

DRAFT PERMIT

PERMITTEE

Highlands Ethanol, LLC
55 Cambridge Parkway, 8th Floor
Cambridge, Massachusetts 02142

Authorized Representative:
Mr. Charles F. Davis III, Senior Vice President

Air Permit No. 0550061-001-AC
Expires: December 31, 2012
PSD-FL-406
Highlands Ethanol Facility
Facility ID No. 0550061
Cellulosic Ethanol Production

PROJECT

This is the final air construction permit, which authorizes construction of a cellulosic ethanol production facility using feedstocks of dedicated energy crops, such as energy cane and forage sorghum at the new Highlands Ethanol Facility (HEF), which is an organic chemicals plant categorized under Standard Industrial Classification No. 2869. The new facility will be located in Highlands County north of State Road 70, approximately 1.7 miles east, northeast of Brighton, Florida. The UTM coordinates are Zone 17; 493.2 km East and 3,013.2 km North.

This final 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. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) 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. and the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality, including a determination of Best Available Control Technology (BACT).

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 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

(DRAFT)

Joseph Kahn, Director
Division of Air Resource Management

(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with 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 _____ to the persons listed below.

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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.

(Clerk)

(Date)

SECTION 1. GENERAL INFORMATION (DRAFT PERMIT)

PROPOSED PROJECT

The project is the construction of a cellulosic ethanol production facility called the HEF. The feedstocks for the HEF will be dedicated energy crops, such as energy cane and forage sorghum, grown on adjacent farmland. The cellulose and hemicellulose in the crops will be converted to sugars that will be fermented to produce approximately 39.4 million gallons per year (MGPY) of distilled ethanol which will be blended with gasoline to yield up to 41.5 MGPY of denatured ethanol product. The denatured ethanol product will consist of 2 to 5 percent (%) of gasoline by volume resulting in a blended product called E98 to E95.

The HEF will generate its own fuel to generate process steam consisting of biomass (stillage cake) from the fermentation and distillation steps and biogas from the on-site wastewater treatment plant (WWTP). Natural gas (NG) will also be used as a supplemental fuel depending on local availability. If NG is unavailable, ultralow sulfur distillate (ULSD) fuel oil (FO) with a maximum sulfur (S) concentration of 0.0015% by weight or propane will be used as the supplemental fuel.

This project will consist of the following emissions units (EU).

Facility ID No. 0550061	
EU ID No.	Emission Unit Description
001	Feedstock delivery, handling and preparation
002	Hydrolysis, liquid/solids separation, neutralization
003	Fermentation, distillation and bacteria/enzyme propagation
004	Solids (stillage and gypsum) separation, dewatering and loadout
005	Denaturing and product storage
006	Product loadout and flare
007	Wastewater treatment plant (WWTP), biogas conditioning and flare
008	Fluidized bed combustion biomass-fueled boiler
009	Fluidized bed combustion biomass-fueled boiler
010	Backup fossil-fueled boiler primarily fueled by natural gas, propane or ULSD fuel oil
011	Cooling tower
012	Miscellaneous storage silos
013	Miscellaneous storage tanks
014	Four emergency generators
015	Emergency fire pump engine
016	Facility-wide VOC fugitive equipment leaks

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400 (PSD), F.A.C.

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Air Resource Section of the Department's South District Office at: 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33901-3881.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's South District Office at: 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33901-3881.
3. Appendices: The following Appendices are attached as a part of this permit and must be complied with by the permittee:
 - a. Appendix ASME: American Society of Mechanical Engineers (ASME) Form for Abbreviated Efficiency Test;
 - b. Appendix BMP: Best Management Practices;
 - c. Appendix CC: Common Conditions;
 - d. Appendix CEMS: Continuous Emissions Monitoring System (CEMS) Requirements;
 - e. Appendix CF: Citation Formats and Glossary of Common Terms;
 - f. Appendix CTR: Common Testing Requirements;
 - g. Appendix Db: NSPS, Subpart Db – Standards of Performance Small Industrial-Commercial-Institutional Steam Generating Units;
 - h. Appendix GC: General Conditions;
 - i. Appendix-GP: Identification of General Provisions, Subpart A from NSPS 40 CFR 60 and Subpart A from NESHAP 40 CFR 63;
 - j. Appendix IIII: NSPS, Subpart IIII - Stationary Compression Ignition Internal Combustion Engines;
 - k. Appendix Kb: NSPS, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels;
 - l. Appendix LDAR: Preliminary Leak Detection and Repair (LDAR) Program;
 - m. Appendix VVa: NSPS, Subpart VVa – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Industry (SOCMI) and;
 - n. Appendix ZZZZ: NESHAP, Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (RICE).
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, F.S.; 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.]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

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.]
7. Source Obligation:
- (a) Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.
 - (b) 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.
 - (c) 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 exceeding its projected actual emissions, 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 specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. 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, 62-4.220, and Chapter 62-213, F.A.C.]
9. Unconfined Emissions of Particulate Matter: No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter. Reasonable precautions include the following: a) Paving and maintenance of roads, parking areas and yards; b) Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing; c) Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities; d) Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne; e) Landscaping or planting of vegetation; f) Use of hoods, fans, filters, and similar equipment to contain, capture and/or

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

vent particulate matter; g) Confining abrasive blasting where possible; and, h) Enclosure or covering of conveyor systems. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice. [Rule 62-296.320(4)(c), F.A.C.]

10. Excess Emissions: Except as required by specific conditions of this permit dealing with excess emissions with regard to individual emission units, the following conditions apply to excess emissions at HEF.
 - a. Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
 - b. Malfunction: Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
 - c. Department Discretion: Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
 - d. Department Notification: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
[Rule 62-210.700, F.A.C.]
11. NSPS, Subpart VVa: Emission units associated with the HEF project that can leak volatile organic compounds (VOC) are subject to NSPS Subpart VVa – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. A requirement of Subpart VVa is the development of a leak detection and repair (LDAR) program. A preliminary LDAR program plan is included as Appendix LDAR in Section IV of this permit. The permittee is required to submit a final LDAR program plan to the Compliance Authority for approval no later than 90 days prior to commencing operation. As per NSPS Subpart VVa, HEF shall demonstrate compliance with the requirements of §§60.482–1a through 60.482–10a or §60.480a(e) for all equipment within 180 days of initial startup
[NSPS, Subpart VVa and Rule 62-4.070, F.A.C. Reasonable Assurance]
12. Equipment Subject to NSPS, Subpart VVa: Equipment such as pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves, line valves and flanges or other connectors in VOC service and any devices or systems subject to NSPS, Subpart VVa and the associated emissions unit must be identified with a list submitted to the Compliance Authority no later than 90 days prior to commencing operation. [Rule 62-4.070, F.A.C. Reasonable Assurance]
13. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. The permittee shall submit an odor control plan (OCP) to the Compliance Authority 90 days prior to commencing operation that addresses the procedures and practices that will be used to control facility wide fugitive odors at HEF including stillage cake storage and disposal (if necessary). In addition, the OCP shall also include provisions for storing, disposing of or recycling off-specification enzymes and bacteria that could otherwise contribute to objectionable odors.
[Rule 62-296.320(2), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 2. ADMINISTRATIVE REQUIREMENTS (DRAFT PERMIT)

{Permitting Note: An objectionable odor is defined in Rule 62-210.200 (Definitions), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.}

14. Open Burning Prohibited: No person shall ignite, cause to be ignited, or permit to be ignited, any material which will result in any prohibited open burning as regulated by chapter 62-256, F.A.C.; nor shall any person suffer, allow, conduct or maintain any prohibited open burning.
[Rule 62-256.300, F.A.C.]

15. General Visible Emissions Standard:

- a. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity).
- b. Notwithstanding subparagraph 62-296.320(4)(b)1., F.A.C., above, the owner or operator of an emissions unit subject to the general visible emission standard may request the Department to establish a higher visible emissions standard for that emissions unit. The owner or operator may request that a visible emissions standard be established at that level at which the emissions unit will be able, as indicated by compliance tests, to meet the opacity standard at all times during which the emissions unit is meeting the applicable particulate matter standard. The Department shall establish such a standard, through the permitting process, if it finds that:
 - (i) The emissions unit was in compliance with the applicable particulate emission standard while a compliance test was being conducted but failed to comply with the general visible emissions standard during the test;
 - (ii) The emissions unit and associated air pollution control equipment were operated and maintained in a manner to minimize the opacity emissions during the compliance test;
 - (iii) The emissions unit and associated air pollution control equipment were incapable of being adjusted or operated in such a manner as to meet the opacity standard; and
 - (iv) If the presence of uncombined water is the only reason for failure to meet visible emission standards given in this rule, such failure shall not be a violation of this rule.

[Rule 62-296.320(4)(b) F.A.C, General Visible Emissions Standard]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

A. Biomass Delivery, Handling and Preparation (EU-001)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	<p><u>Biomass delivery, handling and preparation:</u></p> <ul style="list-style-type: none">• <u>Ethanol process biomass:</u> Freshly harvested energy cane and forage sorghum from adjacent farmland is delivered by trucks equipped with a tipper for unloading material. The feedstock is offloaded to a live bottom bin. The live bottom bin transfers the feedstock to conveyers, through several washing steps and a screw press prior to the hydrolysis step.• <u>Supplemental boiler fuel biomass:</u> Prepared (sized and partially dried) tree wood chips, bagasse or energy crop material are delivered to the plant site in conventional tractor-trailer units or self-unloading trailers with live floors. The trailers are unloaded to the ground using a hydraulic operated trailer dump platform and moved using mobile equipment to small storage piles. When required, the material is reclaimed using a mobile wheel loader, and placed onto the live reclaim area from where it is conveyed to a scalping screen or shaker screen and then transported to the boiler feed bin and fed into the biomass boilers to supplement stillage from the fermentation step.

EQUIPMENT

1. Biomass for the Ethanol Process: The permittee is authorized to install the following major pieces of equipment for the delivery, handling and processing of the of the energy cane and forage sorghum used in the ethanol production process:

- Trailer tipper;
- Covered rake conveyor;
- Live bottom bin;
- Covered transfer conveyors;
- Scalping screen;
- Biomass distribution chest;
- Wash beater;
- Drainage screw;
- Screw press;
- Covered hydrolyser feed conveyor; and,
- Dust collectors at the drop and transfer points of the primary biomass Delivery, Handling and Preparation System to control fugitive emissions.

[Application No. 0550061-001-AC and Rule 62-4.070, F.A.C. Reasonable Assurance]

2. Supplemental Biomass Fuel: The permittee is authorized to install the following major pieces of equipment for the delivery, handling and processing of the supplemental biomass fuel for the biomass boilers:

- Three storage piles west of the ethanol production area for the storage of whole tree chips, bagasse and energy crops;
- A hydraulic truck dumper adjacent to the storage piles;
- Covered conveyors to move the supplemental biomass from the reclaim area to the scalping screen;

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

A. Biomass Delivery, Handling and Preparation (EU-001)

- A scalping screen to remove oversized biomass material;
- Covered conveyors to move the supplemental biomass from the scalping screen to the fuel feed bin;
- A fuel feed bin and covered conveyors to move the supplemental biomass from the fuel feed bin to the biomass boilers; and,
- Dust collectors at the drop and transfer points of the supplemental biomass Delivery, Handling and Preparation System to control fugitive emissions.

[Application No. 0550061-001-AC and Rule 62-4.070, F.A.C. Reasonable Assurance]

3. Air Pollution Control Equipment: To minimize fugitive particulate matter (PM, PM₁₀/PM_{2.5}) henceforth called PM, biomass conveyors shall be enclosed, except for one small section near the biomass receiving point to provide for visible inspection. Dust collectors shall be installed on the conveyor transfer and drop points. The dust collectors shall be designed to obtain an outlet PM loading of 0.005 grains per dry standard cubic foot (gr/dscf).

[Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

{Permitting Note: Enclosed conveyors means that the conveyance belt for the biomass is totally enclosed from above thus preventing wind from causing fugitive dust emissions. However, the bottom of the conveyance belt shall be accessible for maintenance and repairs.}

PERFORMANCE RESTRICTIONS

4. Roadways: The feedstock roadway loop and plant roadways shall be paved. To further minimize fugitive dust emissions from the paved roadways, the roadways will be swept on an as needed basis with a vacuum sweeper in good working order to prevent the buildup of dirt and silt on the roadway surfaces in accordance with the "Best Management Practices" outlined in Appendix BMP. A record of the sweeping shall be kept and made available to the Compliance Authority upon request.
[Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]
5. Gravel Areas: The infield within feedstock roadway loop, the supplemental biomass storage area and other areas of the HEF will have gravel surfaces. During dry conditions the gravel areas shall be wetted, as necessary, to maintain surface moisture to minimize fugitive dust emissions.
[Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]
6. Primary Biomass Storage: To control odor, primary biomass shall be delivered to the facility on a just in time basis. Consequently, no primary biomass shall be stored on site in storage piles. Trucks shall typically deliver primary biomass to HEF between 6:00 am to 6:00 pm. Some of the trucks will be parked on the feedstock roadway gravel infield for no more than 36 hours to provide biomass to the ethanol process during the times when trucks are not delivering biomass to HEF.
[Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

A. Biomass Delivery, Handling and Preparation (EU-001)

7. Supplemental Biomass Storage: Supplemental biomass consisting of whole tree chips, bagasse and energy crops will be stored on site in three piles located in a small area to the west of the ethanol production area and processed mainly using mobile equipment such as front-end loaders. Each pile will have a foot print of approximately 200 by 100 feet and a height of approximately 20 feet for a volume of roughly 400,000 cubic feet (ft³). Supplemental biomass delivered to each storage pile shall be used on a first in first out (FIFO) basis from each pile to control odors and minimize the chance of spontaneous combustion. [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]
8. Authorized Biomass: Biomass authorized to be used at the HEF consist of energy cane and forage sorghum for the ethanol process and whole wood chips, bagasse and energy crops for the supplemental fuel for the biomass boilers. Appendix BCP defines the types of biomass that shall be used at the HEF in the ethanol process and as supplemental boiler fuel as well as quality assurance (Q&A) procedures to ensure the biomass used meets the requirements specified in this permit. [Application No. 0550061-001-AC and Rule 62-4.070, F.A.C. Reasonable Assurance]
9. Restricted Operation: The hours of operation of this emission unit are not limited (8,760 hours per year). [Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

10. Visible Emission (VE) Standard: As determined by EPA Method 9, there shall be no VE greater than 5% opacity at drop points, transfer points and dust collector outlets. [Rule 62-212.400(5)(c), F.A.C.].
11. PM Standard: PM emissions from dust collectors shall not exceed 0.005 grains per dry standard cubic foot (gr/dscf). [Rules 62-4.070(3); 62-210.200(PTE), F.A.C., and Rule 62-4.070, F.A.C. Reasonable Assurance]
12. Baghouse PM Standard by Opacity Measurement: A visible emission reading of 5% opacity or less may be used to demonstrate compliance with the PM emission standard in **Condition 11** above. A visible emission reading greater than 5% opacity will require the permittee to perform a PM emissions stack test within 60 days to show compliance with the PM standard. [Application No. 0470016-020-AC; Rules 62-296.603; 62-296.712, F.A.C.; 40 CFR 60.122(a)(2) and Rule 62-4.070, F.A.C. Reasonable Assurance]
13. Best Management Practices (BMP): A control plan to control PM emissions from biomass delivery, handling and preparation is given in Appendix BMP and shall be followed at all times by the permittee. This plan also addresses measures to minimize the chance of the spontaneous combustion of supplemental biomass storage piles and quality assurance measures for biomass delivered from vendors to the HEF. An example of the procedures to control fugitive PM emission is the wetting of roads and gravel areas during dry periods. As the engineering details of the Biomass Delivery, Handling and Preparation emissions unit becomes finalized, the permittee shall submit an updated BMP plan to the compliance authority 90 days prior to commencing operation. [Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

{Permitting Note: PM emissions from the roadways and grounds during operation of the HEF are estimated to be 9.0 and 1.0 tons in any consecutive twelve month period. According to the permittee, no PM emissions will result from biomass delivery, handling and preparation due to the high moisture content of the biomass.} [Application No. 0550061-001-AC]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

A. Biomass Delivery, Handling and Preparation (EU-001)

TESTING AND MONITORING REQUIREMENTS

14. **Initial Compliance Tests:** The drop points, transfer points and dust collector outlets of the emissions unit shall be tested to demonstrate initial compliance with the emissions standards for opacity given in **Condition 10** above. 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) and 62-297.310(7)(a)1, F.A.C.]
15. **Annual Compliance Tests:** During each federal fiscal year (October 1st to September 30th), the drop points, transfer points and dust collector outlets of the emissions unit shall be tested to demonstrate compliance with the emissions standards for opacity given in **Condition 10** above.
[Rule 62-297.310(7)(a)4, F.A.C.]
16. **Dust Collectors PM Compliance Tests:** The initial and annual VE tests in **Conditions 14 and 15** above with regard to the dust collectors shall serve as a surrogate for the PM emissions tests. If the VE emissions standard in **Condition 10** above is not met for the dust collectors, a PM test utilizing EPA Method 5 must be conducted on the dust collector stack to show compliance with the PM emissions standard in **Condition 11** above within 60 days. [Rule 62-297.620(4), F.A.C.]
17. **Test Requirements:** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(7)(a)9, F.A.C.]
18. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
9	Visual Determination of the Opacity of Emissions from Stationary Sources. The duration of each test shall be 60 minutes.

The above method is described in Appendix A of 40 CFR 60 included as Appendix A of this permit and are adopted by reference in Rule 62-204.800, F.A.C. No other methods 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 CFR 60]

RECORDS AND REPORTS

19. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]
20. **Notification, Recordkeeping and Reporting Requirements:** The permittee shall maintain records of the amount of biomass feedstock (primary and supplemental) delivered, handled and processed on a daily, monthly and 12 month rolling average basis. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

B. Hydrolysis, Liquid/Solid Separation and Neutralization (EU-002)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
002	<p><u>Hydrolysis of Cellulose, Liquid/Solid Separation and Neutralization:</u></p> <ul style="list-style-type: none">• <u>Hydrolysis:</u> Steam and a dilute acid solution hydrolyze the hemicellulose fraction of the biomass feedstock to produce a slurry containing cellulose/lignin solids mixed with a liquid fraction containing a variety of sugars.• <u>Liquid/solid separation:</u> The liquid sugars are separated from the fiber solids through mechanical de-watering in a series of screw presses then washed with fresh, recycled, water and sent to filtrate tanks.• <u>Neutralization:</u> The liquid sugars are neutralized with lime in a neutralization tank.• <u>Design Capacity:</u> The design capacity of the hydrolyzer and liquid/solid separation systems is 3,247 gallons per minute (GPM) of hydrolyzed biomass.

The hydrolyzer system will operate under pressure and will not produce air emissions. The system is equipped with pressure safety valves (PSV), which in turn are ultimately vented to a wet scrubber.

Acid hydrolyzed biomass will be separated into liquid and solid fractions in a 3-stage series of screw presses. An enclosed tank is located at the feed side of each screw press stage (for a total of three feed tanks) and another enclosed tank is located at the filtrate discharge of each screw press stage (for a total of three filtrate tanks). The process will operate at a temperature of approximately 85 to 90 degrees centigrade (°C). The water fraction entering the process will contain trace amounts of dissolved soluble organics that have the potential to volatilize from the water surfaces inside each of the six tanks. Emissions from the liquid/solid separation system are VOC emissions which will be controlled by a wet scrubber.

EQUIPMENT

1. Hydrolyzer System: The permittee is authorized to construct a hydrolyzer system that will utilize steam and an acid solution to hydrolyze the hemicellulose fraction of the biomass feedstock to generate a slurry that will be separated into liquid and solid streams. [Application No. 0550061-001-AC]
2. Liquid/Solid Separation System: The permittee is authorized to construct the following major components of a acid hydrolyzed biomass liquid/solid separation system:
 - a. Three (3) feed tanks;
 - b. Three (3) filtrate tanks; and,
 - c. Six (6) individual screw presses for a total of three feed to filtrate screw press stages.[Application No. 0550061-001-AC]
3. Air Pollution Control Equipment: The permittee shall install a wet scrubber to control VOC emissions from the liquid/solid separation system. The wet scrubber shall have a design control efficiency of 98 percent. Emissions from the wet scrubber shall discharge through a stack approximately 20 feet high at a design exit temperature of 77 degrees Fahrenheit (°F) or ambient conditions. [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

B. Hydrolysis, Liquid/Solid Separation and Neutralization (EU-002)

PERFORMANCE RESTRICTIONS

4. Permitted Capacity: The maximum ethanol production rate is 14.8 TPH and in any consecutive twelve month period 129,298 tons which is the equivalent to an ethanol production rate of 39.4 million gallons per year (MGPY) which when blended with gasoline will equal up to 41.5 MGPY of denatured ethanol product. [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C.; Rule 62-4.070, F.A.C. Reasonable Assurance and Rule 62-210.200 (PTE), F.A.C.]
5. Hours of Operation: The hours of operation of hydrolyzer and liquid/solid separation systems are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200 (PTE), F.A.C.]

EMISSIONS STANDARDS

6. VOC Standard: The liquid/solid separation system shall not discharge VOC through the wet scrubber stack in excess of 0.6 pounds per hour (lbs/hr). [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

TESTING REQUIREMENTS

7. Initial Compliance Tests: The emissions units' scrubber stack shall be tested to demonstrate initial compliance with the emissions standards for VOC given in **Condition 6** above utilizing EPA Method 25A. 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) and 62-297.310(7)(a)1, F.A.C.]
8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the emissions units' scrubber stack shall be tested to demonstrate compliance with the emissions standards in **Condition 6** above for VOC utilizing EPA Method 25A. [Rule 62-297.310(7)(a)4, F.A.C.]
9. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]
10. Test Methods: Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above methods are described in Appendix A of 40 CFR 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 CFR 60]

MONITORING REQUIREMENTS

11. Wet Scrubber Monitoring Requirements:
 - a. Scrubber Operating Parameters: The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across the scrubber. If the total pressure drop cannot be measured for the scrubber, then the liquid flow rate and the fan amps shall be measured and recorded for the scrubber. Accuracy of the monitoring devices shall be $\pm 5\%$ over the operating range.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

B. Hydrolysis, Liquid/Solid Separation and Neutralization (EU-002)

- b. Scrubber Guarantee: Prior to installation of the scrubber, the permittee shall submit to the Compliance Authority the proposed design information along with a manufacturer's guarantee that the scrubber is capable of meeting the emission limitations established by the VOC BACT determination.

[Rule 62-4.070(3), F.A.C.; Rule 62-297.310 and Rule 62-212.400, F.A.C.]

RECORDS AND REPORTS

12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.

[Rule 62-297.310(8), F.A.C.]

13. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of biomass feedstock and acid solution used in the hydrolyzer system, the hydrolyzed biomass fed to the liquid/solid separation systems and the amount of ethanol produced on a daily, monthly and a 12 month average rolling basis. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

C. Fermentation, Distillation and Bacteria/Enzyme Propagation (EU-003)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
003	<u>Fermentation, distillation and bacteria/enzyme propagation</u> : This emission unit is where the cellulose in the solids stream will be converted to liquid glucose sugars by a proprietary enzyme.

The pentose and glucose sugars will be separately fermented in batch mode to produce dilute ethanol beer. The fermented mash will be passed to a beerwell upon completion of each fermentation batch. The beer will then be transferred to a beer stripper that initiates the distillation process. The vapors from the two beer strippers will be passed to a stripper/rectifier for further distillation and then a molecular sieve system to remove the remaining water from the product.

