour 0.72 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.2 and 0.3 g/kW-hr Reference: Tier 3, 40 CFR Subpart III		7. Emissions Method Code:	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table INPB-EU1-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions are for two shredder engines and two trommel screen engines.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

**Section [1]
Materials Handling Area**

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Particulate Matter- PM**

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1_ of 1_

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.20 and 0.30 g/kW-hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Manufacturer emission certification	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60 Subpart IIII emission standard for Tier 3 engines	

Allowable Emissions Allowable Emissions _ of _

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

Allowable Emissions Allowable Emissions _ of _

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

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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Materials Handling Area

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Carbon Monoxide- CO

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 6.61 lb/hour 12.4 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 3.5 and 5.0 g/kW-hr Reference: Tier 3, 40 CFR Subpart III		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table INPB-EU1-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions are for two shredder engines and two trommel screen engines.			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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Materials Handling Area

Page [2] of [3]
Carbon Monoxide- CO

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 3.5 and 5.0 g/kW-hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Manufacturer emission certification	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60 Subpart IIII emission standard for Tier 3 engines	

Allowable Emissions Allowable Emissions _ of _

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

Allowable Emissions Allowable Emissions _ of _

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

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

Section [1]
Materials Handling Area

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Nitrogen Oxide- NOx

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 6.98 lb/hour 13.1 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 4.0 g/kW-hr Reference: Tier 3, 40 CFR Subpart III		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Table INPB-EU1-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment: Potential emissions are for two shredder engines and two trommel screen engines..			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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Materials Handling Area

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Nitrogen Oxide- NOx

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1_ of 1_

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 4.0 g/kW-hr	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Manufacturer emission certification	
6. Allowable Emissions Comment (Description of Operating Method): 40 CFR 60 Subpart IIII emission standard for Tier 3 engines	

Allowable Emissions Allowable Emissions _ of _

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

Allowable Emissions Allowable Emissions _ of _

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

EMISSIONS UNIT INFORMATION

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Materials Handling Area

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Rule 62-296.320(4)(b), F.A.C., General Visible Emission Standard	

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

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Materials Handling Area

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [1]

Materials Handling Area

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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION**Section [1]****Materials Handling Area****I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)****Additional Requirements for Air Construction Permit Applications**

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

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

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ATTACHMENT INPB-EU1-F1.10
CALCULATION OF EMISSIONS

Table INPB-EU1-F1.10
Potential Criteria Pollutant Emissions from Feedstock Preparation Machinery
INEOS New Planet BioEnergy, Vero Beach, FL

Parameter	Units	Shredder Engines	Screen Engines	Total (EU 001)
Manufacturer		Mercedes Benz	Daimler-Chrysler	
Model No.		OM 460 LA	OM 904 LA	
<u>Performance</u>				
Number of Units		2	2	
Fuel		Ultra-low Diesel	Ultra-low Diesel	
Engine Rating ^a	kW	320.6	75.3	
Engine Rating ^a	hp	430	101	
Heat Content (HHV)	Btu/gal	136,000	136,000	
Maximum Annual Fuel Usage ^b	gal/yr	82,368	16,848	
Annual operating hours (for each) ^c	hours	3,744	3,744	
Maximum Annual Heat Input ^d	MMBtu/yr	11,202	2,291	
Hourly Fuel Usage (calculated)	gal/hr	22.0	4.5	
<u>Emissions</u>				
SO ₂ -Basis ^e	ppm	15	15	-
Emissions	lb/yr	0.005	0.0010	0.006
	TPY	0.009	0.002	0.011
NO _x - Basis ^f	g/kw-hr	4.0	4.0	-
Emissions	lb/hr	5.66	1.33	6.98
	TPY	10.6	2.5	13.1
CO - Basis ^f	g/kw-hr	3.5	5.0	-
Emissions	lb/hr	4.95	1.66	6.61
	TPY	9.3	3.1	12.4
VOC - Basis ^g	lb/hp-hr	2.47E-03	2.47E-03	-
	lb/hr	2.12	0.50	2.62
	TPY	4.0	0.9	4.91
PM/PM ₁₀ /PM _{2.5} - Basis ^{t,h}	g/kw-hr	0.20	0.30	-
	lb/hr	0.28	0.10	0.382
	TPY	0.53	0.19	0.72

^a INEOS Bio (2013); Golder (2013).

^b Annual fuel usage limited to 82,368 gal/yr combined for the two shredder engines and 16,848 gal/yr combined for the two trommel screens.

^c Annual operating hours based on AC permit application dated April 2012.

^d Maximum annual heat input calculated based on maximum annual fuel usage and diesel oil heat content of 136,000 Btu/gal.

^e Use of ultra low-sulfur diesel (ULSD) fuel with 0.0015% S and 7.1 lb/gal of fuel density.

^f Based on Tier 3 emission standards per 40 CFR 60 Subpart IIII.

^g EPA, AP-42, Section 3.3 Emission Factors for Uncontrolled gasoline and diesel industrial engines (October 1996).

^h PM₁₀ and PM_{2.5} assumed equal to PM.

ATTACHMENT INPB-EU1-IV1
IDENTIFICATION OF APPLICABLE REQUIREMENTS



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

BOB MARTINEZ CENTER
2600 BLAIRSTONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE

INEOS New Planet BioEnergy
925 74th Avenue
Vero Beach, FL 32968-9702
Authorized Representative:
Mr. David King, President

Air Permit No. 0610096-004-AC
Permit Expires: September 30, 2015
Indian River County BioEnergy Facility
Minor Source Air Construction Permit
Biomass to Ethanol Production

PROJECT

This is the final air construction permit, which authorizes modification of a previously issued construction permit (0610096-003-AC) for a waste-to-ethanol production facility that uses as its primary feedstock biomass, vegetative matter, yard waste, land clearing debris, untreated wood and similar materials available from the Indian River County (IRC) Solid Waste Disposal District (SWDD) curbside collection program. The new facility is located at 925 74th Avenue in Vero Beach, Florida in Indian River County (IRC). Once fully commissioned, the facility is expected to produce up to 8 million gallons of ethanol per year, and although it will generate a small amount of electricity available for commercial use (about 6 megawatts gross, with 2 megawatts net exported), it is categorized under Standard Industrial Classification Code No. 2869—Industrial Organic Chemicals, Not Elsewhere Classified. The UTM coordinates are Zone 17, 550.7 kilometers (km) East and 3,051.3 km North.

This permit is organized into the following sections: Section 1 (General Information), Section 2 (Administrative Requirements), Section 3 (Emissions Unit Specific Conditions) and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix CF of Section 4 of this permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection (Department) in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

for Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Permit (including the Final Determination, Final Permit, and Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

David King, INEOS: david.king@ineos.com

Daniel Cummings, INEOS: dan.cummings@ineos.com

Dr. Mark Niederschulte, INEOS: mark.niederschulte@ineos.com

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Joy Ezell: hopeforcleanwater@yahoo.com

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

SECTION 1. GENERAL INFORMATION

PROPOSED PROJECT

This project is for the modification of a previously issued air construction permit for a waste biomass-to-ethanol production facility. The facility has been constructed and is in the commissioning phase of operation. Once fully operational, the primary feedstock for the facility will be biomass and municipal solid waste (MSW) available from IRC curbside collection program, delivered to the IRC collection centers, or delivered directly to the facility by the public. On an annual average, vegetative matter will make up approximately 90 percent of the feedstock. The remainder of the biomass feedstock will consist of clean woody construction and demolition (C&D) debris and MSW. In this permit, "MSW" refers to solid waste other than yard trash and clean debris, as those terms are defined at Rule 62-210.200, F.A.C. (see Appendix BMP).

The INEOS bio ethanol technology process gasifies the biomass feedstock. The biomass is not directly combusted; instead, oxygen (O₂) is supplied to the gasifier which then converts the feed material into a synthetic gas (syngas) consisting of carbon monoxide (CO), carbon dioxide (CO₂), hydrogen (H₂) and other hydrocarbons.

This syngas is not directly combusted either. It is cleaned and cooled and then fed into a fermentation system where proprietary bacterial metabolic action converts the syngas into ethanol. The ethanol is then distilled, dehydrated, stored and loaded into dedicated ethanol tanker trucks for shipment offsite. Off gases from the fermentation processes are scrubbed and then routed to a vent gas boiler for combustion. Steam from the fermentation and distillation vent gas boiler, as well as steam from waste heat recovery at the gasifiers, are routed to a steam turbine electrical generator (STEG) to generate electricity.

This project consists of the following emissions units (EU). EU 005 and 009 were eliminated in the first permit modification for this project (Permit No. 0610096-002-AC). EU 011 was added as a result of the second permit modification (Permit No. 0610096-003-AC).

EU ID No.	Emission Unit Description
001	Materials Handling Area
002	Feedstock Dryers No. 1 and No. 2
003	Gasification, Fermentation and Distillation Systems
004	Distillation Unit Fugitive Emissions
006	Vent Gas Boiler
007	Tank Farm
008	Loadout Flare
010	Syngas Flare
011	Emergency Equipment (added by Permit No. 0610096-003-AC)

This permit (0610096-004-AC) supersedes and replaces the previous construction permit modifications issued for this project. Major changes from the previous construction permit modifications consist of the following:

- Modification of the odor control plan to indicate that an enclosed area to store MSW is not required until such time waste that can generate odors, such as putrescible household and institutional waste streams, are processed at the facility (objectionable odors are still prohibited at the facility);
- That distinctions be made in the permit between the proposed feedstock streams to clearly define what is and is not considered MSW to better define when the air pollution testing requirement contained in NSPS 40 CFR 60, Subpart AAAA - Standards of Performance for Small Municipal Waste Combustion Units for Which Commenced After August 30, 1999 or for Which Modifications or Reconstruction is Commenced After June 6, 2001 come into force;

SECTION 1. GENERAL INFORMATION

- A reduction was made of the sampling frequency of the continuous monitoring system (CMS) measuring the H₂S concentration in the fermenter off gas from once every 15 minutes to once every hour;
- Based the timing of the pollutant emission stack testing required by NSPS Subpart AAAA on when MSW is actually gasified in the ethanol production process;
- The requirement to use activated carbon injection (ACI) to remove mercury (Hg) from syngas generated by the gasifier that is directly routed to the vent gas boiler thereby bypassing the ethanol production process be modified. Specifically, this requirement is only to be enforced when syngas from the gasification of MSW is routed to the boiler;
- The NSPS Subpart AAAA requirements were clarified to indicate that testing the vent gas boiler stack for total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans (D/F), lead (Pb), mercury (Hg), cadmium (Cd) and hydrogen chloride (HCl) emissions are required 60 days after achieving the maximum production rate, but no later than 180 days from the initial gasification of MSW;
- Update the tank farm description to reflect the as built configuration; and,
- Allow natural gas to be used to supplement syngas in the syngas control flare to ensure proper combustion along with changing the monitoring parameter to syngas flow rather than air flow.