EQUIPMENT

- Fermentation and Propagation System: The permittee is authorized to construct the following major components of a fermentation and propagation system:
 - Four (4) hemicellulosic fermentation tanks;
 - Four (4) cellulosic fermentation tanks;
 - Three (3) hemicellulosic seed propagators;
 - Three (3) cellulosic enzyme propagators; and,
 - Three (3) cellulosic seed propagators.
- Distillation System: The permittee is authorized to construct the following major components of a distillation system:
 - Two beer strippers;
 - One stripper/rectifier; and,
 - One molecular sieve dehydration system.
- Air Pollution Control Equipment: The permittee shall install a wet scrubber to control VOC emissions from the fermentation and propagation and distillation systems. The wet scrubber shall have a design control efficiency of 98 percent. Emissions from the wet scrubber shall discharge through a stack approximately 24.5 feet high at a design exit temperature of 77 °F or ambient temperature. [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

PERFORMANCE RESTRICTIONS

- Permitted Capacity: The maximum permitted feed rate into the fermentation, propagation and distillation systems is 14.8 TPH and 129,298 tons in any consecutive twelve month period which is the equivalent to an ethanol production rate of 39.42 MGPY. [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C.; Rule 62-4.070, F.A.C. Reasonable Assurance and Rule 62-210.200 (PTE), F.A.C.]
- Hours of Operation: The hours of operation of the fermentation, propagation and distillation systems are not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200 (PTE), F.A.C.]

EMISSIONS STANDARDS

- VOC Standard: The fermentation, propagation and distillation systems shall not discharge VOC through the wet scrubber stack in excess of 5.1 lbs/hr and 0.954 pounds per 1000 gallons of ethanol produced. [Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

C. Fermentation, Distillation and Bacteria/Enzyme Propagation (EU-003)

TESTING REQUIREMENTS

7. **Initial Compliance Tests:** The emissions unit stack shall be tested to demonstrate initial compliance with the emissions standard for VOC given in **Condition 6** above. 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) and 62-297.310(7)(a)1, F.A.C.]
8. **Annual Compliance Tests:** During each federal fiscal year (October 1st to September 30th), the emissions unit stack shall be tested to demonstrate compliance with the emissions standard for VOC given in **Condition 6** above. [Rule 62-297.310(7)(a)4, F.A.C.]
9. **Test Requirements:** The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]
10. **Test Methods:** Required tests shall be performed in accordance with the following reference methods.

Method	Description of Method and Comments
1-4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
25A	Method for Determining Gaseous Organic Concentrations (Flame Ionization)

The above methods are described in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. No other methods 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 CFR 60]

MONITORING REQUIREMENTS

11. **Wet Scrubber Monitoring Requirements:**
 - a. **Scrubber Operating Parameters:** The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across the scrubber. If the total pressure drop cannot be measured for the scrubber, then the liquid flow rate and the fan amps shall be measured and recorded for the scrubber. Accuracy of the monitoring devices shall be $\pm 5\%$ over the operating range.
 - b. **Scrubber Guarantee:** Prior to installation of the scrubber, the permittee shall submit to the Compliance Authority the proposed design information along with a manufacturer's guarantee that the scrubber is capable of meeting the emission limitations established by the VOC BACT determination.

[Rule 62-4.070(3), F.A.C.; Rule 62-297.310 and Rule 62-212.400, F.A.C.]

RECORDS AND REPORTS

12. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]
13. **Notification, Recordkeeping and Reporting Requirements:** The permittee shall maintain records of the amount of ethanol produced on an hourly, monthly and 12 month rolling average basis along with the feed rate into the fermentation, distillation and propagation systems on a daily, monthly basis and 12 month rolling average basis. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

D. Stillage Loadout (EU-004)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
004	<p><u>Solids (stillage and gypsum) separation, dewatering and loadout:</u></p> <ul style="list-style-type: none">• <u>Stillage</u>: The lignin-rich biomass residue (stillage cake) is removed from the bottom of the cellulosic beer stripper, dewatered, and conveyed to the biomass boilers.• <u>Gypsum</u>: Gypsum residue is removed from the bottom of the hemicellulosic beer stripper, dewatered, and conveyed to the biomass boilers.• <u>Centrate</u>: The water fraction from the stillage and gypsum separation steps is conveyed to the WWTP.• <u>Design Capacity</u>: The design capacity of the stillage loadout systems is 25 TPH of stillage with a design maximum of 219,000 tons in any consecutive twelve month period. <p>[Application No. 0550061-001-AC; Rule 62-4.070, F.A.C. Reasonable Assurance and Rule 62-210.200(PTE), F.A.C.]</p>

Stillage cake will be removed from the bottom of the cellulosic beer stripper in the distillation system, dewatered to remove some of the water fraction, and conveyed to the biomass boilers. Stillage will be generated at a rate of 25 dry TPH with a moisture content of between 35 and 60 percent. Handling will be performed entirely within a closed system except for the conveyor.

EQUIPMENT

1. Stillage Loadout System: The permittee is authorized to construct a stillage loadout system, including a conveyor to take the stillage to the biomass boilers. Handling of the stillage will be entirely within a closed system except for the conveyor which will be covered. [Application No. 0550061-001-AC]

PERFORMANCE RESTRICTIONS

2. Restricted Operation: The hours of operation of the stillage loadout system is not limited (8,760 hours per year). [Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]
3. Temporary Stillage Storage: If the wet stillage cake cannot be immediately combusted in the bubbling fluidized bed (BFB) biomass boilers it can be temporarily stored on site for no more than 3 days (72 hours) before it must be removed from the site and disposed of. As part of the OCP, stillage storage and disposal procedures must be submitted to the Compliance Authority no later than 90 days prior to commencing operation. These procedures must address at a minimum the design of the stillage storage area and how leaching into the ground will be prevented, the procedures that will be used to prevent objectionable odors from the stillage storage area, plans to prevent fugitive PM and VOC emissions and the method(s) of stillage disposal that will be used including off-site transportation.
[Rule 62-4.070, F.A.C., Reasonable Assurance and Rule 62-296.320(2), F.A.C., Objectionable Odors]

EMISSIONS STANDARDS

4. VOC Emissions: Emissions from the stillage loadout system will consist of fugitive VOC. These emissions are not controlled. To minimize VOC emissions the stillage shall be maintained at a temperature no greater than 165°F in the stillage loadout system. According to the permittee, due to the high moisture content of the stillage (35 to 60 percent) fugitive PM emissions should be minimal.
[Application No. 0550061-001-AC and Rule 62-4.070, F.A.C. Reasonable Assurance]
{Permitting Note: The permittee estimates that VOC emissions from the stillage loadout system will be 0.6 lbs/hr and 2.8 TPY.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

D. Stillage Loadout (EU-004)

RECORDS AND REPORTS

5. Notification, Recordkeeping and Reporting Requirements: The permittee shall maintain records of the amount of stillage produced and fed to the biomass boilers on a daily, monthly and 12 month rolling average basis. The stillage temperature at the entry and exit points of the stillage conveyor shall be measured hourly and recorded. These records shall be submitted to the Compliance Authority on an annual basis or upon request. [Rule 62-4.070(3), F.A.C.]

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SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

E. Product Storage (EU-005)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
005	<u>Product Storage</u> : This emissions unit consists of ethanol and gasoline blending that results in the denatured ethanol final product. The resulting denatured product is stored in tanks.

The purified ethanol and gasoline (denaturant) will be stored in tanks and then blended, resulting in a product that contains approximately 95 to 98 percent ethanol and 5 to 2 percent gasoline by volume with the resulting blended product commonly called E95 to E98. The denatured ethanol product will have dedicated storage tanks. This emission unit consists of six tanks that store volatile organic liquids (VOL). These six tanks will be designed with internal floating roofs to minimize VOC emissions.

EQUIPMENT

- The permittee is authorized to construct the following tanks for product storage.
 - Product Storage Tanks: The permittee is authorized to construct two nominal 295,317 gallon ethanol product storage tanks with fixed roofs and internal floating roofs to minimize VOC emissions as per 40 CFR 60.110b(a)(2).
 - Product Shift Tanks: The permittee is authorized to construct two nominal 61,215 gallon product shift tanks with fixed roofs and internal floating roofs to minimize VOC emissions as per 40 CFR 60.110b(a)(2).
 - Recycle Product Tank: The permittee is authorized to construct one nominal 61,215 gallon recycle product storage tank with a fixed roof and an internal floating roof to minimize VOC emissions as per 40 CFR 60.110b(a)(2).
 - Gasoline (Denaturant) Storage Tank: The permittee is authorized to construct one nominal 28,467 gallon gasoline (denaturant) storage tank with a fixed roof and an internal floating roof to minimize VOC emissions as per 40 CFR 60.110b(a)(2).

[Application No. 0550061-001-AC]

PERFORMANCE RESTRICTIONS

- Permitted Capacity: The maximum throughput (process) rate of the product storage emissions unit is 39.42 MGPY of ethanol. For the E95 blended final product, the throughput of gasoline shall be no more than 2,074,737 gallons with a final product production rate of no more than 41,494,737 gallons of E95 in any consecutive twelve month period. For the E98 blended final product, the throughput of gasoline shall be no more than 804,490 gallons with a final product production rate of no more than 40,224,420 gallons of E98 in any consecutive twelve month period. Ethanol denatured within the E95 to E98 range shall have the allowable amount of gasoline and final denatured product production rate prorated to the appropriate amount in any consecutive twelve month period.
[Application No. 0550061-001-AC and Rule 62-4.070, F.A.C. Reasonable Assurance]
- Hours of Operation: The hours of operation of this emissions unit are not restricted (8,760 hours per year).
[Application No. 0550061-001-AC and Rule 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

- VOC Standard: Emissions of VOC from the product storage tanks will be controlled by the proper construction of the tanks per 40 CFR 60.110b(a)(2).
[Application No. 0550061-001-AC; Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

{Permitting Note: The permittee estimated VOC emissions from the product storage tanks to be 0.5 lbs/hr and 1.7 TPY.}

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

E. Product Storage (EU-005)

NSPS SUBPART KB APPLICABILITY

5. Volatile Organic Liquids (VOL) Storage Tanks: The six tanks in the product storage emissions unit at the HEF are subject to NSPS Subpart Kb which applies to any storage tank with a capacity greater than or equal to 10,300 gallons that is used to store VOL for which construction, reconstruction, or modification is commenced after July 23, 1984. Five of these tanks have a capacity greater than or equal to 40,000 gallons while the gasoline storage tank has a capacity of 28,467 gallons. All six tanks store a liquid with a maximum true vapor pressure greater than 3.5 kilopascals (kPa). Consequently, all six tanks are subject to the General Provisions (40 CFR 60, Subpart A) and the provisions of NSPS 40 CFR 60, Subpart Kb.

RECORDS AND REPORTS

6. Storage Tank Records: The permittee shall keep readily accessible records showing the dimension of the storage tanks and an analysis showing the capacity of the storage tanks. Records shall be retained for the life of the facility. The permittee shall also keep records sufficient to determine the annual throughput of the various liquids for the storage tanks for use in the Annual Operating Report. [Rule 62-4.070(3) F.A.C]
7. NSPS Subpart Kb Reporting and Recordkeeping: The owner or operator of each storage vessel as specified in §60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of §60.115b Reporting and Recordkeeping Requirements. The owner or operator shall keep copies of all reports and records required by §60.115b, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

F. Product Loadout (EU-006)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
006	<p><u>Product Loadout</u>: The denatured blended ethanol product from EU-005 product storage tanks will be loaded out to tanker trucks with displaced vapors sent to a product loadout flare for destruction. The typical hours of operation for the flare are 1,153 hours per year, while the pilot for the flare system will typically operate 8,760 hours per year.</p> <p>[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]</p>

The denatured ethanol product will be loaded onto tank trucks at a rate of no more than 600 gallons per minute (GPM). Vapors displaced from the trucks will be exhausted to a flare. The Product Loadout Flare will have a rated capacity of 9.42 million British thermal units per hour (mmBtu/hr) to control vapors displaced from the tanker trucks during the loading of the denatured ethanol product. Vapors displaced from the trucks will be exhausted to a flare with a design control efficiency of 98 percent.

EQUIPMENT

- Loading Rack: The permittee is authorized to construct a loading rack that is designed to transfer 600 GPM of denatured ethanol product to tanker trucks.
[Application No. 0550061-001-AC and 62-210.200(PTE), F.A.C.]
- Flare System: The permittee is required to construct one flare system with a continuous pilot and combustion chambers to destroy displaced vapors during truck loadout. The flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
[Application No. 0550061-001-AC and 62-210.200(PTE), F.A.C.]

PERFORMANCE RESTRICTIONS

- Approximate Capacities: The flare system is designed to combust vapors displaced from the trucks during the loading of the denatured ethanol product. The trucks are assumed to not be in dedicated denatured ethanol product service (i.e., some trucks will have returned from delivering gasoline and gasoline vapors will be displaced). The product loadout flare will have a rated capacity of 9.42 mmBtu/hr. NG will be used as the fuel for the pilot which has a rated capacity of 0.18 mmBtu/hr. If NG is not available, propane will be used for the pilot until NG becomes available. [Application No. 0550061-001-AC and Rule 62-210.200(PTE), F.A.C.]
- Restricted Operation: The flare shall be operated at all times when truck loading operations are taking place. Only E95 to E98 shall be loaded into the trucks.
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

- VE Standard: The flare shall be designed for and operated with no visible emissions (VE) except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [Rules 62-4.070(3), F.A.C.]

TESTING AND MONITORING REQUIREMENTS

- VE Compliance Tests: The flare system exhaust shall be tested to demonstrate initial compliance with the VE standard given in **Condition 5** above no later than 180 days after initial operation and during each federal fiscal year (October 1st to September 30th) thereafter. EPA Method 22 VE compliance test(s) shall be used to determine the compliance of the flare with the visible emission requirements. The observation period is 2 hours and shall be used according to Method 22. The flare performance test shall be performed when ethanol is being loaded into trucks that previously held gasoline. [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

F. Product Loadout (EU-006)

7. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]
8. Test Methods: Any required stack tests shall be performed in accordance with the following methods:

Method	Description of Method and Comments
EPA 22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares 2 Hour Duration

9. Work Practice: Good combustion practices will be utilized at all times to ensure emissions from the flare system are minimized. Therefore, all operators and supervisors shall be properly trained to operate and ensure maintenance of this system in accordance with the guidelines and procedures established by the manufacturer. The training shall include good operating practices as well as methods for minimizing excess emissions. The flare pilot shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [Rules 62-4.070(3) F.A.C.]

RECORDS AND REPORTS

10. Records: The permittee shall record in a written log the duration of each flare event and the reason for flaring. If requested by the Compliance Authority, the permittee shall provide a copy of these records or a summary of these records. [Rule 62-4.070(3), F.A.C.]
11. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

G. Wastewater Treatment Plant, Biogas Conditioning and Flare (EU-007)

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
007	<u>Wastewater treatment plant (WWTP), biogas conditioning and flare:</u> The HEF will include a WWTP to treat process wastewaters and to condition the resulting biogas for use as fuel in the biomass and backup boilers or to flare it when it cannot be used in the boilers. The effluent from the WWTP will be reused. The flow through the system will be approximately 1,640 gallons per minute.

EQUIPMENT

- WWTP: The permittee is authorized to construct a WWTP consisting of the following major pieces of equipment:
 - Equalization Tank;
 - Primary Clarifier;
 - Anaerobic Reactors;
 - Aeration Basin;
 - Secondary Clarifier; and,
 - Four Sand Filters.[Application No. 0550061-001-AC]
- Flare System: The permittee is required to construct one flare system with a continuous pilot and combustion chambers to combust biogas when the biomass boilers are not operational. The flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
[Application No. 0550061-001-AC and 62-210.200(PTE), F.A.C.]

PERFORMANCE RESTRICTIONS

- Approximate WWTP Flare Capacity: The flare system is designed to combust biogas when the biomass and backup boilers are not operating. The WWTP flare will have a rated capacity of 44.03 mmBtu/hr. Natural gas will be used as fuel for the pilot which has a rated capacity of 0.18 mmBtu/hr. If NG is not available, propane will be used for the pilot until NG becomes available.
[Application No. 0550061-001-AC and Rule 62-210.200(PTE), F.A.C.]
- Required Operation: The flare shall be operated at all times when all the biogas generated by the WWTP cannot be combusted in the biomass and backup boilers.
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]
- Hours of Operation: The hours of operation of the WWTP flare system is not limited (8,760 hours per year). [Application No. 0550061-001-AC and Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

- VE Standard: The flare shall be designed for and operated with no visible emissions (VE) except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. [Rules 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

G. Wastewater Treatment Plant, Biogas Conditioning and Flare (EU-007)

TESTING AND MONITORING REQUIREMENTS

7. VE Compliance Tests: The WWTP flare system exhaust shall be tested to demonstrate initial compliance with the VE standard given in **Condition 6** above no later than 180 days after initial operation and during each federal fiscal year (October 1st to September 30th) thereafter. EPA Method 22 VE compliance test(s) shall be used to determine the compliance of the flare with the visible emission requirements. The observation period is 2 hours and shall be used according to Method 22. The flare performance test shall be performed when ethanol is being loaded into trucks that previously held gasoline. [Rule 62-4.070(3), F.A.C.]

8. Test Requirements: The permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]

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

Method	Description of Method and Comments
EPA 22	Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares 2 Hour Duration

10. Work Practice: Good combustion practices will be utilized at all times to ensure emissions from the flare system are minimized. Therefore, all operators and supervisors shall be properly trained to operate and ensure maintenance of this system in accordance with the guidelines and procedures established by the manufacturer. The training shall include good operating practices as well as methods for minimizing excess emissions. The flare pilot shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [Rules 62-4.070(3) F.A.C.]

RECORDS AND REPORTS

11. Records: The permittee shall record in a written log the duration of each flare event and the reason for flaring. If requested by the Compliance Authority, the permittee shall provide a copy of these records or a summary of these records. [Rule 62-4.070(3), F.A.C.]

12. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

This section of the permit addresses the following emissions units.

EU ID No. 008 and 009	Emission Unit Description
	<p><i>Description:</i> Each boiler will be a biomass-fueled bubbling fluidized bed (BFB) boiler wherein biomass (solid and gaseous) is combusted either above or within a bed of hot sand. The heat from the exhaust will be recovered to generate superheated steam to be used in the ethanol production process.</p> <p><i>Fuels:</i> Stillage cake left over from ethanol production and the biogas produced in the anaerobic reactors of the WWTP will be used as fuel in the BFB boilers. In addition, the boilers will be capable of combusting NG for startup and flame stabilization. If pipeline NG is not available when the HEF becomes operational, ULSD FO or propane will be used as a temporary replacement fuel for the natural gas.</p> <p><i>Capacity:</i> The maximum heat input capacity to each boiler is 218 mmBtu per hour (4-hour average) with a design heat input capacity of 198 mmBtu/hr. The steam production capability will be between approximately 100,000 to 125,000 lb/hr. The maximum heat input capacity using fossil fuels to each BFB biomass boiler must be physically constrain to be less than 250 mmBtu/hr so each boiler is not be subject to 40 CFR 60 NSPS, Subpart Da.</p> <p><i>Controls:</i> Efficient combustion of woody biomass in the BFB boilers to minimize formation of PM, NO_x, CO and VOC; use of biomass and clean fossil fuels to minimize HAP formation; use of inherently clean fossil fuels for startup, shutdown and flame (bed) stabilization; Selective Non-Catalytic Reduction (SNCR) with urea injection to destroy NO_x; limestone injection into the BFB boilers to control SO₂ and hydrogen chloride (HCl); and fabric filter baghouses to further control PM and VE, i.e., opacity.</p> <p><i>Stack Parameters:</i> Flue gas from each boiler will discharge to the atmosphere via separate stacks with design heights of 180 feet and diameters of 6 feet. The flue gas exit temperature will be approximately 305 degrees °F with a design volumetric flow rate of 78,905 ACFM.</p> <p><i>Continuous emissions and opacity monitoring systems (CEMS, COMS):</i> Emissions of CO, NO_x, SO₂, and HCl will be monitored and recorded by CEMS. VE (opacity) will be monitored and recorded by COMS on each stack.</p> <p><i>Applicability of 40 CFR Subpart Db (NSPS Subpart Db):</i> These units are subject to NSPS Subpart Db - Industrial-Commercial-Institutional Steam Generating Units because each has a maximum heat input capacity greater than 100 mmBtu/hr from combusted fuels and is not subject to NSPS Subpart Da because it has a maximum heat input capacity less than 250 mmBtu/hr from combusted fossil fuels.</p> <p>[Application No. 0550061-001-AC]</p>

{Permitting Note: In accordance with Rule 62-212.400, F.A.C., the Department established permit standards for the biomass-fueled boilers that represent the Best Available Control Technology (BACT) for emissions of NO_x, PM, VOC, SO₂, and CO. The biomass-fueled boilers are subject to the federal New Source Performance Standards (NSPS) in Subpart Db (industrial boilers) of 40 CFR 60, which is adopted by reference in Rule 62-204.800, F.A.C. NSPS Subpart Db for Industrial Boilers is provided in Appendix Db of this permit.}

EQUIPMENT

1. Construction of BFB Biomass-Fueled Boilers: The permittee is authorized to construct two BFB biomass-fueled boilers each with a design heat input rate of 198 mmBtu/hr for steam generation at the HEF. The BFB boilers will include a fluidizing air supply, fossil fuel startup and stabilization burners, overfire air ports, steam drum, superheater, economizer, air heater, ash hoppers, ducts, fuel feeding equipment, air pollution control equipment and other associated equipment.
[Application No. 0550061-001-AC]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

2. ULSD FO Storage Tank: The permittee is authorized to construct an ULSD FO fixed roof storage tank with a capacity equal to or less than 110,000 gallons. The tank vent will be equipped with an end-line-vacuum breather pressure/vacuum vent valve. The tank will be contained in a concrete dike for spill containment. [Application No. 0550061-001-AC]

{Permitting Note: The ULSD FO storage tank at HEF is not subject to NSPS Subpart Kb because it is larger or equal to 40,000 gallons (151 cubic meters) and stores a liquid (ULSD FO) with a maximum true vapor pressure less than 3.5 kPa (0.51 pounds per square inch (psi)). Accordingly it is an unregulated emissions unit.}

[40 CFR 60.110b(a) and (c); Rule 62-204.800(7)(b), F.A.C.]

3. 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 BFB biomass boiler.

- a. Baghouse: The permittee shall design, install, operate and maintain a baghouse to remove PM from the flue gas exhaust and achieve the PM standards specified in this subsection. The baghouse shall have a design control efficiency greater than 99%. The baghouse shall be on line and functioning properly whenever the boiler is in operation.
- b. SNCR System: The permittee shall design, install, operate, and maintain a urea-based SNCR system to reduce NO_x emissions in the flue gas exhaust and achieve the NO_x emissions standards specified in this subsection. The SNCR shall be on line and functioning properly whenever the boiler is in operation.
- c. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]

{Permitting Note: to control emission of SO₂ to the limits specified in this permit, limestone will be injected into the BFB biomass-fueled boilers. Good combustion practices (GCP) will be used to control emissions of CO and VOC to the limits specified in this permit.}

[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

PERFORMANCE REQUIREMENTS

4. Authorized Fuels: The biomass boilers are authorized to combust as their primary fuels: stillage cake from ethanol production; the biogas produced in the anaerobic reactors of the facility's WWTP; and, supplemental biomass as defined in Appendix BMP. In addition, the boilers are authorized to combust NG for startup and flame stabilization. If pipeline NG is not available when that facility is constructed, the boilers are authorized to combust ULSD FO or propane as a replacement fuel for NG. HEF has estimated the fuel mix to be used in the biomass boilers. This estimate fuel mix is provided below.
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

Stillage Cake	Biogas	Supplemental Biomass	Natural Gas	ULSD Fuel Oil*	Propane*
75%	18%	6%	1%	---	---

* ULSD fuel oil or propane will only be used if natural gas is not available. If used, the percentage amounts would equal natural gas.