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C. (PSD).
- The facility operates units that are subject to the New Source Performance Standards (NSPS) at 40 Code of Federal Regulations, Part 60 (40 CFR 60), and the National Emissions Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR 63.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department (2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400). The Permitting Authority for permits to operate this facility is the Air Resource Section of the Department's Central District Office (3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767).
2. Compliance Authority: The Compliance Authority for this project is the Air Resource Section of the Department's Central District Office (3319 Maguire Boulevard, Suite 232, Orlando, Florida 32803-3767). All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Compliance Authority.
3. Appendices: The following Appendices are attached as a part of this permit and must be complied with by the permittee:
 - a. Appendix CF: Citation Formats, Acronyms and Glossary of Common Terms;
 - b. Appendix GC: General Conditions;
 - c. Appendix CC: Common Conditions;
 - d. Appendix CTR: Common Testing Requirements;
 - e. Appendix BMP: Best Management Practices;
 - f. Appendix LDAR: Preliminary Leak Detection and Repair (LDAR) Program;
 - g. Appendix GP: Identification of Applicable General Provisions from Title 40, Part 60 of the Code of Federal Regulation (C.F.R.);
 - h. Appendix Kb: New Source Performance Standards (NSPS) for Volatile Organic Liquid Storage Vessels, 40 C.F.R. 60, subpart Kb;
 - i. Appendix VVa: NSPS for Equipment Leaks of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI), 40 C.F.R. 60, Subpart VVa;
 - j. Appendix AAAA: NSPS for Small Municipal Waste Combustion Units, 40 C.F.R. 60, subpart AAAA;
 - k. Appendix IIII: NSPS for Stationary Compression Ignition Internal Combustion Engines, 40 C.F.R. 60, subpart IIII; and
 - l. Appendix ZZZZ: National Emission Standards for HAP (NESHAP) for Stationary Reciprocating Internal Combustion Engines (RICE), 40 C.F.R. 63, subpart ZZZZ.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, Florida Statutes; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

SECTION 2. ADMINISTRATIVE REQUIREMENTS

7. Source Obligation: At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.
[Rule 62-212.400(12), F.A.C.]
8. Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V operation permit is required for regular operation of the permitted emissions units. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority.
[Rules 62-4.030, 62-4.050 and 62-4.220, F.A.C. and Chapter 62-213, F.A.C.]
9. Monthly Operations Summary: By the last calendar day of each month, the permittee shall record the following parameters in a written or electronic log for the previous month of operation. (For example, the monthly operations summary for June must be recorded by July 31.) The monthly operations summary shall be kept and made available to the Compliance Authority upon request.
- Gallons of ultra low sulfur diesel fuel used in the shredder and screen engines (see **Condition 3.A.11**);
 - Total combined dry tons of biomass and MSW feedstock processed in both dryers (see **Condition 3.B.11**);
 - Gallons of ethanol produced (see **Condition 3.C. 20**);
 - Hours of operation and million British thermal units (MMBtu) of total heat input for the vent gas boiler (see **Condition 3.E.13**);
 - Standard cubic feet of syngas, natural gas and landfill gas fired in the vent gas boiler (see **Condition 3.E.13**);
 - Gallons of final (denatured) ethanol product loadout (see **Condition 3.F.7**);
 - Standard cubic feet of displaced vapors to the loadout flare and the duration of each flare event during the month (see **Condition 3.G.7**);
 - Standard cubic feet of displaced vapors to the syngas flare, the duration of each flare event during the month and the reason for flaring (see **Condition 3.H.5**); and
 - Updated 12-month rolling totals for each of these operating parameters.
- [Rule 62-4.070(3), F.A.C.]
10. Annual Operating Report: The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year and submitted to the Compliance Authority by April 1 of the following year. [Rule 62-210.370(3), F.A.C.]
11. Reasonable Precautions to Prevent Emissions of Unconfined Particulate Matter (PM): The facility shall take the following reasonable precautions to prevent emissions of unconfined PM:
- All normally traveled roads on the site shall be paved.
 - Access paths used exclusively for maintenance purposes may be unpaved.
 - Speed limit signs will be posted.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

- d. The unpaved areas of the facility shall be maintained and either sodded or landscaped as necessary.
- e. The conveyor systems outside of the materials handling area shall be fully enclosed.
- f. Hoods, fans, filters or similar equipment shall be used to contain, capture or vent particulate matter.
- g. The ash shall be wetted before being stored in the ash handling roll-off bins.

[Rule 62-296(4)(c), F.A.C.]

12. **Objectionable Odors Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. Prior to the use of MSW that creates objectionable odors (i.e. putrescible household waste and institutional waste), the permittee shall submit an odor control plan to the Compliance Authority that addresses how the facility will control MSW odors, such as through implementing a "first in/first out" material handling practice; storing MSW in an enclosed area; limiting on-site storage of MSW to 48 hours or less; or other procedures. After the conclusion of a 120 day period continuously using such MSW, the permittee shall revise and resubmit the odor control plan to the Compliance Authority. If objectionable odors arise while any type of MSW is processed, the permittee shall take immediate actions to eliminate the odors. In addition, the permittee shall within 10 days submit a plan to the Compliance Authority documenting the corrective actions taken to eliminate the odors and outlining how in the future objectionable odors will be prevented.

[Application No. 0610096-004-AC; Rule 62-296.320(2), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

13. **Standard Conditions:** As used in this permit, standard conditions refers to a temperature of 68 °F and a pressure of 14.7 pounds per square inch absolute (psia).

[Rule 62-210.200, F.A.C. Definition of "Standard Conditions"]

14. **Dried Tons:** As used in this permit, "dried tons" refers to solid material with 15 percent moisture content. [Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Materials Handling Area (EU-001)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	<p><u>Materials Handling Area:</u></p> <p>Trucks deliver vegetative waste and clean woody C&D debris to the tipping floor of the materials handling area. Vegetative waste is primarily yard waste or land clearing debris from the IRC curbside collection program, delivered to the IRC collection centers, or delivered directly to the facility by the public. The C&D debris is material diverted from a dedicated cell of the IRC landfill. The BioEnergy facility may accept vegetative waste, C&D and MSW from outside IRC. MSW will be stored in accordance with the submitted odor control plan. Vegetative waste and C&D debris will be stored outdoors on a hard-packed gravel area in windrows to provide for drying. Feedstock preparation machinery will include two slow speed shredders (or grinders, referred to as shredders throughout this permit and associated documents) and two trommel screens.</p>

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS for Stationary Compression Ignition Internal Combustion Engines (Appendix IIII): 40 CFR Part 60, Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines—applies to the diesel engines powering the shredders and screens. The permittee shall comply with the requirements of the NSPS, included as Appendix IIII. [Application No. 0610096-002-AC and Rule 62-296.100(3), F.A.C.]
2. NESHAP for Stationary RICE (Appendix ZZZZ): 40 CFR Part 63, Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines—applies to the diesel engines powering the shredders and screens. The permittee shall comply with the requirements of the NESHAP, included as Appendix ZZZZ. [Rule 62-296.100(3), F.A.C.]

EQUIPMENT

3. Feedstock System: The permittee is authorized to install the following major pieces of equipment for feedstock delivery, handling and processing:
 - a. Tipping floor;
 - b. Front-end loaders;
 - c. The biomass storage area shall meet applicable FDEP regulations for such materials for biomass (authorized feedstock other than MSW, see Condition 3.A.4 of this permit);
 - d. MSW storage area shall conform to **Specific Condition 12 of Section 2** of this permit and be so configured such that objectionable odors cannot develop;
 - e. Conveyor systems; and
 - f. Relocateable shredding, screening and processing equipment.[Application No. 0610096-004-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

4. Authorized Feedstock: Biomass, vegetative matter, yard waste, land clearing debris, untreated wood and MSW is authorized to be stored in the materials handling area. For purposes of this permit, "biomass" refers to authorized feedstock other than MSW. [Application No. 0610096-004-AC; Rule 62-210.200, F.A.C. Definitions of "Biomass", "Yard Waste", "Land Clearing Debris," "Untreated Wood" and "Solid Waste"; and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Materials Handling Area (EU-001)

5. Hours of Operation: The hours of operation of this emissions unit are not limited (8,760 hours per year).
[Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
6. Restricted Fuel Use: The diesel engines powering the shredders and screens shall be fired only with ultra low sulfur diesel fuel (maximum 15 ppm sulfur by weight). Fuel use for the two shredder engines is limited to no more than a combined total of 82,368 gallons per year on a rolling 12-month basis. Fuel use for the two screen engines is limited to no more than a combined total of 16,848 gallons per year on a rolling 12-month basis.
[Application No. 0610096-002-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

WORK PRACTICE STANDARDS

7. Feedstock Storage:
 - a. Biomass shall be delivered directly to the tipping floor unless the tipping floor cannot accommodate additional material. The tipping floor shall be designed to accommodate feedstock for up to two days (48-hour period) of operation.
 - b. Additional biomass shall be delivered to the hard-packed gravel storage area.
 - c. Storage of MSW shall be in accordance with the submitted odor control plan.
[Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
8. Roadways: The plant roadways shall be paved and during dry conditions wetted sufficiently to maintain surface moisture to minimize fugitive dust emissions. Roadways shall be swept as required with a vacuum sweeper in good working order to prevent the buildup of dirt and silt on the roadway surfaces. [Application No. 0610096-001-AC; Rule 62-296(4)(c), F.A.C. Unconfined Emissions of Particulate Matter; and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
9. Traffic Control: The feedstock delivery vehicles shall be accepted at the site on a 12 hour per day (7:00 AM to 7:00 PM), seven days per week basis. Speed limit signs shall be posted. The feedstock delivery vehicles shall be weighed on entry and exit from the site.
[Application No. 0610096-001-AC; Rule 62-296(4)(c), F.A.C. Unconfined Emissions of Particulate Matter; and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
10. Treated Wood Management Plan: To ensure that wood treated with chromated copper arsenate is not included with the C&D debris delivered to the facility for use as feedstock, the permittee shall only accept shredded or mulched C&D debris from a source complying with a treated wood management plan meeting the requirements of Rule 62-701.730(20), F.A.C. The permittee shall implement the treated wood management plan in Appendix BMP to screen any C&D debris that is to be shredded or mulched at the facility, unless the delivered C&D debris has been screened at its source as per a treated wood management plan meeting the requirements of Rule 62-701.730(20), F.A.C.
[Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

RECORDS AND REPORTS

11. Recordkeeping Requirements: The permittee shall maintain monthly records of ultra low sulfur diesel fuel use, and the permittee shall maintain fuel delivery receipts identifying the sulfur content of the delivered diesel fuel. These records shall be kept and made available to the Compliance Authority upon request. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

B. Feedstock Dryers No. 1 and No. 2 (EU-002)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
002	<p><u>Feedstock Dryers No. 1 and No. 2:</u> The two feedstock dryers (Carrier Model QAD-3660S-20'-6"-5 HP or equivalent) receive feedstock from the storage piles and use low-pressure steam, provided by the boiler and heat recovery systems, to reduce the feedstock moisture to around 15 percent. The dryers use 8,960 pounds per hour of the steam to heat the inlet to about 250 °F. Flue gas from the dryers is vented to the atmosphere through a dust control system. PM emissions from the dryer exhaust are controlled with a baghouse. The dried feedstock is then sent to the gasifiers by way of a covered conveyor system.</p>

EQUIPMENT

- Feedstock dryers: The permittee is authorized to install two vibrating fluidized bed dryers that use low-pressure steam to reduce the feedstock moisture to approximately 15 percent. [Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
- Air Pollution Control Equipment: To comply with the emission standards of this permit, the permittee shall install the following air pollution control equipment on each feedstock dryer.
 - Baghouse: The permittee shall install a baghouse to remove PM emissions from the dryer exhaust. The baghouse shall be designed to achieve a PM emissions rate of 0.005 grains per dry standard cubic meter.
 - VOC control: The permittee is authorized to vent the dryer exhaust to a VOC control device, if necessary, to meet the VOC emission limit in **Condition 3.B.7**. The choice and design of the control device, if needed, will be made after the initial compliance test data are available. The permittee shall submit the recommended design for a VOC control device to the Permitting Authority prior to installation.
[Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
- Enclosed Conveyor System: The permittee shall install an enclosed conveyor system to transport dried feedstock from the dryers to the gasification system.
[Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

- Permitted Capacity: Feedstock drying for both dryers combined is limited to an annual average throughput of no more than 425 tons per day (27 percent moisture content) on a rolling 12-month basis. [Application No. 0610096-002-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
{Permitting Note: 425 tons per day at 27 percent moisture is equivalent to 365 tons per day at 15 percent moisture.}
- Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year). [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

EMISSIONS STANDARDS

- Visible Emission Standard: Visible emissions (VE) from each feedstock dryer shall not exceed 5 percent opacity. [Application No. 0610096-001-AC and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

B. Feedstock Dryers No. 1 and No. 2 (EU-002)

- 7. VOC Standard: VOC emissions from each feedstock dryer shall not exceed 3.8 pounds per hour (lbs/hr). [Application No. 0610096-001-AC and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

TESTING REQUIREMENTS

- 8. Initial Compliance Tests: Each feedstock dryer stack shall be tested to demonstrate initial compliance with the standards for visible emissions and VOC. The initial tests shall be conducted within 60 days after achieving permitted capacity, but not later than 180 days after initial operation of the unit. [Rules 62-4.070(3), F.A.C. Reasonable Assurance and Rule 62-297.310(7)(a)1., F.A.C.]
- 9. Compliance Tests Prior to Permit Renewal: Prior to obtaining a renewed operation permit, each feedstock dryer stack shall be tested to demonstrate compliance with the visible emissions and VOC emission limits in **Conditions 3.B.6 and 3.B.7**. [Rule 62-4.070(3), F.A.C. Reasonable Assurance and Rule 62-297.310(7)(a)3., F.A.C.]
- 10. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources.
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above methods are described in Appendix A of 40 C.F.R. 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other method may be used unless prior written approval is received from the Department.