5. Boiler Heat Input Rate: The maximum heat input rate from all fuel combinations for each biomass boiler is 218 mmBtu/hr (4 hour average).
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]
6. Hours of Operation: The hours of operation for each biomass boiler are not restricted (8,760 hours/year).
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

7. Good Combustion Practices (GCP): The emission standards established by this permit rely on “good combustion practices” to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the steam generating unit and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good combustion practices as well as methods of minimizing excess emissions.
[Rule 62-4.070(3), F.A.C. and 62-212.400(5), F.A.C.]

EMISSIONS STANDARDS

8. Emission Limits: Emissions from each biomass BFB boiler at HEF shall not exceed the following standards. All except hydrogen chloride (HCl) and ammonia (NH₃) are determinations of BACT.

Pollutant	Initial (I) or Annual (A) Test		CEMS/COMS Based Averages	
NO _x ^a	14.9 lb/hr	(I)	14.9 lb/hr	0.075 lb/mmBtu
	0.075 lb/mmBtu		30 day rolling average	30 day rolling average
SO ₂ ^b	N/A	N/A	11.9 lb/hr, 30 day rolling average	0.06 lb/mmBtu 30 day rolling average
CO	19.8 lb/hr	(I)	19.8 lb/hr	0.10 lb/mmBtu
	0.10 lb/mmBtu		30 day rolling average	30 day rolling average
HCl ^c	1.05 lb/hr	(I)	1.05 lb/hr	0.0054 lb/mmBtu
	0.0054 lb/mmBtu		30 day rolling average	30 day rolling average
PM/PM ₁₀ ^{d, e}	2.0 lb/hr	(I,A)	10 percent (%) opacity (6-minute blocks) 20% opacity (one 6-minute block per hour)	
	0.01 lb/mmBtu			
VOC	1.0 lb/hr	(I,A)	Not applicable	
	0.005 lb/mmBtu			
NH ₃ Slip ^f	10 ppmvd @ 7% O ₂	(I,A)	Not applicable	
	1.45 lb/hr			

- a. CEMS based NO_x limit in pounds per million Btu heat input (lb/mmBtu) will ensure compliance with NSPS Subpart Db NO_x limit of 0.30 lb NO_x/mmBtu.
- b. CEMS based SO₂ limit in lb/mmBtu will ensure compliance with NSPS Subpart Db SO₂ limit of 0.20 lb SO₂/mmBtu.
- c. CEMS based mass HCl emission limit insures annual emissions will be less than 10 TPY.
- d. Compliance with the PM/PM₁₀ mass emission limit insures compliance with the NSPS Subpart Db limit of 0.030 lb PM/mmBtu (filterable PM).
- e. During startups, shutdowns and malfunction the following limits apply: 20% opacity (6-minute blocks) except for one 6-minute block per hour of 27%.
- f. NH₃ slip in parts per million by dry volume at 7% oxygen (ppmvd @ 7% O₂).

[Application No. 0550061-001-AC; Rule 62-212.400(10) (PSD), Control Technology Review; and 40 CFR 60, Subpart Db]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

9. Continuous Monitoring Requirements: The permittee shall install, calibrate, maintain and operate CEMS, a COMS and a diluent monitor to measure and record the emissions of SO₂, NO_x, CO, HCl and opacity from each BFB biomass boiler stack in a manner sufficient to demonstrate continuous compliance with the CEMS-based and COMS-based emission standards in **Conditions 8** above. Each CEMS and COMS shall be installed, calibrated and properly functioning within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup and prior to the initial performance tests. Within one working day of discovering emissions in excess of a SO₂, NO_x, CO or HCl standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.
- a. SO₂ CEMS: The SO₂ CEMS shall be certified, operated, and maintained in accordance with the requirements of 40 CFR 75. Record keeping and reporting shall be conducted pursuant to Subparts F and G in 40 CFR 75.
 - b. NO_x CEMS: The NO_x CEMS shall be certified, operated, and maintained in accordance with the requirements of 40 CFR Part 75. Recordkeeping and reporting shall be conducted pursuant to Subpart Db in 40 CFR 60 and Subparts F and G in 40 CFR 75.
 - c. CO CEMS: The CO CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the CO monitor shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards.
 - d. HCl CEMS: The HCl CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 15. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority. The RATA tests required for the HCl monitor shall be performed using EPA Method 26 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The HCl monitor span values shall be set appropriately, considering the allowable methods of operation and corresponding emission standards. The HCl CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 15. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F, and the Data Assessment Report of Section 7 shall be made each calendar quarter, and reported semiannually to the Compliance Authority.
 - e. COMS: In accordance with 40 CFR 60.48b(a) the permittee shall install, calibrate, operate and maintain a continuous opacity monitor (COM) to continuously monitor and record opacity from the steam generating unit. The COMS shall be certified pursuant to 40 CFR 60 Appendix B, Performance Specification 1.
 - f. Diluent Monitor: The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NO_x are monitored. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.
- [Rule 62-212.400(10), F.A.C.; Rule 62-210.200(PTE), F.A.C.; Rule 62-4.070(3), F.A.C.; and 40 CFR 60, Subpart Db and Appendices]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

STARTUP, SHUTDOWN, AND MALFUNCTION REQUIREMENTS

10. Malfunction Notifications: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Compliance Authority in accordance with the following. If the permittee is temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately (within one working day) notify the Compliance Authority. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. If requested by the Compliance Authority, the owner or operator shall submit a quarterly written report describing the malfunction. [Rules 62-210.700(6) and 62-4.130, F.A.C.]
11. Emission Limit Compliance and Excess Emission: Because of the long-term nature of all of the NO_x, SO₂, CO and HCl mass emission rate limits and as part of PSD and the associated BACT determination, all emissions data for these pollutants, including periods of startup, shutdown and malfunction, shall be included in any compliance determinations based on CEMS data.
[Rule 62-210.700(4), 62-210.200(PTE); Rule 62-212.400(10) (PSD), Control Technology Review; and Rule 62-4.070(3), F.A.C.]
12. Excess Emissions Allowed – Opacity Requirements: As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions supersede the provisions in Rule 62-210.700(1), F.A.C.
 - a. Opacity: During startup, shutdown and malfunctions, the stack opacity shall not exceed 20% based on a 6-minute block average, except for one 6-minute block per hour that shall not exceed 27% opacity.
[Rule 62-210.700(5), 62-210.200(PTE); Rule 62-212.400(10) (PSD), Control Technology Review; and Rule 62-4.070(3), F.A.C.]

TESTING REQUIREMENTS

13. Boiler Performance Test: Within 180 days of first fire on the primary fuels (stillage and biogas with NG for flame stabilization); the permittee shall conduct a test to determine the boiler thermal efficiency. The test shall be conducted in general abbreviated accord with ASME PTC 4, 1998 (See Appendix ASME of this permit). The abbreviated test procedure shall be agreed upon by all parties. The test shall be conducted when firing only the primary fuels with as close of fuel mix and heating values to the boiler design fuel mix and heating value as practical and shall be at least three hours long. The boiler steam conditions and production rate shall be monitored and recorded during the test. The primary fuels firing rates (tons per hour and cubic feet per minute as appropriate) shall be calculated and recorded based on the steam parameters. A sample of the as-fired stillage shall be analyzed for the heating value (Btu/lb) and moisture content (%). A sample of the as-fired biogas shall be analyzed for the heating value (Btu/ft³). The actual heat input rate (mmBtu/hour) shall be determined using two methods: (a) steam parameters with enthalpies and the measured thermal efficiency, and (b) steam parameters with enthalpies and the design boiler thermal efficiency. Results of the test shall be submitted to the Compliance Authority within 45 days of completion. The boiler thermal efficiency test shall be repeated during the 12-month period prior to renewal of any operation permit. If the tested boiler thermal efficiency is less than 90% of the design boiler thermal efficiency, then the tested thermal efficiency shall be used in any future calculations of the heat input rate until a new test is conducted. [Applicant's Request and Rule 62-4.070(3), F.A.C.]
*{Permitting Note: If NG is not available either propane or ULSD FO may be used for flame stabilization during boiler performance testing. However, once NG becomes available at HEF, the boiler performance test specified in **Condition 13** above must be redone within 30 days with the results submitted to the Compliance Authority no later than 45 days after testing with natural gas was completed.}*

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

14. Initial and Annual Stack Tests: In accordance with test methods specified in this permit, the biomass boilers shall be tested to demonstrate initial compliance with the emission standards for ammonia slip, CO, NO_x, PM, SO₂, VOC, opacity and HCl. The tests shall be conducted within 60 days after achieving the maximum heat input rate to each boiler, but not later than 180 days after the initial startup of each boiler. Subsequent compliance stack tests for ammonia slip, PM and VOC shall also be conducted during each federal fiscal year (October 1st to September 30th). Tests shall be conducted between 90% and 100% of the maximum heat input rate when firing only the primary fuels. CEMS data for CO, NO_x, SO₂ and HCl along with COMS data for opacity shall be reported for each run of the required stack tests for ammonia slip, PM and VOC. The Department may require the permittee to repeat some or all of these initial stack tests after major replacement or major repair of any air pollution control or process equipment.
[Rules 62-212.400(5)(c) and 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

{Permitting Note: All initial tests must be conducted between 90% and 100% of permitted capacity; otherwise, this permit will be modified to reflect the true maximum capacity as constructed.}

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

EPA Method	Description of Method and Comments
CTM-027 320	Measurement of Ammonia Slip <i>or</i> Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Notes: Methods shall be performed as necessary to support other methods.}</i>
5	PM
6C	Measurement of SO ₂ Emissions (Instrumental)
7E	Measurement of NO _x Emissions (Instrumental)
9	Visual Determination of the Opacity
10B	Measurement of CO Emissions (Instrumental) <i>{Note: The method shall be based on a continuous sampling train.}</i>
18	Measurement of Gaseous Organic Compound Emissions (Gas Chromatography) <i>{Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the total hydrocarbons (THC) emissions measured by Method 25A.}</i>
19	Calculation Method for NO _x , PM, and SO ₂ Emission Rates
25	Determination of Total Gaseous Nonmethane Organic Emissions as Carbon
25A	Measurement of Gaseous Organic Concentrations (Flame Ionization)
26	Determination of Hydrogen Chloride (HCl) Emissions from Stationary Sources

Method CTM-027 is published on EPA's Technology Transfer Network Web Site at <http://www.epa.gov/ttn/emc/ctm.html>. The other methods are specified in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Compliance Authority.
[Rules 62-204.800, F.A.C. and 40 CFR 60, Appendix A]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

H. Biomass-Fueled Steam Production (EU-008 and 009)

OTHER MONITORING REQUIREMENTS

15. Steam Parameters: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate and maintain continuous monitoring and recording devices for the following parameters: steam temperature (°F), steam pressure (psig) and steam production rate (lb/hour). Records shall be maintained on site and made available upon request.
[Applicant's Request; Rules 62-4.070(3) and 62-212.400(5), F.A.C.]
16. Fuel Flow Meter: A fuel flow meter shall be installed on each BFB biomass boiler to record the amount of fossil fuel (NG, ULSD FO or propane) used in each boiler on a hourly, monthly and 12 month rolling average basis. [Rule 62-4.070(3), Reasonable Assurance]
17. Pressure Drop: The permittee shall maintain and calibrate a device which continuously measures and records the pressure drop across each baghouse compartment controlling the PM emissions from each biomass boiler. Pressure drop records shall be maintained on site and made available upon request.
[Rule 62-4.070(3), F.A.C. and 40 CFR 63.548(c)(1)]
18. Bag Leak Detection: The permittee shall maintain continuous operation of bag leak detection systems on each biomass boiler baghouse. Baghouse leak detection records shall be kept on site and made available upon request. [Rule 62-4.070(3), F.A.C. and 40 CFR 63.548]
19. SNCR Urea Injection: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a flow meter to measure and record the urea injection rate for the SNCR system for each biomass boiler. The permittee shall document the general range of urea flow rates required to meet the NO_x standard over the range of load conditions by comparing NO_x emissions with urea flow rates. During NO_x CEMS downtimes or malfunctions, the permittee shall operate at a urea flow rate that is consistent with the documented flow rate for the given load condition. Urea injection records shall be maintained on site and made available upon request. [Rules 62-4.070(3) and 62-212.400(5), F.A.C.]

RECORDS AND REPORTS

20. Stack Test Reports: In addition to the information required in Rule 62-297.310(8), F.A.C., each stack test report shall also include the following information: steam production rate (lb/hour), heat input rate (mmBtu/hour), calculated authorized fuels firing rate (tons/hour and cubic feet per minute as appropriate), and emission rates (lb/mmBtu, ppmvd @ 7% oxygen and lb/hr as appropriate). [Rule 62-4.070(3), F.A.C.]
21. Monthly Operations Summary: By the tenth calendar day of each month, the permittee shall record the following parameters for each biomass boiler in a written or electronic log for the previous month of operation: hours of operation, tons of stillage, tons of supplemental biomass and cubic feet of biogas, pounds of steam, total heat input rate and the updated 12-month rolling totals for each of these operating parameters. Cubic feet of NG, cubic feet of propane, or gallons of ULSD FO used shall be recorded in a written or electronic log for the previous month of operation along with the updated 12-month rolling totals for each of these fossil fuels. In addition, the hourly heat input rate to each biomass boiler shall be recorded and reported. The Monthly Operations Summary shall be maintained on site and made available for inspection when requested by the Department. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
22. Quarterly CO, NO_x, SO₂, HCl and Opacity Emissions Report: Within 30 days following the end of each quarter, the permittee shall submit a report to the Compliance Authority summarizing CO, NO_x, SO₂, HCl emissions and opacity including periods of startups, shutdowns, malfunctions, and CEMS and COMS systems monitor availability for the previous quarter. If COMS data is excluded from a compliance determination during the quarter due to a startup, shutdown or malfunction, the permittee shall include a description of the malfunction, the actual emissions recorded, and the actions taken to correct the malfunction. See Appendix CTR of this permit for the reporting format.
[Rules 62-4.070(3), 62-4.130 and 62-210.400(5)(c), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

I. Backup Fossil-Fueled Steam Production (EU-010)

This section of the permit addresses the following emissions unit.

EU ID No. 010	Emission Unit Description
	<p><i>Description:</i> Backup boiler to be used to generate superheated steam to be used in the ethanol production process when one of the BFB biomass boilers is not available. Use of the backup boiler is limited to 6,000 hours in any consecutive twelve month period.</p> <p><i>Fuels:</i> The backup boiler is primarily fueled by NG and supplemented with biogas. Propane or ULSD FO will be the primary fuel if NG is not available.</p> <p><i>Capacity:</i> The maximum heat input capacity to the backup boiler is 218 mmBtu per hour (4-hour average) with a design heat input capacity of 198 mmBtu/hr. The steam production capability will be between approximately 100,000 to 125,000 pounds per hour (lb/hr). The maximum heat input capacity using fossil fuels to the backup boiler must be physically constrain to be less than 250 mmBtu/hr so the backup boiler is not be subject to 40 CFR 60 NSPS, Subpart Da.</p> <p><i>Controls:</i> Efficient combustion of clean fuels to minimize the emissions of PM, NO_x, CO, VOC and HAP. Efficient combustion and clean fuels to minimize VE. Low NO_x burners and flue gas recirculation (FGR) to further minimize NO_x emissions.</p> <p><i>Stack Parameters:</i> Flue gas from the backup boiler will discharge to the atmosphere via a stack with a design height of 150 feet and a design diameter of 5.56 feet. The flue gas exit temperature will be approximately 350 degrees °F with a design volumetric flow rate of 61,671ACFM.</p> <p><i>CEMS:</i> Emissions of NO_x will be monitored and recorded by CEMS from the backup boiler stack.</p> <p><i>Applicability of 40 CFR Subpart Db (NSPS Subpart Db):</i> This unit is subject to NSPS Subpart Db - Industrial-Commercial-Institutional Steam Generating Units because it has a maximum heat input capacity greater than 100 mmBtu/hr from the fuels combusted and is not subject to NSPS Subpart Da because it has a maximum heat input capacity less than 250 mmBtu/hr from combusted fossil fuels.</p> <p>[Application No. 0550061-001-AC]</p>

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

I. Backup Fossil-Fueled Steam Production (EU-010)

EQUIPMENT

1. Construction of Natural Gas Fueled Boiler: The permittee is authorized to construct one backup boiler with a design heat input rate of 198 mmBtu/hr for steam generation at the HEF. The backup boiler will include an air supply, low NO_x burners, overfire air ports, FGR, steam drum, superheater, economizer, air heater, ash hoppers, ducts, fuel feeding equipment, air pollution control equipment and other associated equipment. [Application No. 0550061-001-AC]
2. Air Pollution Control Equipment: To comply with the emission standards of this permit, the permittee shall install the following air pollution control equipment on the backup boiler.
 - a. Low NO_x Burners: The permittee shall design, install, operate and maintain low NO_x burners on the backup boiler to control NO_x from the flue gas exhaust and achieve the NO_x standards specified in this subsection.
 - b. Flue Gas Recirculation (FGR): The permittee shall design, install, operate, and maintain a FGR system on the backup boiler to reduce NO_x emissions in the flue gas exhaust and achieve the NO_x emissions standards specified in this subsection.
{Permitting Note: to control emission of SO₂ to the limits specified in this subsection low sulfur fuels will be used in the backup boiler. Clean fuels and GCP will be used to control emissions of PM, NO_x, CO, VOC and HAP to the limits specified in this subsection. Clean fuels and GCP will also minimize VE.} [Application No. 0550061-001-AC; Rule 62-212.400(10) (PSD), Control Technology Review; Rule 62-4.070(3), and Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE RESTRICTION

3. Authorized Fuels: The backup boiler is authorized to combust fossil fuels. Specifically, NG is authorized as its primary fuel. If NG is not available when the HEF becomes operational, propane or ULSD FO may be used as the primary fuel. Biogas produced in the anaerobic reactors of the facility's WWTP may be used to supplement the fossil fuels. HEF has estimated the fuel mix to be used in the backup boiler. This estimate fuel mix is provided in the table below.
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

Stillage Cake	Biogas	Biomass	NG	ULSD FO*	Propane*
0%	18%	0%	82%	---	---

* ULSD FO or propane will only be used if natural gas is not available. If used, the percentage amounts would equal NG.

4. Boiler Heat Input Rate: The maximum heat input rate from all fuel combinations for the backup boiler is 218 mmBtu/hr (4 hour average).
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]
5. Operational Hours: The hours of operation of the backup boiler are restricted to 6,000 hours in any consecutive twelve month period. In addition, the 6,000 operation hour limit will be reduced by two hours for every hour (2 for 1) that the backup boiler is fired by ULSD FO.
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]
6. Backup Boiler Operation: The backup boiler shall only be in operation when one of the biomass boilers is not available due to malfunction, required maintenance or shortage of biomass fuel. Under no circumstance can the backup boiler be in operation for more than 6,000 hours in any consecutive twelve month period.
[Application No. 0550061-001-AC; Rules 62-4.070(3) and 62-210.200(PTE), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

I. Backup Fossil-Fueled Steam Production (EU-010)

EMISSIONS STANDARDS

7. **Emission Limits:** Emissions from the backup boiler at HEF shall not exceed the standards given in the table below. All emission limits are determinations of BACT. Unless otherwise stated, averaging time is the time of the test method.

Pollutant	Initial (I) or Annual (A) Test		CEMS/COMS Based Averages	
NO _x ^a	14.3 lb/hr	(I)	14.3 lb/hr 30 day rolling average	0.072 lb/mmBtu 30-day rolling average
	0.072 lb/mmBtu			
SO ₂ ^b	1.1 lb/hr	(I,A)	Not applicable	
	0.0056 lb/mmBtu			
CO	7.3 lb/hr	(I,A)	Not applicable	
	0.037 lb/mmBtu			
PM/PM ₁₀ ^c	1.4 lb/hr	(I,A)	Not applicable	
	0.0071 lb/mmBtu			
VOC	0.3 lb/hr	(I,A)	Not applicable	
	0.0015 lb/mmBtu			
Opacity ^{d,e}	10% opacity (6-minute blocks) 20% opacity (one 6-minute block per hour)	(I,A)	Not applicable	

- a. CEMS based NO_x limit in pounds per million Btu heat input (lb/mmBtu) will ensure compliance with 40 CFR 60, NSPS Subpart Db NO_x limit of 0.30 lb NO_x/mmBtu.
- b. Use of low sulfur fossil fuels such as ULSD FO, NG or propane in the backup boiler insures that uncontrolled SO₂ emissions are less than 0.32 lb SO₂/mmBtu. Therefore, no specific limit from 40 CFR 60, NSPS Subpart Db applies to the backup boiler.
- c. Compliance with the PM/PM₁₀ mass emission limit insures compliance with the 40 CFR 60, Subpart Db limit of 0.030 lb PM/mmBtu (filterable PM).
- d. During startups, shutdowns and malfunction the following limits apply: 20% opacity (6-minute blocks) except for one 6-minute block per hour of 27%.
- e. Opacity limits during normal operation of the backup boiler.

[Application No. 0550061-001-AC; Rule 62-212.400(10) (PSD), Control Technology Review; and 40 CFR 60, Subpart Db]

MONITORING REQUIREMENTS

8. **Continuous Monitoring Requirements:** The permittee shall install, calibrate, maintain and operate a CEMS and a diluent monitor to measure and record the emissions of NO_x from the backup boiler stack in a manner sufficient to demonstrate continuous compliance with the CEMS-based emission standard in **Condition 7** and the table below. The CEMS shall be installed, calibrated and properly functioning within 60 calendar days of achieving permitted capacity as defined in Rule 62-297.310(2), F.A.C., but no later than 180 calendar days after initial startup and prior to the initial performance tests. Within one working day of discovering emissions in excess of the NO_x standard (and subject to the specified averaging period), the permittee shall notify the Compliance Authority.

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

I. Backup Fossil-Fueled Steam Production (EU-010)

- a. NO_x CEMS: The NO_x CEMS shall be certified, operated, and maintained in accordance with the requirements of 40 CFR Part 75. Recordkeeping and reporting shall be conducted pursuant to Subpart Db in 40 CFR 60 and Subparts F and G in 40 CFR 75.
- b. Diluent Monitor: The oxygen (O₂) or carbon dioxide (CO₂) content of the flue gas shall be monitored at the location where CO and NO_x are monitored. Each monitor shall comply with the performance and quality assurance requirements of 40 CFR 75.

[Rule 62-212.400(10), F.A.C.; Rule 62-210.200 (PTE), F.A.C.; Rule 62-4.070(3), F.A.C.; and 40 CFR 60, Subpart Db and Appendices]

STARTUP, SHUTDOWN, AND MALFUNCTION REQUIREMENTS

9. Emission Limit Compliance and Excess Emission: Because of the long-term nature of the NO_x mass emission rate limit and as part of PSD and the associated BACT determination, all emissions data for NO_x, including periods of startup, shutdown and malfunction, shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4); Rule 62-210.200 (PTE); Rule 62-212.400(10) (PSD), Control Technology Review; and Rule 62-4.070(3), F.A.C.]

TESTING REQUIREMENTS

10. Boiler Performance Test: Within 180 days of first fire on the primary fuels (biogas and NG); the permittee shall conduct a test to determine the boiler thermal efficiency. The test shall be conducted in general abbreviated accord with ASME PTC 4, 1998 (See Appendix ASME of this permit). The abbreviated test procedure shall be agreed upon by all parties. The test shall be conducted when firing only the primary fuels with as close of fuel mix and heating values to the boiler design fuel mix and heating value as practical and shall be at least three hours long. The boiler steam conditions and production rate shall be monitored and recorded during the test. The primary fuels firing rates (tons per hour and cubic feet per minute as appropriate) shall be calculated and recorded based on the steam parameters. A sample of the as-fired biogas shall be analyzed for the heating value (Btu/ft³). The actual heat input rate (mmBtu/hour) shall be determined using two methods: (a) steam parameters with enthalpies and the measured thermal efficiency, and (b) steam parameters with enthalpies and the design boiler thermal efficiency. Results of the test shall be submitted to the Compliance Authority within 45 days of completion. The boiler thermal efficiency test shall be repeated during the 12-month period prior to renewal of any operation permit. If the tested boiler thermal efficiency is less than 90% of the design boiler thermal efficiency, then the tested thermal efficiency shall be used in any future calculations of the heat input rate until a new test is conducted. [Applicant's Request and Rule 62-4.070(3), F.A.C.]