[Rules 62-204.800 and 62-297.100, F.A.C. and Appendix A of 40 C.F.R. 60]

RECORDS AND REPORTS

- 11. Recordkeeping Requirements: The permittee shall maintain records of the amount of total combined biomass and MSW feedstock processed in both dryers on a tons per day basis and an annual average tons per day, rolling 12-month basis (27 percent moisture content). These records shall be kept and made available to the Compliance Authority upon request. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Gasification, Fermentation and Distillation Systems (EU-003)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
003	<u>Gasification, Fermentation and Distillation Systems:</u> Two gasifiers heat feedstock through starved-air pyrolysis to produce syngas, a mixture of CO, CO ₂ , H ₂ and other hydrocarbons. The syngas is cleaned and bubbled through the fermentation system. The distillation system extracts ethanol from the filtered fermentation broth. This emissions unit also includes equipment to accomplish waste heat recovery; dry gas cleaning; syngas quench and compression; and vent gas scrubbing.

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS for Equipment Leaks of VOC (Appendix VVa): 40 CFR Part 60, Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the SOCOMI for Which Construction, Reconstruction or Modification Commenced After November 7, 2006—applies to each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, flange or other connector that contains or contacts a process fluid that is at least 10 percent VOC by weight. It also applies to any devices or systems that it requires to be installed. The permittee shall comply with the requirements of the NSPS, included as Appendix VVa, for all subject equipment. [Application No. 0610096-001-AC and Rule 62-296.100(3), F.A.C.]
2. Closed Vent Systems and Control Devices: During normal operation, off-gas from the fermentation and distillation systems shall be collected and routed via closed vent systems to scrubbers (the process vent gas scrubber or distillation overhead scrubber, respectively) prior to being routed to a control device. The control device for these streams shall be the vent gas boiler (EU-006). [Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
3. Preliminary LDAR Program: Because the final list of subject equipment will not be known until the facility's design is complete, the permittee shall implement the preliminary LDAR program contained in Appendix LDAR until a final LDAR program is submitted to the Compliance Authority. The permittee shall submit the final LDAR plan and otherwise demonstrate compliance with the NSPS, included as Appendix VVa, within 180 days of initial startup. [Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

EQUIPMENT

4. Gasifiers: The permittee is authorized to install two gasifiers, each consisting of a two-stage, upper and lower gasification zone with a dedicated ram feeder to feed the dried feedstock. The gasifiers shall be equipped with emergency vent valves that can route syngas to the syngas flare (EU-010) in the event of emergencies such as a failure of the electrical supply to the plant or high pressure in the system caused by the blockage of downstream equipment. The permittee is authorized to install ancillary equipment to cool the syngas and to recover waste heat through the boiler feed water preheater. [Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
5. Dry Gas Cleanup Packages: The permittee is authorized to install two dry gas cleanup packages, each of which consists of activated carbon and sodium bicarbonate injection followed immediately by a fabric filter. Exhaust from the fabric filter is not emitted to the atmosphere, but is routed to syngas quench and compression. [Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Gasification, Fermentation and Distillation Systems (EU-003)

6. Syngas Quench and Compression: The permittee is authorized to install a quench tower to further cool the cleaned and filtered syngas, an electrical driven gas compression system and ancillary equipment including a cooled water heat exchanger and a knock-out drum.
[Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
7. Fermentation and Distillation System: The permittee is authorized to install a fermentation and distillation system consisting of fermentation vessels, distillation feed tank, distillation tower, reflux drum and dehydration system.
[Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
8. Vent Gas Scrubbing: The permittee is required to install a process vent gas scrubber for the fermentation off-gases. Emergency release from the process vent gas scrubber shall be routed to the syngas flare (EU-010). [Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
9. Distillation Overhead Scrubbing: The permittee is required to install a distillation overhead scrubber for the distillation and dehydration system off-gases. Emergency release from the process distillation area overhead scrubber shall be routed to the syngas flare (EU-010). Emergency release from the distillation system emergency relief valves may be vented to the atmosphere.
[Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

10. Primary Authorized Feedstock: Biomass, vegetative matter, yard waste, land clearing debris and untreated wood is authorized to be used as feedstock to the gasification system. Feedstock processing for both gasifiers combined is limited to an annual average throughput of no more than 365 dried tons (15% moisture) per day on a rolling 12-month basis.
[Application No. 0610096-004-AC; Rule 62-210.200, F.A.C. Definitions of "Biomass," "Yard Waste," "Untreated Wood" and "Solid Waste"; and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
11. MSW Trial Period: During an MSW trial period not to exceed 120 continuous days, MSW is authorized to be used as a feedstock, alone or in combination with biomass, subject to the following requirements.
 - a. Feedstock: The permittee may fire MSW alone or in combination with the biomass feedstock. MSW processing is limited to no more than 365 dry tons per day for both gasifiers combined. A maximum of 10,950 dry tons of MSW is authorized to be processed during the MSW trial period.
 - b. Notification: The permittee shall notify the Compliance Authority at least 30 days prior to commencement of the MSW trial period.
 - c. Testing: The permittee shall conduct stack tests at the vent gas boiler stack (EU-006), using the methods and procedures specified in Appendix AAAA, for the following pollutants: PM, lead, mercury, hydrogen chloride (HCl) and cadmium. The permittee may repeat this testing during or after the MSW trial period so as to demonstrate compliance at different MSW feed rates.
 - d. Report: Prior to initiating routine processing of MSW in the gasifiers as authorized by Condition 3.C.12, the permittee shall submit a report to the Compliance Authority that uses available monitor and stack test data to evaluate the impact of processing MSW on emissions of the following pollutants: nitrogen oxides (NO_x), CO, sulfur dioxide (SO₂), PM, lead, mercury, HCl and cadmium.
[Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
12. MSW Feedstock: After submitting the report specified in **Condition 3.C.11.d**, MSW is authorized to be used as feedstock to the gasification system. MSW processing for both gasifiers combined is limited to a 12-month rolling annual average throughput of no more than 110 percent of the dried tons per day achieved for both gasifiers combined during the most recent testing conducted pursuant to **Condition 3.C.11.c**. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

C. Gasification, Fermentation and Distillation Systems (EU-003)

13. Authorized Fuels: Natural gas and landfill gas are authorized to be fed to the gasifier bottom chamber start-up burners in order to bring the system up to temperature until the solid feed is started. During normal operation, butanol from the distillation system is authorized to be fed to the gasifier burners. [Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
14. Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year). [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
15. Ethanol Production Rate: Ethanol production is limited to 8.00 million gallons per year on a rolling 12-month basis. [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
{Permitting Note: The final product with the addition of a denaturant is limited to 8.42 million gallons per year.}
16. Ethanol Capture, Fermentation System: The process vent gas scrubber shall be designed to remove 95 percent of the residual ethanol from the fermentation system off-gases. [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
17. Ethanol Capture, Distillation and Dehydration System: The distillation overhead scrubber shall be designed to remove 95 percent of the residual ethanol from the distillation and dehydration system off-gases. [Application No. 0610096-002-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
18. H₂S Concentration Limit: The concentration of H₂S in the fermenter off gas and syngas streams shall not exceed 500 part per million by volume (ppmv). [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

MONITORING REQUIREMENTS

19. H₂S Concentration: The concentration of H₂S in the fermenter off gas (vent gas) shall be monitored in ppmv at least once per hour with a continuous on-line gas chromatograph to show that it is 500 ppmv or less. The concentration in ppmv of H₂S in the syngas steam from the gasifiers shall be monitored monthly by collecting bag or canister samples from the inlet port to the fermenter and injecting the samples into a chromatograph for analysis. As an alternative the samples may be sent off-site to a certified laboratory for analysis. If the average H₂S concentration of the first 12 monthly samples of the syngas is 400 ppmv or less, with no sample exceeding 500 ppmv, sampling may hence forth be done on a quarterly basis. Any exceedance of the H₂S concentration limit of 500 ppmv shall be reported to the Compliance Authority within 48 hours. [Application No. 0610096-004-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

RECORDS AND REPORTS

20. Recordkeeping Requirements: The permittee shall maintain records of the amount of ethanol produced (gallons per year) on a rolling 12-month basis. The permittee shall maintain records of all H₂S concentration tests. These records shall be kept and made available to the Compliance Authority upon request. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]
21. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR of this permit. In addition, the concentration of H₂S in the fermenter off gas (vent gas) monitored with a continuous on-line gas chromatograph shall be reported. [Rule 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

D. Distillation Unit Fugitive Emissions (EU-004)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
004	<u>Distillation Unit Fugitive Emissions:</u> Process vents from the fermentation, distillation and dehydration system are collected, and emissions are routed through closed vent systems to a control device (the vent gas boiler, EU-006). There will be some fugitive VOC emissions from the distillation unit, however, that are not captured and routed to control.

EQUIPMENT

1. Fermentation and Distillation System: The permittee is authorized to install a fermentation and distillation system (EU-003) as specified in Section 3.C of this permit.
[Application No. 0610096-001-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

2. Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year).
[Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
3. Ethanol Production Rate: Ethanol production is limited to 8.00 million gallons per year on a rolling 12-month basis.
[Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

{Permitting Note: The final product with the addition of a denaturant is limited to 8.42 million gallons per year. Controlled VOC emissions from distillation are assumed to be 0.1161 lb VOC per 1000 gallons of ethanol produced. At 95 percent control and 8 million gallons per year of ethanol, this equates to 0.46 tons of fugitive VOC—primarily ethanol and butanol.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

E. Vent Gas Boiler (EU-006)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
006	<p>Vent Gas Boiler:</p> <p><i>Fuels:</i> During startup, the vent gas boiler fires landfill gas supplemented with natural gas. During normal operation, the boiler fires the vent gases collected from fermentation, distillation and dehydration. Vent gases are scrubbed prior to combustion in the vent gas boiler. The vent gases may be supplemented with landfill gases during normal operation.</p> <p><i>Control Devices:</i> The vent gas boiler is equipped with low-NO_x burners. Following combustion, sodium bicarbonate is injected into the flue gas immediately prior to a fabric filter.</p> <p><i>Stack Parameters:</i> The vent gas boiler exhaust stack is 80 feet tall and 2.5 feet in diameter. Flow rate at the vent gas boiler stack exit is approximately 19,000 dry standard cubic feet per minute at 7 percent O₂. Exit velocity corresponding to this flow rate at the vent gas boiler stack is estimated to be 61 feet per second.</p>

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS for Small Municipal Waste Combustion Units (Appendix AAAA): Each equipment train (from gasifier to vent gas boiler) is an "affected facility" (i.e., new municipal waste combustion unit) for purposes of 40 C.F.R. part 60, subpart AAAA—Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 31, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001 when MSW is first combusted in the gasifiers. Upon first gasification of MSW, the permittee shall comply with the requirements of the NSPS, included as Appendix AAAA. The following requirements and specifications are relevant to NSPS applicability.
 - a. The word "combust" in reference to the NSPS refers to the pyrolysis reaction in the gasifiers utilizing MSW as the feedstock.
 - b. Each municipal waste combustion unit (gasifier-to-vent gas boiler equipment train) has a capacity of greater than 35 but less than 250 tons per day of MSW.
 - c. The municipal waste combustion units are "Class I Units" because the aggregate plant combustion capacity is 365 tons per day of MSW, which is greater than 250 tons per day.
 - d. The municipal waste combustion units use activated carbon (in the dry gas cleanup packages) to control emissions of dioxin/furan and mercury.
 - e. The NSPS emissions limits will apply at the vent gas boiler exhaust stack upon initial gasification of MSW.
 - f. Continuous monitors required by the NSPS will be located at the vent gas boiler exhaust stack.
 - g. The municipal waste combustion units generate steam.
 - h. With respect to NSPS-required monitoring of flue gas temperature, the inlets to the dry gas cleaning fabric filters are deemed to be the inlets to the PM air pollution control device.
 - i. The municipal waste combustion units are deemed to be modular starved-air and excess air units. [Application No. 0610096-004-AC; Rule 62-296.100(3), F.A.C.; and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
2. NSPS for Equipment Leaks of VOC (Appendix VVa): The vent gas boiler is an enclosed combustion device for purposes of 40 CFR Part 60, Subpart VVa—Standards of Performance for Equipment Leaks of VOC in the SOCM I for Which Construction, Reconstruction or Modification Commenced After November 7, 2006. The permittee shall comply with the requirements of the NSPS, included as Appendix VVa. [Application No. 0610096-001-AC and Rule 62-296.100(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

E. Vent Gas Boiler (EU-006)

3. Initial Standards and Requirements for Biomass-Firing: Each emission train (gasifiers to vent gas boiler) shall demonstrate compliance with the emission limits, initial compliance, continuous compliance, monitoring, recordkeeping and reporting requirements in 40 CFR Part 60 Subpart AAAA for the following pollutants: particulate matter (PM), VE (opacity), nitrogen oxides (NO_x) for Class I units, sulfur dioxide (SO₂), fugitive ash, CO (modular starved units) and VOC during the initial operation of the emission train using biomass other than MSW. When MSW is first combusted in the emission train, all the requirements of 40 CFR Part 60 Subpart AAAA shall apply (see Appendix AAAA).

*{Permitting Note: The initial operation of the INPB syngas to ethanol production process is planned to be demonstrated using clean biomass that does not constitute yard trash as defined in (§60.1465). During this demonstration period, MSW is not planned to be used. The vent gas boiler will not be "an affected facility" under Subpart AAAA when biomass is used during this initial demonstration period. However, this condition requires a demonstration of initial compliance of the vent gas boiler using biomass as feedstock for the air pollutants referenced in the **Specific Condition 3.E.3** of this subsection. Upon the gasification of MSW for the generation syngas for the ethanol production process, the vent gas boiler will be considered to be "an affected facility" for the purposes of Subpart AAAA. Subpart AAAA requirements including the initial compliance determination for emissions of Hg, Cd, D/F, Pb and HCl from the vent gas boiler will take effect at that time. INPB may perform initial compliance determination on different MSW types and feed rates during or after the MSW trial period.}*

[Application No. 0610096-004-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

EQUIPMENT

4. Vent Gas Boiler: The permittee is authorized to construct a nominal 97.2 MMBtu per hour watertube boiler for steam generation. The boiler will include low NO_x burners as well as a feed water heat exchanger, steam drum, turbine, stack and other ancillary equipment. The vent gas boiler shall be designed and operated to one of the following specifications:
 - a. Reduce VOC emissions vented to the boiler with an efficiency of 95 percent or greater. The uncontrolled inlets are specified to be upstream of the process vent gas scrubber for the fermentation off-gases and upstream of the distillation overhead scrubber for the distillation and dehydration system off-gases.
 - b. Reduce VOC emissions vented to the boiler to an exit concentration of 20 parts per million by volume (ppmv) on a dry basis corrected to 3 percent O₂.
 - c. Provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

[Application No. 0610096-003-AC; Appendix VVa; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

5. Sorbent Injection and Fabric Filter: The permittee is required to install a system to inject sodium bicarbonate into the flue gas. The permittee is required to install a fabric filter to collect PM and spent bicarbonate.

[Application No. 0610096-002-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

PERFORMANCE RESTRICTIONS

6. Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year). [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
7. Authorized Fuels: The vent gas boiler is authorized to fire the following fuels: syngas, natural gas and landfill. For purposes of this subsection of the permit, the term "syngas" includes the mixture of

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

E. Vent Gas Boiler (EU-006)

CO, CO₂, H₂ and other hydrocarbons resulting from the starved-air pyrolysis in the gasifiers as well as the off-gases from the fermentation and distillation systems.

[Application No. 0610096-001-AC]

8. **Circumvention of Air Pollution Control Equipment:** The permittee shall not circumvent any air pollution control equipment or allow the emission of air pollutants without the applicable air pollution equipment operating properly. Syngas shall not be routed to the vent gas boiler for combustion except through the gasifier-to-vent gas boiler equipment train, including dry gas cleaning (sodium bicarbonate for SO₂ control and ACI for Hg control followed by fabric filtration) and vent gas scrubbing. If all or part of the gasifier-to-vent gas boiler equipment train is inoperative, then syngas shall be routed to the syngas flare (EU-010) instead of the vent gas boiler. [Application No. 0610096-004-AC; Rule 62-210.650, F.A.C.]

{Permitting Note: ACI in the syngas for Hg control is only required when the syngas is generated by gasifying MSW.}

9. **Operation and Maintenance:** The permittee shall monitor the vent gas boiler to ensure that it is operated and maintained in conformance with its design. [Paragraph 60.482-10a(e), Appendix VVa]

EMISSIONS STANDARDS

10. **Emissions Standards:** The emission limits in 40 CFR Part 60 Subpart AAAA for PM, VE, NO_x (Class I units), SO₂, fugitive ash and CO (modular starved units) are applicable during the initial operation of vent gas boiler combusting syngas generated using clean biomass that is not considered yard trash as defines in (§60.1465). The NSPS for small municipal waste combustion units (Appendix AAAA) specifies emissions standards for the following pollutants when syngas generate from the gasification of MSW is combusted in the vent gas boiler: D/F, Cd, Pb, Hg, PM, HCl, NO_x, SO₂ and CO. This NSPS also limits VE. The permittee shall comply with the NSPS limits when the vent gas boiler is first combusting syngas generated from MSW. NO_x emission from the vent gas boiler shall also be limited to 120 ppm_{dv}, corrected to 7 percent O₂, based on a rolling 12-month average of 24-hour daily block averages.

[Application No. 0610096-004-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

11. **Continuous Monitoring Requirements:** The permittee shall install, calibrate, maintain and operate continuous emissions monitoring systems (CEMS), a continuous opacity monitoring system (COMS) and a diluent monitor (either O₂ or CO₂ monitor) to measure and record the emissions of SO₂, NO_x, CO and opacity from the vent gas boiler stack in the manner prescribed by the NSPS for small municipal waste combustion units (Appendix AAAA). Within one working day of discovering emissions in excess of a SO₂, NO_x or CO standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]

TESTING REQUIREMENTS

12. **Initial and Annual Stack Tests:** The permittee shall conduct initial and annual stack testing for PM and VE when syngas generated from biomass other than MSW is combusted in the vent gas boiler. The initial stack testing combusting syngas generated from biomass shall be conducted within 60 days after the vent gas boiler reaches maximum load level on syngas generated from biomass but no later than 180 days of initial continuous operation on syngas generated from biomass. The permittee shall conduct initial and annual stack testing as specified by the NSPS for small municipal waste combustion units (Appendix AAAA) when syngas generated from MSW is combusted in the vent gas boiler. As specified in §60.8, the permittee shall conduct required compliance tests within 60 days after vent gas boiler becomes an "affected facility" and reaches the maximum load level at which it will operate, but no later than 180 days after its initial startup. [Application No. 0610096-004-AC; NSPS Subpart AAAA and Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

E. Vent Gas Boiler (EU-006)

13. Initial and Annual VOC Performance Check: No later than 180 days after initial operation of the vent gas boiler and annually during each federal fiscal year (October 1 to September 30) thereafter, the permittee shall determine compliance with **Condition 3.E.3.a, 3.E.3.b or 3.E.3.c**. Any VOC stack testing performed pursuant to this condition shall be performed in accordance with the following reference test method.

Method	Description of Method and Comments
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above method is described in Appendix A of 40 C.F.R. 60 and is adopted by reference in Rule 62-204.800, F.A.C. No other method may be used unless prior written approval is received from the Department.

[Rules 62-4.070(3), 62-204.800, 62-297.100 and 62-297.310(7)(a)3., F.A.C. and Appendix A of 40 C.F.R. 60]

RECORDS AND REPORTS

14. Recordkeeping Requirements: The permittee shall record the hours of operation and MMBtu of total heat input for the vent gas boiler. The permittee shall record the standard cubic feet of syngas, natural gas and landfill gas fired in the vent gas boiler. These records shall be kept and made available to the Compliance Authority upon request. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]
15. Stack Test Reports: In addition to the information required in Appendix CTR, each stack test report shall also include the following information: heat input rate (MMBtu/hour), calculated authorized fuels firing rate by fuel type (cubic feet per minute), emissions rate (in the units of the applicable standard) and approximate gasifier feed rates by feedstock type, in dry tons per hour. In addition, based on stack test results or CEMS data as appropriate, the TPY of NO_x, SO₂, CO, VOC, PM₁₀/PM_{2.5} and HCl shall be included in the stack test report. When the TPY is based on CEMS data, the CEMS results from the previous 12 months prior to the stack test shall be used. When stack test results are used, the TPY calculation shall be based on back casting for the preceding 12 months the current stack test results. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

F. Tank Farm (EU-007)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
007	The as-built Tank Farm configuration is: <ul style="list-style-type: none">• 100,000-gallon product storage tank• 23,800-gallon denaturant storage tank• 23,800-gallon re-run tank• 23,800-gallon day tank No. 1• 23,800-gallon day tank No. 2

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS for Volatile Organic Liquid Storage Vessels (Appendix Kb): The product storage tank and the denaturant storage tank are subject to 40 C.F.R. part 60, subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984. The permittee shall comply with the requirements of the NSPS, included as Appendix Kb. [Application No. 0610096-001-AC and Rule 62-296.100(3), F.A.C.]

EQUIPMENT

2. Storage Tanks: The permittee is authorized to install and operate the Tank Farm. [Application No. 0610096-004-AC]
3. Internal Floating Roofs: The storage tanks shall be equipped with fixed roofs in combination with internal floating roofs meeting the requirements of the NSPS, included as Appendix Kb. [Application No. 0610096-001-AC]

PERFORMANCE RESTRICTIONS

4. Ethanol Throughput: Throughput of final ethanol product is limited to 8.42 million gallons per year on a rolling 12-month basis. [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
5. Denaturant Throughput: Throughput of denaturant is limited to 0.42 million gallons per year on a rolling 12-month basis. [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
6. Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year). [Application No. 0610096-001-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

RECORDS AND REPORTS

7. Recordkeeping Requirements: The permittee shall maintain records of the amount of final (denatured) ethanol product throughput (gallons per year) on a rolling 12-month basis. These records shall be kept and made available to the Compliance Authority upon request. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

G. Loadout Flare (EU-008)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
008	<u>Loadout Flare:</u> Up to 200 gallons of denatured ethanol per minute will be transferred to ethanol tanker trucks. Displaced vapor from the 8,000 gallon, dedicated ethanol tank trucks will be routed to the loadout flare.

EQUIPMENT

- 1. Loading Rack:** The permittee is authorized to construct a product loading and metering system equipped with a loading rack designed to transfer a nominal 200 gallons per minute of denatured ethanol product to nominal 8,000 gallon, ethanol-dedicated tank trucks.
[Application No. 0610096-002-AC; Rule 62-4.070(3), F.A.C. Reasonable Assurance; and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
- 2. Loadout Flare:** The permittee is required to construct an enclosed flare system with a continuous natural gas pilot flame. The loadout flare shall be used to capture and destroy vapors displaced during truck loadout. The loadout flare shall comply with the requirements of 40 C.F.R. 60.18, included in Appendix GP.
[Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

- 3. Hours of Operation:** The hours of operation of the pilot flame for the flare system are not limited (8,760 hours per year). Air flow routed to the flare is limited to 1.123 million standard cubic feet per year on a rolling 12-month basis. The flare shall be operated at all times when truck loading operations are taking place.
[Application No. 0610096-002-AC and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]
{Permitting Note: 1.123 million standard cubic feet of displaced vapors per year result from the loading of 8.42 million gallons per year of ethanol product into the tank trucks. With the loadout flare design provided by the permittee, the flare will operate at maximum loading less than 700 hours per year at the maximum design flow rate. The truck loading and gas flow rates to the flare may vary.}
- 4. Approximate Capacities:** The flare system shall be designed to combust vapors displaced from the trucks during the loading of the denatured ethanol product. The trucks are assumed to be in dedicated denatured ethanol product service (i.e., only denatured ethanol product vapors will be displaced). The product loadout flare shall have a nominal rated capacity of 3.4 MMBtu per hour. Natural gas will be used as the fuel for the pilot, which shall have a nominal rated capacity of 0.17 MMBtu per hour.
[Application No. 0610096-002-AC and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

TESTING AND MONITORING REQUIREMENTS

- 5. Visible Emission Compliance Tests:** The flare system exhaust shall be tested to demonstrate initial compliance with the visible emission standard specified in 40 C.F.R. 60.18 no later than 180 days after initial operation and during each federal fiscal year (October 1 to September 30) thereafter. Testing shall be conducted as specified in 40 C.F.R. 60.18(f). Testing shall be conducted while tank trucks are being loaded. [Rule 62-4.070(3), F.A.C. Reasonable Assurance]
- 6. Operation and Maintenance:** The permittee shall monitor the flare to ensure that it is operated and maintained in conformance with its design. The permittee shall monitor the flow rate of displaced vapors to the flare. [Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

G. Loadout Flare (EU-008)

RECORDS AND REPORTS

7. Records: The permittee shall record in a written or electronic log the monthly flow rate of displaced vapors to the flare, the duration of each flare event and the reason for flaring. These records shall be kept and made available to the Compliance Authority upon request.
[Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