*{Permitting Note: If NG is not available either propane or ULSD FO may be used as the primary fuel during boiler performance testing. However, once NG becomes available at HEF, the boiler performance test specified in **Condition 10** above must be redone within 30 days with the results submitted to the Compliance Authority no later than 45 days after testing with natural gas was completed.}*

11. Initial and Annual Stack Tests: In accordance with test methods specified in this permit, the backup boiler shall be tested to demonstrate initial compliance with the emission standards for CO, NO_x, PM, SO₂, VOC and opacity. The tests shall be conducted within 60 days after achieving the maximum heat input rate to the boiler, but not later than 180 days after the initial startup of the boiler. Subsequent compliance stack tests for CO, PM, SO₂, VOC and opacity shall also be conducted during each federal fiscal year (October 1st to September 30th). Tests shall be conducted between 90% and 100% of the maximum heat input rate when firing only the primary fuels. CEMS data for NO_x shall be reported for each run of the required tests for CO, PM, SO₂, VOC and opacity. The Department may require the permittee to repeat some or all of these initial stack tests after major replacement or major repair of any air pollution control or process equipment. [Rules 62-212.400(5)(c) and 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

I. Backup Fossil-Fueled Steam Production (EU-010)

{Permitting Note: All initial tests must be conducted between 90% and 100% of permitted capacity; otherwise, this permit will be modified to reflect the true maximum capacity as constructed. Annual stack tests of emissions from the backup boiler will not be required in any federal fiscal year (October 1st to September 30th) in which the backup boiler is in operation for less than 500 hours }

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

EPA Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Notes: Methods shall be performed as necessary to support other methods.}</i>
5	PM
6C	Measurement of SO ₂ Emissions (Instrumental)
7E	Measurement of NO _x Emissions (Instrumental)
9	Visual Determination of the Opacity
10B	Measurement of CO Emissions (Instrumental) <i>{Note: The method shall be based on a continuous sampling train.}</i>
18	Measurement of Gaseous Organic Compound Emissions (Gas Chromatography) <i>{Note: EPA Method 18 may be used (optional) concurrently with EPA Method 25A to deduct emissions of methane and ethane from the THC emissions measured by Method 25A.}</i>
19	Calculation Method for NO _x , PM, and SO ₂ Emission Rates
25	Determination of Total Gaseous Nonmethane Organic Emissions as Carbon
25A	Measurement of Gaseous Organic Concentrations (Flame Ionization)

The test methods are specified in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Compliance Authority. [Rules 62-204.800, F.A.C. and 40 CFR 60, Appendix A]

OTHER MONITORING REQUIREMENTS

13. Steam Parameters: In accordance with the manufacturer's recommendations, the permittee shall install, calibrate, operate and maintain continuous monitoring and recording devices for the following parameters: steam temperature (°F), steam pressure (psig) and steam production rate (lb/hour). Records shall be maintained on site and made available upon request.
[Applicant's Request; Rules 62-4.070(3) and 62-212.400(5), F.A.C.]
14. Fuel Flow Meter: A fuel flow meter shall be installed on the backup boiler to recorded the amount of fossil fuels (NG, ULSD FO or propane) used in the boiler on a hourly, monthly and 12 month rolling average basis. [Rule 62-4.070(3), Reasonable Assurance]

RECORDS AND REPORTS

15. Stack Test Reports: In addition to the information required in Rule 62-297.310(8), F.A.C., each stack test report shall also include the following information: steam production rate (lb/hour), heat input rate (mmBtu/hour), calculated authorized fuels firing rate (tons/hour and cubic feet per minute as appropriate), and emission rates (lb/mmBtu and ppmvd @ 7% oxygen and lb/hr). [Rule 62-4.070(3), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

I. Backup Fossil-Fueled Steam Production (EU-010)

16. Monthly Operations Summary: By the tenth calendar day of each month, the permittee shall record the following for each fuel used in the backup boiler in a written or electronic log for the previous month of operation: hours of operation, cubic feet of biogas, cubic feet of natural gas, cubic feet of propane, and gallons of ULSD fuel oil, pounds of steam per month, total heat input rate and the updated 12-month rolling totals for each of these operating parameters. In addition, the hourly heat input rate to the backup boiler shall be recorded and reported. The Monthly Operations Summary shall be maintained on site and made available for inspection when requested by the Department. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
17. Quarterly NO_x Emissions Report: Within 30 days following the end of each quarter, the permittee shall submit a report to the Compliance Authority summarizing NO_x emissions including periods of startups, shutdowns, malfunctions, and CEMS monitor availability for the previous quarter. See Appendix CTR of this permit for the reporting format. [Rules 62-4.070(3), 62-4.130, and 62-210.400(5)(c), F.A.C.]

DRAFT

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

J. Cooling Tower (EU-011)

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
011	<u>Six cell mechanical draft cooling tower</u> : An induced draft evaporative cooling tower will provide the cooling of process water for the project.

The cooling tower will be of rectangular mechanical-draft design with six cells. Each cell will be equipped with its own fan and a high efficiency drift eliminator to minimize water drift losses. The flow rate will be approximately 22,500 GPM. Total dissolved solids in the cooling water are expected to be approximately 2,750 milligrams per liter (mg/l).

EQUIPMENT

1. Cooling Tower: The permittee is authorized to install one new 6-cell mechanical draft cooling tower with the following design characteristics: a circulating water flow rate of 22,500 GPM; design water temperature of 85 °F; a design air flow rate of 75,398 ACFM; and drift eliminators.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.]

PERFORMANCE RESTRICTIONS

2. Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

EMISSIONS STANDARDS

3. Drift Rate: Within 60 days of commencing operation, the permittee shall certify that the cooling tower was constructed to achieve the specified drift rate of no more than 0.0005 percent of the circulating water flow rate. [Rule 62-212.400(BACT), F.A.C.]
4. VOC Emissions: VOC emissions can occur from cooling towers used in chemical plants, where the circulating water is used to cool down hydrocarbon process streams. While the process heat exchangers will be designed to prevent contact of the cooling water with the process streams, leaks in the process heat exchangers can occur. The VOCs that would consequently enter the cooling water would ultimately be stripped out by the cooling tower's air flow. Therefore, the permittee shall control VOC emissions by promptly repairing any leaking components in accordance with the approved LDAR plan. The permittee shall collect a sample of cooling water on a weekly basis and analyze it for VOCs to enable the early detection of leaking heat exchangers and thereby minimizing VOC emissions from the cooling tower.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]

{Permitting Note: These work practice standards are established as BACT for PM₁₀/PM_{2.5} and VOC emissions from the cooling tower. Based on this design criteria, potential emissions are expected to be less than 0.7 tons of PM₁₀ and PM_{2.5} per year and 4.1 tons of VOC per year. Actual emissions are expected be lower than these rates.}

TESTING AND MONITORING REQUIREMENTS

5. VOC Cooling Water Monitoring Plan: A test plan detailing how the cooling tower water shall be monitored for VOC contamination from leaking heat exchangers shall be submitted to the compliance authority for approval no later than 90 days before the HEF becomes operational.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

J. Cooling Tower (EU-011)

6. VOC Water Testing Frequency: Testing of the cooling water shall be conducted weekly unless VOC contamination is found during one of the weekly tests. Then daily testing will be required until the problem is corrected.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]
7. Notification: The permittee shall notify the Compliance Authority in writing within 24 hours when VOC contamination of the cooling tower water is discovered. Additionally, the permittee shall submit a plan to correct the problem within 7 days for the approval of the Compliance Authority.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]

RECORDS AND REPORTS

8. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.
[Rule 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

K. Miscellaneous Storage Silos (EU-012)

This section of the permit addresses the following emissions units.

ID No.	Emission Unit Description
012	<u>Miscellaneous storage silos</u> : Silos to store dry chemicals and agents required for ethanol production at HEF, including urea for the SNCR systems on the biomass boilers.

The HEF will include equipment and silos for the handling and storage of dry materials. These materials include nutrients for the propagation of the proprietary enzyme and bacteria, lime for the neutralization of hydrolyzate and cake prior to fermentation, and materials associated with the biomass boilers. Fabric filters baghouses (bin vent filters) will be used to control PM emissions from all the silos. All silos will have stacks with design diameters of 1.5 feet with design flow rates of 2,500 ACFM.

CONSTRUCTION

- Equipment: The permittee is authorized to construct the following.
 - One lime storage silo with a design stack height of 105 feet.
 - One Solka-Floc® (propagation nutrient) storage silo with a design stack height of 47.5 feet.
 - One soy flour (propagation nutrient) storage silo with a design stack height of 47.5 feet.
 - One ammonium sulfate (propagation nutrient) storage silo with a design stack height of 35.6 feet.
 - One potassium phosphate (propagation nutrient) storage silo with a design stack height of 47.5 feet.
 - One urea (propagation nutrient) storage silo with a design stack height of 35.6 feet.
 - One ash (biomass boilers) storage silo with a design stack height of 34 feet.
 - One sand (fluidized bed for biomass boilers) storage silo with a design stack height of 34 feet.
 - One limestone (fluidized bed for biomass boilers) storage silo with a design stack height of 34 feet.
 - One urea (biomass boilers, SNCR) storage silo with a design stack height of 34 feet.[Application No. 0550061-001-AC]

PERFORMANCE RESTRICTION

- Hours of Operation: The hours of operation of this emission unit are not limited (8,760 hours per year). [Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance].

EMISSIONS STANDARDS

- PM Standard: PM emissions from each baghouse of the silos shall not exceed 0.005 gr/dscf. [Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]
- VE Standard: VE from the silo baghouses shall not exceed 5% opacity as demonstrated by initial and annual compliance tests. A visible emission reading of 5% opacity or less may be used to establish compliance with the PM emission standard in Specific **Condition 3** above. A visible emission reading greater than 5% opacity will require the permittee to perform a PM emissions stack test within 60 days to show compliance. [Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

K. Miscellaneous Storage Silos (EU-012)

TESTING AND MONITORING REQUIREMENTS

5. **Initial Compliance Tests:** Each silo shall be tested to demonstrate initial compliance with the VE emissions standard specified in **Condition 4** above. The initial test shall be conducted within 180 days after initial operation.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]
6. **Annual Compliance Tests:** During each federal fiscal year (October 1st to September 30th), each silo shall be tested to demonstrate compliance with the VE emissions standard specified in **Condition 4** above.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]
7. **PM Compliance Test:** The initial and annual VE tests in **Conditions 5 and 6** above shall serve as a surrogate for the PM emissions tests. If the VE emissions standard in **Condition 4** above is not met, PM tests utilizing EPA Method 5 must be conducted within 60 days on the silo bin vent filters to show compliance with the PM emissions standard in **Condition 3** above.
[Application No. 0550061-001-AC; Rule 62-210.200 (PTE), F.A.C.; Rule 62-212.400(BACT), F.A.C.; and Rule 62-4.070, F.A.C. Reasonable Assurance]
8. **Test Requirements:** The permittee shall notify the compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(7)(a)9, F.A.C.]
9. **Test Methods:** Any required stack tests shall be performed in accordance with the following methods.

Method	Description of Method and Comments
EPA 5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 9	Method 9 - Visual Determination of the Opacity of Emissions from Stationary Sources 60 Minute Test

RECORDS AND REPORTS

10. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the operating rate. [Rule 62-297.310(8), F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS (DRAFT PERMIT)

L. Miscellaneous Storage Tanks (EU-013)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
013	Miscellaneous Storage Tanks

These miscellaneous tanks consist of tanks to store: (1) ULSD FO; (2) sulfuric acid; (3) ammonia; (4) phosphoric acid; (5) corn steep; (6) lactose; and, (7) glucose.