H. Syngas Flare (EU-010)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
010	<p><u>Syngas Flare:</u> The syngas flare is used to control vent gas emissions during system malfunctions when the vent gas boiler is unavailable. It has a natural gas fueled pilot light that operates continuously. The syngas flare also accepts vent gases from the gasifiers, syngas compression, dry gas cleaning, waste heat recovery and vent gas scrubbing.</p>

EQUIPMENT

1. Syngas Flare: The permittee is authorized to construct an enclosed ground flare system with the continuous use of natural gas as either a pilot flame or in sufficient quantity to support good combustion of the syngas. The syngas flare shall comply with the requirements of 40 CFR 60.18, included in Appendix GP.
[Application No. 0610096-004-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

2. Hours of Operation: Vent gas routed to the syngas flare shall not exceed 496.2 million standard cubic feet per year on a rolling 12-month basis. The flare will be used during facility shake-down, startup of the gasifier, when the syngas quality is not adequate for use in either the fermenter (EU 003) or vent gas boiler (EU 006) or until the fermenter pressure reaches the boiler head pressure or for emergencies.
[Application No. 0610096-004-AC and Rule 62-210.200, F.A.C. Definition of "Potential to Emit"]

TESTING AND MONITORING REQUIREMENTS

3. Visible Emission Compliance Tests: The flare system exhaust shall be tested to demonstrate initial compliance with the visible emission standard specified in 40 C.F.R. 60.18 no later than 180 days after initial operation, and once during each federal fiscal year (October 1 to September 30) thereafter. The flare shall be designed for and operated with no visible emissions except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Testing shall be conducted as specified in 40 C.F.R. 60.18(f). Testing shall be a visible emissions observation in accordance with EPA Method 22 conducted while venting syngas or vent gas to the flare. [Rule 62-4.070(3), F.A.C. Reasonable Assurance; NSPS Subpart A]
4. Operation and Maintenance: The permittee shall monitor the flare to ensure that it is operated and maintained in conformance with its design. The permittee shall monitor the flow rate of displaced vapors to the flare.
[Application No. 0610096-002-AC and Rule 62-4.070(3), F.A.C. Reasonable Assurance]

RECORDS AND REPORTS

5. Records: The permittee shall record in a written or electronic log the monthly flow rate of displaced vapors to the flare, the duration of each flare event and the reason for flaring. The permittee shall record in a written or electronic log the monthly volume of natural gas used in the flare for both the pilot flame and to supplement the combustion of syngas. These records shall be kept and made available to the Compliance Authority upon request.
[Rule 62-4.070(3), F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (

I. Emergency Equipment (EU-011)

This section of the permit addresses the following EU.

ID No.	EU Description
011	Emergency Equipment: One emergency natural gas-fired generator with a maximum design rating of 400 kW and one emergency fire pump engine with a maximum design rating of 190 Hp.

EQUIPMENT

1. Emergency Generator: The permittee is authorized to install and maintain one natural gas fired emergency generator with a maximum design rating of 400 kW (536 Hp). [Application No. 0610096-003-AC and Rule 62-210.200 (PTE), F.A.C.]
2. Emergency Fire Pump Engine: The permittee is authorized to continue to operate and maintain one Cummins Model N-855-F diesel fired emergency fire pump engine with a maximum design rating of 190 Hp (142 kW). [Application No. 0610096-003-AC and Rule 62-210.200 (PTE), F.A.C.]
3. Fuel Storage Tank: The permittee is authorized to construct or use one 400 gallon tank to store fuel oil for use in emergency fire pump engine. . [Application No. 0610096-003-AC and Rule 62-210.200 (PTE), F.A.C.]

NSPS AND NESHAP APPLICABILITY

4. NSPS Subpart JJJJ Applicability: The natural gas fired emergency generator was manufactured in 2009. Consequently, it is a stationary spark ignition internal combustion engine subject to the provisions of 40 CFR 60, Subpart JJJJ, including emission testing or certification, applicable general provisions and performance tests. [40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines]
5. NSPS Subpart IIIII Applicability: The emergency fire pump engine was manufactured in 1978. Consequently, due to its date of manufacture, the emergency fire pump engine is exempt from the emission testing and certification requirements of NSPS Subpart IIIII. [40 CFR 60, Subpart IIIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]
6. NESHAP Subpart ZZZZ Applicability: The emergency generator is subject to the applicable provisions of 40 CFR 63, Subpart ZZZZ. The requirements of NESHAP ZZZZ are met by meeting the requirements of NSPS Subpart JJJJ. These include:

Per § 63.6625(f), if you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake Hp located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed. This requirement also applies to the emergency fire pump engine.

[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines]

PERFORMANCE RESTRICTIONS

7. Hours of Operation: The emergency generator and the emergency fire pump engine may each operate up to 100 hours per year for maintenance and testing purposes. Operation during emergency conditions is unlimited. [Application No. 0610096-003-AC and Rule 62-210.200 (PTE), F.A.C.]
8. Authorized Fuel: The emergency generator is authorized to fire pipeline quality natural gas only. The emergency fire pump engine is authorized to fire ultra low sulfur distillate fuel only. The natural gas shall have a vendor certification indicating its maximum sulfur content is 20 grains per standard

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (

I. Emergency Equipment (EU-011)

cubic feet (gr/scf) or less. The ultra low sulfur distillate fuel oil fired shall have a vendor certification indicating its sulfur content is 0.0015% or less.

[Application No. 0610096-003-AC and Rule 62-210.200 (PTE), F.A.C.]

EMISSION LIMITS AND TESTING REQUIREMENTS

9. Emergency Generator Emission Limits:

Emergency Generator Hp ≥ 150 Hp	CO (g/Hp-hr) ¹	VOC ² (g/Hp-hr)	NO _x (g/Hp-hr)	Natural Gas ⁴ gr/scf
	4.0	1.0	2.0	
	ppmvd @ 7% O ₂ ³	ppmvd @ 7% O ₂	ppmvd @ 7% O ₂	
	540	160	86	

1. g/Hp-hr means grams per horsepower-hour.
 2. When calculating emissions of VOC, emissions of formaldehyde should not be included.
 3. Part per million volume dry at 7 percent oxygen.
 4. The fuel used for certifying stationary spark ignition natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248 with a sulfur content of no more than 20 gr/scf.

[Application No. 0610096-003-AC; NSPS Subpart JJJJ]

10. Emergency Generator Testing Requirements: The emergency generator shall be stack tested to demonstrate initial compliance with the emission standards for CO, VOC and NO_x. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup of this unit. As an alternative, an EPA certification of emissions characteristics of the purchased model that are at least as stringent as the NSPS Subpart IIII values and the use of ultralow sulfur distillate fuel oil or nonroad diesel fuel with a sulfur content of 15 ppm or less can be used to fulfill this requirement.

[Rule 62-297.310(7)(a)1, F.A.C.; 40 CFR 60.8; 40 CFR 60.4211]

11. Test Methods: Any required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
7E	Determination of Nitrogen Oxides Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources
18	Measurement of Gaseous Organic Compounds Emissions by Gas Chromatography
25A	Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer

NOTIFICATION, REPORTING AND RECORDS

12. Notifications: Initial notifications are required pursuant to 40 CFR 60.7, 40 CFR 63.9, and 40 CFR 63.6590(b)(i) for the emergency generator.

13. Reporting: The permittee shall maintain records of the amount of liquid fuel used. These records shall be submitted to the Compliance Authority on an annual basis or upon request.

[Rule 62-4.070(3), F.A.C.]

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

2. Description of Emissions Unit Addressed in this Section:
Feedstock Dryers No. 1 and No. 2

3. Emissions Unit Identification Number: **002**

4. Emissions Unit Status Code:
A

5. Commence Construction Date:

6. Initial Startup Date:
July 31, 2013

7. Emissions Unit Major Group SIC Code:
28

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

- Acid Rain Unit
- CAIR Unit

9. Package Unit: **Carrier**
Manufacturer:

Model Number: **QAD-3660S-20-6-5HP**

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

These are two vibrating fluidized bed dryers that receive feedstock from the storage piles and use low-pressure steam, provided by the vent-gas boiler and heat recovery systems to reduce the feedstock moisture to around 15 percent. The emissions from dryer exhaust are controlled by a baghouse.

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:

Fabric Filter

2. Control Device or Method Code: **127**

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 425 TPD
2. Maximum Production Rate:
3. Maximum Heat Input Rate: million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: 24 hours/day 7 days/week 52 weeks/year 8760 hours/year
6. Operating Capacity/Schedule Comment: Maximum throughput rate based on annual average for both dryers combined on a 12-month rolling basis with 27 percent moisture content. This is equivalent to 365 TPD at 15 percent moisture. Dryers use 8,960 lb/hr of steam.

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Feedstock Dryers		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Each dryer has a separate stack			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: V	6. Stack Height: feet	7. Exit Diameter: Feet	
8. Exit Temperature: 190°F	9. Actual Volumetric Flow Rate: 7,308 acfm	10. Water Vapor: 0 %	
11. Maximum Dry Standard Flow Rate: 5,935.5 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: Stack parameters based on AC Permit application submitted for Permit No.0610096-002-AC. dscfm = 7,307 acfm x [(460+68) R/(460+190) R] = 5,935.5 dscfm			

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes; Pulp and Paper Products; Bulk Handling and Storage- Wood/Bark; Conveyors/Feedstock Dryers		
2. Source Classification Code (SCC): 3-07-040-05		3. SCC Units: Tons Material Processed
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 155,125	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum annual rate based on 425 tons per day and 8,760 hours of operation.		

Segment Description and Rate: Segment of

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

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

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	127		EL
PM10	127		NS
PM2.5	127		NS
VOC			EL

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.014 lb/hour 0.061 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.005 gr/dscm Reference: Permit No. 0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly emission = 0.005 gr/dscm x 5,935.5 dscfm x (1 m³/35.3 ft³) x lb/7,000 gr x 60 min/hr x 2 dryers = 0.014 lb/hr Annual emission = 0.014 lb/hr x 8,760 hr/yr x ton/2,000 lb = 0.061 ton/yr			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [2]
Feedstock Dryers No. 1 and No. 2

POLLUTANT DETAIL INFORMATION

Page [1] of [2]
Particulate Matter- PM

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 5% Opacity	4. Equivalent Allowable Emissions: 0.014 lb/hour 0.061 tons/year
5. Method of Compliance: Initial VE Test, compliance test prior to operating permit renewal	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions of

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

Allowable Emissions Allowable Emissions of

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

EMISSIONS UNIT INFORMATION

Section [2]
Feedstock Dryers No. 1 and No. 2

POLLUTANT DETAIL INFORMATION

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Volatile Organic Compounds - VOC

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)**

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 7.6 lb/hour 33.3 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 3.8 lb/hr/dryer Reference: Permit No. 0610096-004-AC		7. Emissions Method Code: 3	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential annual emissions = 3.8 lb/hr/dryer x 2 dryers x 8,760 hr/yr x ton/2,000 lb = 33.3 ton/yr			
11. Potential, Fugitive, and Actual Emissions Comment: Potential hourly and annual emissions are for two dryers.			

EMISSIONS UNIT INFORMATION

Section [2]
Feedstock Dryers No. 1 and No. 2

POLLUTANT DETAIL INFORMATION

Page [2] of [2]
Volatile Organic Compounds - VOC

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 7.6 lb/hour	4. Equivalent Allowable Emissions: 7.6 lb/hour 33.3 tons/year
5. Method of Compliance: Annual stack test; EPA Method 25A	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions are for both dryers. Based on Rule 62-210.200 and Permit No.0610096-004-AC.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE5	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 5 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: Initial and operating permit renewal VE test using EPA Method 9	
5. Visible Emissions Comment: Permit No. 0610096-004-AC.	

Visible Emissions Limitation: Visible Emissions Limitation of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number: 0534013551	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 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) <input checked="" type="checkbox"/> Attached, Document ID: INPB-FI-C2 <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <u>See compliance plan in Attachment INPB-FI-CV3</u> <input type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [2]

Feedstock Dryers No. 1 and No. 2

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

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

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

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

Emissions Unit Description and Status

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

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

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

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

2. Description of Emissions Unit Addressed in this Section:
Gasification, Fermentation and Distillation Systems

3. Emissions Unit Identification Number: **003 and 004**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: July 31, 2013	7. Emissions Unit Major Group SIC Code: 28
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8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:
This emission unit consists of combination of three different processes namely gasification, fermentation and distillation required to produce the final ethanol product. Specifically the emission unit includes two gasifiers, which heat incoming feedstock through a starved air-pyrolysis to produce syngas, the fermentation system, which further cleans and bubbles the syngas and the distillation system where the filtered fermented broth is further extracted as ethanol. Also included in this emission unit are the distillation unit fugitive emissions (EU 004).

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

Emissions Unit Control Equipment/Method: Control 1 of 5

1. Control Equipment/Method Description:
Activated Carbon Injection (for each gasifier train)

2. Control Device or Method Code: **207**

Emissions Unit Control Equipment/Method: Control 2 of 5

1. Control Equipment/Method Description:
Dry Sorbent Injection (DSI) – Sodium bicarbonate (for each gasifier train).

2. Control Device or Method Code: **206**

Emissions Unit Control Equipment/Method: Control 3 of 5

1. Control Equipment/Method Description:
Fabric filter (for each gasifier train)

2. Control Device or Method Code: **127**

Emissions Unit Control Equipment/Method: Control 4 of 5

1. Control Equipment/Method Description:
Scrubbers – Vent gas scrubber for fermentation off gases, distillation overhead scrubber for the distillation and dehydration system off gases

2. Control Device or Method Code: **129**

Emissions Unit Control Equipment/Method: Control 5 of 5

1. Control Equipment/Method Description:
Miscellaneous control devices- Vent gas boiler is used as a control for process vent emissions from the fermentation and the distillation system

2. Control Device or Method Code: **099**

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

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:	8,000,000 gallons of ethanol	
3. Maximum Heat Input Rate:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	24 hours/day 52 weeks/year	7 days/week 8760 hours/year
6. Operating Capacity/Schedule Comment:	Maximum production rate based on a 12-month rolling basis and Permit No. 0610096-004-AC. Maximum production rate with the addition of a denaturant is limited to 8,420,000 gallons of ethanol.	

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram:		2. Emission Point Type Code: 2	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: The vent gas boiler is used as the control device for off gases from the fermentation and distillation systems.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: EU006 (Vent Gas Boiler)			
5. Discharge Type Code: V	6. Stack Height: 80 feet	7. Exit Diameter: 2.5 Feet	
8. Exit Temperature: 313°F	9. Actual Volumetric Flow Rate: 19,000 acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: Feet	
13. Emission Point UTM Coordinates... Zone: East (km): North (km):		14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: Vent gas boiler stack parameters based on Permit No. 0610096-004-AC.			

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes; Chemical Manufacturing; Methanol/Alcohol Production; Ethanol by Fermentation		
2. Source Classification Code (SCC): 3-01-250-10		3. SCC Units: 1,000 gallons of ethanol produced
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 8,000	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum annual rate based on Permit No.0610096-004-AC		

Segment Description and Rate: Segment of

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

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
 (Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted:		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions:			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions _ 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):	

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):	

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

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) <input checked="" type="checkbox"/> Attached, Document ID: INPB-FI-C2 <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: INPB-EU3-I3 <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [3]

Gasification, Fermentation and Distillation Systems

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

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ATTACHMENT INPB-EU3-13
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT INPB-EU3-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Each gasifier train is equipped with a dry gas cleanup package, which consists of activated carbon and sodium bicarbonate injection immediately followed by a fabric filter. The activated carbon injection and fabric filter combination controls mercury emissions. The sodium bicarbonate injection and fabric filter combination controls PM, SO₂ and acid gas emissions. Exhaust from the fabric filter is routed to syngas quench and compression system, which includes a syngas quench tower to further cool the cleaned and filtered syngas, a gas compression system and ancillary equipment including a cooled water heat exchanger and a knock-out drum. The clean syngas is routed to the fermentation and distillation system.

The fermentation off gases are routed to a vent gas scrubber before routing to the syngas flare (EU010). The distillation and dehydration system off-gases are routed to a distillation overhead scrubber before routing to the syngas flare (EU010). The scrubbed gases can also be routed to the vent gas boiler (EU006), which acts as a control device.

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

2. Description of Emissions Unit Addressed in this Section:
Vent Gas Boiler

3. Emissions Unit Identification Number: **006**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: July 31, 2013	7. Emissions Unit Major Group SIC Code: 28
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8. Federal Program Applicability: (Check all that apply)

- Acid Rain Unit
- CAIR Unit
- Hg Budget Unit

9. Package Unit: **Rentech Boiler Systems, Inc.**
Manufacturer:

Model Number:

10. Generator Nameplate Rating: MW

11. Emissions Unit Comment:

This emission unit consists of a boiler which fires the vent gases collected from fermentation, distillation, and dehydration system during normal operation. The landfill gas and natural gas are also used as fuels.

EMISSIONS UNIT INFORMATION

**Section [4]
Vent Gas Boiler**

Emissions Unit Control Equipment/Method: Control 1 of 3

1. Control Equipment/Method Description:
Dry sorbent injection – Sodium Bicarbonate

2. Control Device or Method Code: **206**

Emissions Unit Control Equipment/Method: Control 2 of 3

1. Control Equipment/Method Description:
Fabric Filter

2. Control Device or Method Code: **127**

Emissions Unit Control Equipment/Method: Control 3 of 3

1. Control Equipment/Method Description:
Low NOx Burners

2. Control Device or Method Code: **205**

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control _ of _

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

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: 97.2 million Btu/hr		
4. Maximum Incineration Rate:	pounds/hr	
	tons/day	
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8760 hours/year
6. Operating Capacity/Schedule Comment: Maximum heat input based on Permit No. 0610096-004-AC		

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Vent gas boiler		2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Exhausts through a single stack.			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 006			
5. Discharge Type Code: V	6. Stack Height: 80 feet	7. Exit Diameter: 2.5 Feet	
8. Exit Temperature: 313 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: 19,000 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: Volumetric flow rate based on 7 percent O₂. Stack parameters based on Permit No. 0610096-004-AC.			

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 3

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Industrial; Natural Gas; 10-100 MMBtu/hr		
2. Source Classification Code (SCC): 1-02-006-02		3. SCC Units: Million cubic feet Natural gas burned
4. Maximum Hourly Rate: 0.095	5. Maximum Annual Rate: 834.77	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,020
10. Segment Comment: Maximum hourly rate = 97.2 MMBtu/hr / 1,020 MMBtu/MMcf = 0.095 MMcf/hr. Maximum annual rate = 0.095 MMcf/hr x 8,760 hr/yr = 834.77 MMcf/year		

Segment Description and Rate: Segment 2 of 3

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Industrial; Process Gas; Landfill Gas		
2. Source Classification Code (SCC): 1-02-007-11		3. SCC Units: Million Cubic Feet Landfill Gas Burned
4. Maximum Hourly Rate: 0.194	5. Maximum Annual Rate: 1,702.9	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 500
Maximum hourly rate = 97.2 MMBtu/hr / 500 MMBtu/MMcf = 0.194 MMcf/hr Maximum annual rate = 0.194 MMcf/hr x 8,760 hr/yr = 1,702.94 MMcf/year		

EMISSIONS UNIT INFORMATION

**Section [4]
Vent Gas Boiler**

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

Segment Description and Rate: Segment 3 of 3

1. Segment Description (Process/Fuel Type): External Combustion Boilers; Industrial; Process Gas; Other- Syngas.		
2. Source Classification Code (SCC): 1-02-007-99		3. SCC Units: Million Cubic Feet Process Gas Burned
4. Maximum Hourly Rate: 0.571	5. Maximum Annual Rate: 5,008.6	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 170
10. Segment Comment: Maximum hourly rate = 97.2 MMBtu/hr / 170 MMBtu/MMcf = 0.571 MMcf/hr Maximum annual rate = 0.571 MMcf/hr x 8,760 hr/yr = 5,008.65 MMcf/year Syngas heat content of 170 Btu/scf based on INPB data.		

Segment Description and Rate: Segment _ of _

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 31,139	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million
10. Segment Comment:		

EMISSIONS UNIT INFORMATION

**Section [4]
Vent Gas Boiler**

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	127		EL
PM10	127		NS
SO2	206	127	EL
NOx	205		EL
CO			EL
VOC			EL
Pb	127		EL
H027 – Cadmium	127		EL
H106 – HCL	206	127	EL
H114 – Mercury	206	127	EL
Dioxins/Furans			EL

EMISSIONS UNIT INFORMATION

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Vent Gas Boiler

POLLUTANT DETAIL INFORMATION

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Particulate Matter - Total

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)**

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: PM		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 2.03 lb/hour 8.61 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 24 mg/dscm Reference: 40 CFR 60 Subpart AAAA (Table 1)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: Rule	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 24 mg/dscm @7% O₂ (3-run avg.)	4. Equivalent Allowable Emissions: 2.03 lb/hour 8.61 tons/year
5. Method of Compliance: Initial and annual stack test; EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1)	

Allowable Emissions Allowable Emissions of

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

Allowable Emissions Allowable Emissions of

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

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

POLLUTANT DETAIL INFORMATION

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Sulfur Dioxide - SO2

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)**

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 18.28 lb/hour 77.75 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 30 ppmvd or 80% reduction of potential emissions Reference: 40 CFR 60 Subpart AAAA (Table 1)		7. Emissions Method Code: 5	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012 and were calculated based on 85% control efficiency guarantee from boiler vendor.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 30 ppmvd or 80% reduction of potential emissions	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1)	

Allowable Emissions Allowable Emissions _ of _

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

Allowable Emissions Allowable Emissions _ of _

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

EMISSIONS UNIT INFORMATION

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Vent Gas Boiler

POLLUTANT DETAIL INFORMATION

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Nitrogen Oxides - NOx

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 24.21 lb/hour 82.37 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 150 ppmvd @ 7% O₂ (24-hour daily block averages) Reference: 40 CFR 60 Subpart AAAA and Permit No.0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 120 ppmvd @ 7% O2 (12-month rolling average of 24-hour daily block averages)	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Permit No. 0610096-004-AC	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 150 ppmvd (24-Hr daily block average)	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1) Emission limit is 180 ppmvd for the first year of operation	

Allowable Emissions Allowable Emissions _ of _

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
 (Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 4.91 lb/hour 20.89 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 50 ppmvd @ 7% O₂ Reference: 40 CFR 60 Subpart AAAA (Table 2) and Permit No.0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

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

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

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 50 ppmvd @ 7% O₂ (4-hr block avg.)	4. Equivalent Allowable Emissions: 4.91 lb/hour 20.89 tons/year
5. Method of Compliance: CEMS	
6. Allowable Emissions Comment (Description of Operating Method): Based on Table 2 of 40 CFR 60 Subpart AAAA for modular starved-air and excess air units.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 2.51 lb/hour 10.66 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 20 ppmvd @ 3% O₂ Reference: Permit No. 0610096-004-AC and 40 CFR 60 Subpart VVa		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 20 ppmvd @ 3% O₂	4. Equivalent Allowable Emissions: 2.51 lb/hour 10.66 tons/year
5. Method of Compliance: Initial and annual stack test using EPA Method 25A	
6. Allowable Emissions Comment (Description of Operating Method): Based on 40 CFR 60 Subpart VVa and Permit No. 0610096-004-AC.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: Pb		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.0169 lb/hour 0.072 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.2 mg/dscm @ 7% O₂ (3-run average) Reference: 40 CFR 60 Subpart AAAAA (Table 1)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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Vent Gas Boiler

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Lead - Pb

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.2 mg/dscm @ 7% O₂ (3-run average)	4. Equivalent Allowable Emissions: 0.0169 lb/hour 0.072 tons/year
5. Method of Compliance: Stack test using EPA Method 29	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1)	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**
(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: Cadmium		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.00169 lb/hour 0.0072 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.02 mg/dscm @ 7% O₂ (3-run average) Reference: 40 CFR 60 Subpart AAAA (Table 1)			7. Emissions Method Code: 0
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.02 mg/dscm @ 7% O₂ (3-run average)	4. Equivalent Allowable Emissions: 0.00169 lb/hour 0.0072 tons/year
5. Method of Compliance: Stack test using EPA Method 29	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1)	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: HCL		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1.28 lb/hour 5.44 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 10 ppmvd @ 7% O₂ (3-run average) Reference: Applicant request		7. Emissions Method Code: 2	
8.a. Baseline Actual Emissions (if required): tons/year	8.b. Baseline 24-month Period: From: To:		
9.a. Projected Actual Emissions (if required): tons/year	9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years		
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012 and are based on 10 ppmvd from vendor guarantees.			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
 ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 25 ppmvd @ 7% O₂ (3-run average)	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Stack test using EPA Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1)	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 10 ppmvd @ 7% O₂ (3-run average)	4. Equivalent Allowable Emissions: 1.28 lb/hour 5.44 tons/year
5. Method of Compliance: Stack testing using Method 26 or 26A	
6. Allowable Emissions Comment (Description of Operating Method): Applicant request	

Allowable Emissions Allowable Emissions ____ of ____

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

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: Hg		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.0057 lb/hour 0.025 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 0.08 mg/dscm @ 7% O₂ (3-run average) Reference: 40 CFR 60 Subpart AAAA (Table 1)		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Hourly emissions = 0.08 mg/dscm x 19000 dscf/min x (m³/35.3 ft³) x (lb/453.6 g) x (g/1000 mg) x 60 min/hr = 0.0057 lb/hr Annual emissions = 0.0057 lb/hr x 8,760 hr/yr x ton/2,000 lb = 0.025 ton/yr			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

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Vent Gas Boiler

POLLUTANT DETAIL INFORMATION

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Mercury – H114

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 0.08 mg/dscm @ 7% O₂	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Stack test using EPA Method 29	
6. Allowable Emissions Comment (Description of Operating Method): Allowable emissions based on 40 CFR 60 Subpart AAAA (Table 1)	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: D/F		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1.1x10 ⁻⁶ lb/hour 4.67x10 ⁻⁶ tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: 13 ng/dscm @ 7% O ₂ (3-run avg.) Reference: 40 CFR 60 Subpart AAAA (Table 1) and Permit No.0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: Potential emissions are from Attachment 3 of the AC application submitted to FDEP in April 2012.			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

POLLUTANT DETAIL INFORMATION

Page [11] of [11]
Dioxins and Furans – D/F

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: 13 ng/dscm @ 7% O₂ (3-run avg.)	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Stack test using EPA Method 23	
6. Allowable Emissions Comment (Description of Operating Method): Based on Table 1 of 40 CFR 60 Subpart AAAA and Permit No. 0610096-004-AC	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 2

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 10 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: VE test using EPA Method 9	
5. Visible Emissions Comment: Opacity limited to 10% based on thirty 6-minute averaging periods. Tables 1 and 4 of 40 CFR 60 Subpart AAAA and Permit No. 0610096-004-AC.	

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION**Section [4]
Vent Gas Boiler****H. CONTINUOUS MONITOR INFORMATION (CONTINUED)****Continuous Monitoring System: Continuous Monitor 3 of 5**

1. Parameter Code: EM	2. Pollutant(s): CO
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: CEM required pursuant to 40 CFR 60 Subpart AAAA. Performance testing will be completed in January 2014. See Compliance Plan in Attachment INPB-FI-CV3.	

Continuous Monitoring System: Continuous Monitor 4 of 5

1. Parameter Code: O2	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: CEM required pursuant to to 40 CFR 60 Subpart AAAA. Performance testing will be completed in January 2014. See Compliance Plan in Attachment INPB-FI-CV3.	

EMISSIONS UNIT INFORMATION

**Section [4]
Vent Gas Boiler**

H. CONTINUOUS MONITOR INFORMATION (CONTINUED)

Continuous Monitoring System: Continuous Monitor 5 of 5

1. Parameter Code: VE	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: CEM required pursuant to 40 CFR 60 Subpart AAAA. Performance testing will be completed in January 2014. See Compliance Plan in Attachment INPB-FI-CV3.	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU4-I3</u> <input type="checkbox"/> 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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU4-I4</u> <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: <u>VE, PM, VOC, SO₂, NO_x, CO</u> <u>See Compliance Plan in Attachment INPB-FI-CV3</u> <input type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [4]
Vent Gas Boiler

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU4-IV3</u> <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

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ATTACHMENT INPB-EU4-I3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT INPB-EU4-I3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

The vent gas boiler (EU006) is equipped with low-NO_x burners to control NO_x emissions. Low-NO_x burners work on the principle of reducing NO_x emissions by reducing the temperature of combustion products with an excess of fuel, air, flue gas, or steam.

The vent gas boiler is also equipped with a sodium bicarbonate injection system in the flue gas followed by a fabric filter to control PM and acid gas emissions.

ATTACHMENT INPB-EU4-14
PROCEDURES FOR STARTUP AND SHUTDOWN

ATTACHMENT INPB-EU4-I4 PROCEDURES FOR STARTUP AND SHUTDOWN

Startup and shutdown for these units are fully automatic. Startup for the unit begins at low loads using distillate oil (i.e., diesel).

Corrective actions may include switching the unit from automatic (remote) to local control or changing load conditions. Best Operating Practices based on manufacturer recommendations are adhered to and all efforts to minimize both the level and duration of excess emissions are undertaken.

Shutdown is performed by reducing the unit load (electrical production) to a minimum level, opening the breaker (which disconnects the unit from the system electrical grid), shutting off the fuel, and coasting down to stop.

ATTACHMENT INPB-EU4-IV3
ALTERNATIVE METHODS OF OPERATION

ATTACHMENT INPB-EU4-IV3**ALTERNATIVE METHODS OF OPERATION
VENT GAS BOILER**

The vent gas boiler is authorized to fire natural gas, syngas and landfill gas. As defined in Specific Condition No. E.6 of permit No. 0610096-003-AC, syngas includes the mixture of CO, CO₂, H₂, and other hydrocarbons resulting from the starved-air pyrolysis in the gasifiers as well as the off-gases from the fermentation and distillation systems.

This unit can operate for the entire year 8,760 hours and can fire fuels, alone or in combination, with no restrictions on hours of operation.

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

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Tank Farm

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

2. Description of Emissions Unit Addressed in this Section:
Tank Farm

3. Emissions Unit Identification Number: **EU 007**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: July 31, 2013	7. Emissions Unit Major Group SIC Code: 28
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8. Federal Program Applicability: (Check all that apply)
- Acid Rain Unit
- CAIR Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This emission unit consists of one 100,000- gallon product storage tank, a 23,800-gallon denaturant storage tank, a 23,800-gallon re-run tank and two 23,800-gallon day tanks.

EMISSIONS UNIT INFORMATION

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Tank Farm

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:

Floating Roof Tank

2. Control Device or Method Code: **91**

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 8,420,000 gal/yr
2. Maximum Production Rate:
3. Maximum Heat Input Rate: million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: 24 hours/day 7 days/week 52 weeks/year 8,760 hours/year
6. Operating Capacity/Schedule Comment: Maximum process or throughput rate based on 8 million gallons of ethanol per year and 0.42 million gallons per year of denaturant on a rolling 12-month basis.

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

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

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Industrial Processes; Chemical Manufacturing; Inorganic Chemical Storage (Floating Roof Tank); Ethanol ,Denaturant Ethanol and Gasoline (RVP 9) ; Breathing Loss		
2. Source Classification Code (SCC): 3-01-875-97	3. SCC Units: 1,000 gallon-years liquid storage capacity	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 8,420	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum annual throughput of ethanol is limited to 8 million gallons/yr and maximum annual throughput of denaturant is limited to 0.42 million gallons/year.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Industrial Processes; Chemical Manufacturing; Inorganic Chemical Storage (Floating Roof Tank); Ethanol ,Denaturant and Gasoline (RVP 9); Withdrawal Loss		
2. Source Classification Code (SCC): 3-01-875-98	3. SCC Units: 1,000 gallons liquid Throughput	
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 8,420	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Maximum annual throughput of ethanol is limited to 8 million gallons/yr and maximum annual throughput of denaturant is limited to 0.42 million gallons/year.		

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

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
VOC	91		NS

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

Visible Emissions Limitation: Visible Emissions Limitation _ of _

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [5]

Tank farm

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor ____ of ____

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

<p>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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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) <input type="checkbox"/> Attached, Document ID: <u>INPB-EU5-I3</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable</p>
<p>6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> 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.</p>
<p>7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

EMISSIONS UNIT INFORMATION

Section [5]

Tank Farm

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications

<p>1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u></p>
<p>2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

Additional Requirements Comment

ATTACHMENT INPB-EU5-I3
DETAILED DESCRIPTION OF CONTROL EQUIPMENT

ATTACHMENT INPB-EU5-I3

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Fixed Roof with Internal Floating Roof

The control equipment for the product and denaturant storage tanks consist of a fixed roof with an internal floating roof that is made of Ultraflote (Internal Floating Roof) Cover. An Ultraflote Cover prevents better than 99 percent of the loss of product that may occur in the absence of an internal floating roof. It has sufficient structural strength to support several large workmen, both when afloat and when landed on its legs with high safety factors.

The floating roof consists of a vent located centrally at the top of the tank along with an optional overflow vent and a peripheral roof vent each located on either side. The Ultraflote Cover also includes the cable suspended aluminum floating covers, in lieu of legs, which are useful, especially with larger diameter tanks. Stainless steel cables 1/8" ground cables take the place of the legs and each cable is attached to a neck that is welded to the exterior of the tank roof. A neck with a cap provides a weather tight cover and allows the cable lengths to be adjusted from the tank roof exterior while the floating cover is floating. This system has the advantage of allowing a lower operating level for the floating cover and therefore allows greater usable tank capacity. Secondary advantages are that cables eliminate the emission loss from the legs and the tank is easier to clean because the floating cover legs do not interfere with the cleaning operation.

The Ultraflote Cover rim pontoons are designed for 100 percent excess buoyancy. They are specially designed aluminum tubes with end caps and structural ears on the end caps that allow the pontoons to be bolted together. The attachment of pontoons is such that the pontoons are allowed to flex at each connection.

The aluminum pontoons support an aluminum grid made up of long clamp beams and deck skin. The aluminum deck skin for an Ultraflote Cover comes in rolls of sheet 0.023" thick by 84" wide. The clamp beams are positioned at the edge of two sheets so that the edges of both sheets are overlapped, clamped, and bolted together. The clamp beam extrusion is one of the keys to the strength of the floating cover. The clamp beam and bolting must be sufficiently secure that the sheets cannot separate. When in service the floating cover deck skin is in membrane tension, similar to a drumhead. The clamp beams allow the sheets of aluminum skin to act structurally as though the floating cover was assembled with only one wide sheet. A load on the deck is therefore transferred out to the edge of the floating cover where the load is restrained by a rim plate.

The floating cover continues to provide a safe operating tank and enhanced profitability by preventing loss of product.

EMISSIONS UNIT INFORMATION

Section [6]
Loadout Flare

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [6]

Loadout Flare

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

2. Description of Emissions Unit Addressed in this Section:
Loadout Flare

3. Emissions Unit Identification Number: **008**

4. Emissions Unit Status Code:
A

5. Commence Construction Date:

6. Initial Startup Date:
July 31, 2013

7. Emissions Unit Major Group SIC Code:
28

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

- Acid Rain Unit
- CAIR Unit

9. Package Unit:
Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

This emission unit is an enclosed flare system with a continuous natural gas pilot flame used to capture and destroy the displaced vapors that arise while transferring denatured ethanol to ethanol tanker trucks.

EMISSIONS UNIT INFORMATION

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Loadout Flare

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description:
Flaring

2. Control Device or Method Code: **023**

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

Emissions Unit Control Equipment/Method: Control ____ of ____

1. Control Equipment/Method Description:

2. Control Device or Method Code:

EMISSIONS UNIT INFORMATION

**Section [6]
Loadout Flare**

**B. EMISSIONS UNIT CAPACITY INFORMATION
(Optional for unregulated emissions units.)**

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 8,420,000 gal/yr
2. Maximum Production Rate:
3. Maximum Heat Input Rate: 3.4 million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: <p style="text-align: center;">24 hours/day 7 days/week 52 weeks/year 8760 hours/year</p>
6. Operating Capacity/Schedule Comment: <p>Maximum throughput rate based on loading of ethanol product into the tank trucks.</p> <p>Maximum operating hours based on pilot flame for the flare (the flare is expected to operate less than 700 hr/yr at maximum design flow rate).</p> <p>Natural gas as pilot fuel has a maximum heat input capacity of 0.17 MMBtu/hr.</p> <p>Maximum heat input rate and natural gas usage are approximate capacities.</p>

EMISSIONS UNIT INFORMATION

Section [6]

Loadout Flare

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

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

EMISSIONS UNIT INFORMATION

**Section [6]
Loadout Flare**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Industrial Processes; Miscellaneous Manufacturing Industries; Miscellaneous Manufacturing Industries; Natural Gas: Flares		
2. Source Classification Code (SCC): 3-99-900-23		3. SCC Units: Million Cubic Feet Natural Gas Burned
4. Maximum Hourly Rate: 0.00017	5. Maximum Annual Rate: 1.5	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1,020
10. Segment Comment: Maximum hourly and annual rates based on maximum pilot flame heat input rate of 0.17 MMBtu/hr (permit No. 0610096-004-AC).		

Segment Description and Rate: Segment _ of _

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

EMISSIONS UNIT INFORMATION

Section [6]

Loadout Flare

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

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions ____ 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):	

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):	

EMISSIONS UNIT INFORMATION

Section [6]

Loadout Flare

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE0	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 0 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: 5 min/ 2 hours	
4. Method of Compliance: VE test using EPA Method 22	
5. Visible Emissions Comment: Based on 40 CFR 60.18(b).	

Visible Emissions Limitation: Visible Emissions Limitation of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [6]

Loadout Flare

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer:	Serial Number:
Model Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [6]
Loadout Flare

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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: <u>Opacity</u> <u>See compliance plan in Attachment INPB-FI-CV3</u> <input type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [7]
Syngas Flare

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application - Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

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

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

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

Emissions Unit Description and Status

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

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

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

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

2. Description of Emissions Unit Addressed in this Section:
Syngas Flare

3. Emissions Unit Identification Number: **010**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: July 31, 2013	7. Emissions Unit Major Group SIC Code: 28
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8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This emission unit is an enclosed ground flare system used to control vent gas emissions during system malfunctions when the vent gas boiler is unavailable. The flare accepts vent gases from gasifiers, syngas compression, dry gas cleaning, waste heat recovery, and vent gas scrubbing.

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

Emissions Unit Control Equipment/Method: Control 1 of 1

1. Control Equipment/Method Description: Flaring
2. Control Device or Method Code: 23

Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 496.2 million scf/yr
2. Maximum Production Rate:
3. Maximum Heat Input Rate: million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: hours/day days/week weeks/year hours/year
6. Operating Capacity/Schedule Comment: Maximum process rate based on a 12-month rolling basis of vent gas including syngas (Permit No. 0610096-004-AC). The flare will be used during facility shake-down, startup of the gasifier, when the syngas quality is inadequate to be used in either fermenter or vent gas boiler or until the fermenter pressure reaches the boiler head pressure or for emergencies.

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

C. EMISSION POINT (STACK/VENT) INFORMATION

(Optional for unregulated emissions units.)

Emission Point Description and Type

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

EMISSIONS UNIT INFORMATION

**Section [7]
Syngas Flare**

D. SEGMENT (PROCESS/FUEL) INFORMATION

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

1. Segment Description (Process/Fuel Type): Industrial Processes; Miscellaneous Manufacturing Industries; Miscellaneous Manufacturing Industries; Process Gas (Syngas): Flares		
2. Source Classification Code (SCC): 3-99-900-24		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate:	5. Maximum Annual Rate: 496.2	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: The syngas flare is also authorized to use natural gas as either a pilot flame or in sufficient quantity to support good combustion of the syngas.		

Segment Description and Rate: Segment _ of _

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

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			NS
S02			NS

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 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):	

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):	

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE0	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 0 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: 5 min/2 hour	
4. Method of Compliance: VE test using EPA Method 22	
5. Visible Emissions Comment: Based on 40 CFR 60.18(c)(1).	

Visible Emissions Limitation: Visible Emissions Limitation of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

Section [7]
Syngas Flare

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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> 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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: <u>Opacity</u> <u>See compliance plan in Attachment INPB-FI-CV3</u> <input type="checkbox"/> 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: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

EMISSIONS UNIT INFORMATION

Section [7]

Syngas Flare

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

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EMISSIONS UNIT INFORMATION

Section [8]

Emergency Equipment

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

EMISSIONS UNIT INFORMATION

**Section [8]
Emergency Equipment**

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
 - The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

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

2. Description of Emissions Unit Addressed in this Section:
Emergency Equipment

3. Emissions Unit Identification Number: **011**

4. Emissions Unit Status Code: A	5. Commence Construction Date:	6. Initial Startup Date: July 31, 2013	7. Emissions Unit Major Group SIC Code: 28
--	--------------------------------	--	--

8. Federal Program Applicability: (Check all that apply)
- Acid Rain Unit
 - CAIR Unit

9. Package Unit:
Manufacturer: _____ Model Number: _____

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:
This emission unit consists of one emergency natural gas-fired generator with maximum design rating of 400 kW (536 hp) and one emergency fire pump engine with maximum design rating of 142 Kw (190 hp). This unit also includes a 400-gallon tank to store fuel oil for emergency fire pump engine. The emergency generator is authorized to fire pipeline natural gas while the fire pump fires ultra low sulfur distillate fuel.

EMISSIONS UNIT INFORMATION

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Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

Emissions Unit Control Equipment/Method: Control _ of _

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

EMISSIONS UNIT INFORMATION

**Section [8]
Emergency Equipment**

**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:	million Btu/hr	
4. Maximum Incineration Rate:	pounds/hr tons/day	
5. Requested Maximum Operating Schedule:	hours/day weeks/year	days/week 100 hours/year
6. Operating Capacity/Schedule Comment:	Maximum hours of operation per year based on maintenance and testing purposes. Hours of operation are unlimited during emergency situations.	

EMISSIONS UNIT INFORMATION

**Section [8]
Emergency Equipment**

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

Emission Point Description and Type

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

EMISSIONS UNIT INFORMATION

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Emergency Equipment**

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Natural Gas; Reciprocating		
2. Source Classification Code (SCC): 2-01-002-02		3. SCC Units: Million Cubic Feet Burned
4. Maximum Hourly Rate: 0.0014	5. Maximum Annual Rate: 0.14	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Max annual rate = 1409 ft³/hr x 100 hr/yr x 1/1,000,000 = 0.14 million ft³/yr Natural gas burned in the emergency generator		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type): Internal Combustion Engines; Electric Generation; Distillate Oil (Diesel); Reciprocating		
2. Source Classification Code (SCC): 2-01-001-02		3. SCC Units: 1,000 Gallons Burned
4. Maximum Hourly Rate: 0.0098	5. Maximum Annual Rate: 0.98	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0015	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: Max annual rate = 9.8 gal/hr x 100 hr/yr x 1/1,000 = 0.98 thousand gal/yr Distillate fuel oil burned in the emergency fire pump.		

EMISSIONS UNIT INFORMATION

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Emergency Equipment

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			EL
NOx			EL
SO2			EL
VOC			EL

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: CO		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 6.0 lb/hour 0.3 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Attachment INPB-EU10-F1.10 Reference: 40 CFR 60 Subpart JJJJ and Permit No. 0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment INPB-EU10-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units 4 g/hp-hr or 540 ppmvd @ 7% O₂	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 10 or Emissions Certification	
6. Allowable Emissions Comment (Description of Operating Method): Based on 40 CFR 60 Subpart JJJJ and Permit No. 0610096-004-AC Allowable emissions applicable to only the emergency generator.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: NOx		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 8.25 lb/hour 0.4 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Attachment INPB-EU10-F1.10 Reference: 40 CFR 60 Subpart JJJJ and Permit No. 0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To: _	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment INPB-EU10-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units 2 g/hp-hr or 86 ppmvd @ 7% O₂	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 7E or Emissions Certification	
6. Allowable Emissions Comment (Description of Operating Method): Based on 40 CFR 60 Subpart JJJJ and Permit No. 0610096-004-AC Allowable emissions applicable to only the emergency generator.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

EMISSIONS UNIT INFORMATION

POLLUTANT DETAIL INFORMATION

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Emergency Equipment

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Sulfur Dioxide – SO2

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

(Optional for unregulated emissions units.)

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: SO2		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 0.405 lb/hour 0.02 tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Attachment INPB-EU10-F1.10 Reference: Permit No. 0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment INPB-EU10-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment:			

EMISSIONS UNIT INFORMATION

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Emergency Equipment

POLLUTANT DETAIL INFORMATION

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Sulfur Dioxide – SO2

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units Natural gas firing	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: Vendor Certification	
6. Allowable Emissions Comment (Description of Operating Method): Based on Permit No. 0610096-004-AC Allowable emissions applicable to only the emergency generator.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS
(Optional for unregulated emissions units.)**

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

Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions

1. Pollutant Emitted: VOC		2. Total Percent Efficiency of Control:	
3. Potential Emissions: 1.65 lb/hour 0.08 tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: See Attachment INPB-EU10-F1.10 Reference: 40 CFR 60 Subpart JJJJ and Permit No. 0610096-004-AC		7. Emissions Method Code: 0	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: See Attachment INPB-EU10-F1.10			
11. Potential, Fugitive, and Actual Emissions Comment:			

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -
ALLOWABLE EMISSIONS**

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

Allowable Emissions Allowable Emissions _ of _

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units 1 g/hp-hr or 160 ppmvd @ 7% O₂	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance: EPA Method 18 or 25A or Emissions Certification	
6. Allowable Emissions Comment (Description of Operating Method): Based on 40 CFR 60 Subpart JJJJ and Permit No. 0610096-004-AC Allowable emissions applicable to only the emergency generator.	

Allowable Emissions Allowable Emissions ____ of ____

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

Allowable Emissions Allowable Emissions ____ of ____

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

EMISSIONS UNIT INFORMATION

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G. VISIBLE EMISSIONS INFORMATION

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

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment: Rule 62.296.320(4)(b)1., F.A.C.	

Visible Emissions Limitation: Visible Emissions Limitation of

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

EMISSIONS UNIT INFORMATION

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H. CONTINUOUS MONITOR INFORMATION

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

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor _ of _

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

EMISSIONS UNIT INFORMATION

**Section [8]
Emergency Equipment**

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

<p>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) <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-FI-C2</u> <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input type="checkbox"/> Not Applicable (construction application)</p>
<p>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) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable</p>
<p>6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ <input checked="" type="checkbox"/> 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.</p>
<p>7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable</p>

EMISSIONS UNIT INFORMATION

**Section [8]
Emergency Equipment**

I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)

Additional Requirements for Air Construction Permit Applications

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

Additional Requirements for Title V Air Operation Permit Applications

1. Identification of Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>INPB-EU1-IV1</u>
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

Additional Requirements Comment

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ATTACHMENT INPB-EU8-F1.10
CALCULATION OF EMISSIONS

TABLE INPB-EU8-F1.10
Potential Criteria Pollutant Emissions from Emergency Equipment
INEOS New Planet BioEnergy, Vero Beach, FL

Parameter	Units	Emergency Generator	Emergency Fire Pump	Total (EU 011)
Manufacturer		Kohler	Cummins	
Model No.		400REZX	N-855-F	
<u>Performance</u>				
Number of Units		1	1	
Fuel		Natural Gas	Ultra-low Diesel	
Engine Rating ^a	kW	400	142	
Engine Rating ^a	hp	536	190	
Heat Content (HHV)	Btu/gal	--	136,000	
Heat Content (HHV)	Btu/ft ³	1,020	--	
Annual operating hours	hours	100	100	
Hourly Fuel Usage ^b	gal/hr	--	9.8	
Hourly Fuel Usage ^b	ft ³ /hr	1,409	--	
Hourly Heat Input (calculated)	MMBtu/hr	1.44	1.33	
<u>Emissions</u>				
SO ₂ - Basis	ppm	--	15	
Basis	gr/scf	2	--	
Emissions	lb/hr	0.4	0.0021	0.405
	TPY	0.02	0.0001	0.020
NO _x - Basis ^c	g/hp-hr	2.0	--	
Basis ^d	lb/hp-hr	--	0.031	
Emissions	lb/hr	2.36	5.89	8.25
	TPY	0.1	0.3	0.4
CO - Basis ^c	g/hp-hr	4.0	--	
Basis ^d	lb/hp-hr	--	0.0067	
Emissions	lb/hr	4.73	1.27	6.00
	TPY	0.2	0.1	0.3
VOC - Basis ^c	g/hp-hr	1.0	--	
Basis ^d	lb/hp-hr	--	2.47E-03	
	lb/hr	1.18	0.47	1.65
	TPY	0.1	0.023	0.08
PM/PM ₁₀ /PM _{2.5} - Basis ^d	lb/hp-hr	--	2.20E-03	
Basis ^e	lb/10 ⁶ ft ³	7.6	--	
	lb/hr	0.011	0.42	0.429
	TPY	0.001	0.021	0.02

^a INEOS Bio (2013); Golder Associates (2013).

^b Fuel usage based on manufacturer data.

^c Based on Permit No. 0610096-004-AC (Section 3, Subsection I).

^d Table 3-1, AP-42 Section 3.3.

^e Table 1.4-2, AP-42 Section 1.4.

Established in 1960, Golder Associates is a global, employee-owned organization that helps clients find sustainable solutions to the challenges of finite resources, energy and water supply and management, waste management, urbanization, and climate change. We provide a wide range of independent consulting, design, and construction services in our specialist areas of earth, environment, and energy. By building strong relationships and meeting the needs of clients, our people have created one of the most trusted professional services organizations in the world.

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