CONSTRUCTION

1. ULSD FO Storage Tank: The permittee is authorized to construct an ULSD FO fixed roof storage tank with a capacity equal to or less than 110,000 gallons. The tank vent will be equipped with an end-line-vacuum breather pressure/vacuum vent valve. The tank will be contained in a concrete dike for spill containment.
2. Other Storage Tanks: The permittee is authorized to construct tanks to store sulfuric acid, ammonia, phosphoric acid, corn steep, lactose and glucose.
[Application No. 0550061-001-AC]

NSPS SUBPART Kb APPLICABILITY

3. Non Volatile Organic Liquids (VOL) Storage Tanks: The ULSD FO, sulfuric acid, ammonia, phosphoric acid, corn steep, lactose and glucose storage tanks at HEF do not store VOL. In addition, these storage tanks are larger or equal to 40,000 gallons (151 cubic meters) and store liquids with a maximum true vapor pressure less than 3.5 kPa (0.51 pounds per square inch (psi)). Accordingly, these tanks are unregulated emissions units and are not subject to NSPS 40 CFR 60, Subpart Kb.
[40 CFR 60.110b(a) and (c); Rule 62-204.800(7)(b), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

4. Hours of Operation: The hours of operation of this emissions unit are not restricted (8,760 hours per year).
[Application No. 0550061-001-AC and Rule 62-210.200(PTE), F.A.C.]

NOTIFICATION, REPORTING AND RECORDS

5. Liquid Records: The permittee shall keep readily accessible records showing the maximum true vapor pressure of the liquid stored in a tank not subject to NSPS Subpart Kb. The maximum true vapor pressure shall be less than 3.5 kPa. Compliance with this condition may be demonstrated by using the information from the respective material Safety Data Sheet (MSDS) for the liquid stored in the tank.
[Rule 62-4.070(3), F.A.C.; Avoidance of 40 CFR 60, Subpart Kb]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

M. FOUR EMERGENCY GENERATORS EU-014)

This section of the permit addresses the following emissions units.

ID	Emission Unit Description
014	Four emergency generators each rated at 2,000 kilowatts (kW)

Four emergency generators, each rated at 2,000 kW or 2,682 horsepower (HP), will be installed to provide backup electrical power in the event of a power outage at the facility. The engines will fire ULSD FO or propane and each will be limited to 500 hours per year of operation during emergencies. Each unit will be operated no more than 100 hours per year for testing and maintenance purposes per 40 CFR 60, Subpart IIII. Potential to emit (PTE) emissions are based on an assumed maximum operating time of 500 hr/yr. Each engine will be designed to meet USEPA's emission standards listed in 40 CFR Part 60 Subpart IIII for model year 2009 or later.

EQUIPMENT

1. Emergency Generators: The permittee is authorized to install, operate, and maintain four 2,000 kW emergency generators. [Application No. 0550061-001-AC and Rule 62-210.200 (PTE), F.A.C.]

PERFORMANCE RESTRICTIONS

2. Hours of Operation: Each emergency generator may operate in response to emergency conditions for up to 500 hours per year and 100 non-emergency hours per year for maintenance and testing purposes. [Application No. 0550061-001-AC and Rule 62-210.200 (PTE), F.A.C.]
3. Authorized Fuel: These units shall fire ULSD fuel oil or propane. The ULSD FO shall contain no more than 0.0015% sulfur by weight. [Application No. 0550061-001-AC and Rule 62-210.200 (PTE), F.A.C.]

EMISSION STANDARDS

4. Emissions Limits: Each emergency generator shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII the language of which is given in Appendix IIII. Manufacturer certification can be provided to the Department in lieu of actual stack testing.

Source (model year)	CO (g/KW-hr)	PM (g/KW-hr)	Hydrocarbons (g/KW-hr)	NO _x (g/KW-hr)
Subpart IIII (2006 and later)	3.5	0.20	6.4 (NMHC ^a +NO _x)	

a. NMHC means Non-Methane Hydrocarbons.

[Applicant Request; 40 CFR 60, Subpart IIII and Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

5. Notification, Recordkeeping and Reporting Requirements: The permittee shall adhere to the compliance testing and certification requirements listed in 40 CFR 60.4211 and maintain records demonstrating fuel usage and quality. [Rule 62-212.400 (BACT), F.A.C. and 40 CFR 60.4211]

NSPS APPLICABILITY

6. NSPS Subpart IIII Applicability: These emergency generators are Stationary Compression Ignition Internal Combustion Engines (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII, including emission testing or certification. [40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

M. FOUR EMERGENCY GENERATORS EU-014)

NESHAP APPLICABILITY

7. NESHAPS Subpart ZZZZ Applicability: The emergency generators are a Liquid Fueled Reciprocating Internal Combustion Engines (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the generators must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

DRAFT

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS
N. EMERGENCY DIESEL-FUELED FIRE PUMP ENGINE (EU-015)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
015	One 360 hp emergency diesel fire pump engine

A backup 360 hp diesel fire pump will also be installed to provide firewater during power outages. This unit will fire ULSD FO or propane and will be limited to 500 hours per year of operation. This unit will be operated no more than 100 hours per year for testing and maintenance purposes per 40 CFR 60, Subpart IIII. The engine will be designed to meet USEPA's emission standards listed in 40 CFR Part 60 Subpart IIII for model year 2009 or later. Potential to emit (PTE) emissions are based on an assumed maximum operating time of 500 hr/yr.

EQUIPMENT

1. Diesel Engine Driven Fire Pump: The permittee is authorized to install, operate, and maintain one diesel engine driven fire pump of approximately 360 hp.
[Application No. 0550061-001-AC and Rule 62-210.200(PTE), F.A.C.]

PERFORMANCE RESTRICTIONS

2. Hours of Operation: The fire pump may operate in response to emergency conditions for up to 500 hours per year and 100 non-emergency hours per year for maintenance and testing purposes.
[Application No. 0550061-001-AC and Rule 62-210.200 (PTE), F.A.C.]
3. Authorized Fuel: This unit shall fire ULSD fuel oil or propane. The ULSD fuel oil shall contain no more than 0.0015% sulfur by weight.
[Application No. 0550061-001-AC and Rule 62-210.200 (PTE), F.A.C.]

EMISSION STANDARDS

4. Emissions Limits: The emergency fire pump engine shall comply with the following emission limits and demonstrate compliance in accordance with the procedures given in 40 CFR 60, Subpart IIII. Manufacturer certification may be provided to the Department in lieu of actual testing.
[40 CFR 60.4211 and Rule 62-4.070(3), F.A.C.]

Model Year	CO (g/hp-hr)	NMHC + NO_x (g/hp-hr)	PM (g/hp-hr)
Subpart IIII (2009 or later)	NA	3.0	0.15

[Application No. 0550061-001-AC and 40 CFR 60, Subpart IIII and Rule 62-4.070(3), F.A.C.]

RECORDS AND REPORTS

5. Notification, Recordkeeping and Reporting Requirements: The permittee shall adhere to the compliance testing and certification requirements listed in 40 CFR 60.4211 and maintain records demonstrating fuel usage and quality. [Rule 62-212.400 (BACT), F.A.C. and 40 CFR 60.4211]

NSPS APPLICABILITY

6. NSPS Subpart IIII Applicability: The fire pump engine is an Emergency Stationary Compression Ignition Internal Combustion Engine (Stationary ICE) and shall comply with applicable provisions of 40 CFR 60, Subpart IIII.
[40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS
N. EMERGENCY DIESEL-FUELED FIRE PUMP ENGINE (EU-015)

NESHAP APPLICABILITY

7. NESHAPS Subpart ZZZZ Applicability: The fire pump engine is a Liquid Fueled Reciprocating Internal Combustion Engine (RICE) and shall comply with applicable provisions of 40 CFR 63, Subpart ZZZZ. Pursuant to 40 CFR 63.6590(c) the generators must meet the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.
[40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)]

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SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS

O. FACILITY FUGITIVE VOC EMISSION LEAKS (EU-016)

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
016	<u>Facility Fugitive VOC Emission Leaks</u> : Fugitive VOC emissions from equipment leaks involved in the ethanol production process.

Total fugitive VOC emissions from equipment leaks were calculated to be 19.6 TPY. To minimized VOC fugitive emissions from the HEF, a monthly leak detection and repair (LDAR) program shall be implemented in accordance with New Source Performance Standard (NSPS) 40 CFR Part 60, Subpart VVa.

NSPS SUBPART VVa

1. Leak Detection and Repair (LDAR) Program: The most practical method of controlling fugitive VOC emissions from HEF is to promptly repair any leaking components. HEF is subject to NSPS 40 CFR 60, Subpart VVa - VOC Equipment Leaks in the Synthetic Chemical Manufacturing Industry (SOCMI), for projects that commence construction or modifications after November 7, 2006. NSPS Subpart VVa requires a LDAR program. HEF must come in to compliance with Subpart VVA, including the LDAR program, no later than 180 days after HEF becomes operational.
[40 CFR 60, Subpart VVa and Rule 62-4.070, F.A.C. Reasonable Assurance]
2. Equipment Subject to NSPS, Subpart VVa: As per **Condition 12** of Section II of this permit, all the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves at HEF that are subject to NSPS Subpart VVa must be submitted to the Compliance Authority no later than 90 days before the HEF becomes operational.
[Rule 62-212.400 (BACT), F.A.C. and Rule 62-4.070, F.A.C. Reasonable Assurance]

TESTING AND MONITORING REQUIREMENTS

3. LDAR Program Plan Implementation: As per **Condition 11** of Section II of this permit, the permittee must submit for approval a LDAR program plan no later than 90 days prior to commencing operation. Once the program plan is approved by the Compliance Authority, the permitted shall implement the program within 180 days of initial startup of the HEF.
[40 CFR 60, Subpart VVa ; Application No. 0550061-001-AC; Rule 62-210.200(PTE), F.A.C. and Rule 62-4.070(3), F.A.C. Reasonable Assurance]
4. Compliance with NSPS VVa: The permittee shall demonstrate compliance with the requirements of §§60.482–1a through 60.482–10a or §60.480a(e) for all equipment subject to NSPS Subpart VVa within 180 days of initial startup of the HEF.
[Application No. 0550061-001-AC; Rule 62-210.200(PTE), F.A.C.; Rule 62-4.070(3), F.A.C. Reasonable Assurance and NSPS, Subpart VVa]
5. Test Methods and Procedures: The permittee shall show the HEF is in compliance with the requirements of NSPS Subpart VVa following the test methods and procedures specified in §60.485a.
[Application No. 0550061-001-AC; Rule 62-210.200(PTE), F.A.C.; Rule 62-4.070(3), F.A.C. Reasonable Assurance and NSPS, Subpart VVa]

SUBPART VVa APPLICABILITY

6. Emission Units Subject to Subpart VVa: The following emission units are subject to the requirements of NSPS 40 CFR Part 60, Subpart VVa and must be addressed in the LDAR program plan.
[Application No. 0550061-001-AC; Rule 62-210.200(PTE), F.A.C.; Rule 62-4.070(3), F.A.C. Reasonable Assurance and NSPS, Subpart VVa]

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS
O. FACILITY FUGITIVE VOC EMISSION LEAKS (EU-016)

Facility ID No. 0550061	
EU ID No.	Emission Unit Description
002	Hydrolysis of cellulose, liquid/solids separation, neutralization
003	Hydrolysis of hemicellulose, fermentation, distillation and bacteria/enzyme propagation
004	Solids (stillage and gypsum) separation, dewatering and loadout
005	Denaturing and product storage
006	Product loadout and flare
007	Wastewater treatment plan (WWTP), biogas conditioning and flare
011	Cooling tower

RECORDS AND REPORTS

7. NSPS VVa Recordkeeping Requirements: The permittee shall follow the recordkeeping requirements specified in §§60.486a to show compliance with NSPS Subpart VVa and submit the records to the Compliance Authority 180 days after the initial startup of the HEF and annually thereafter. [Application No. 0550061-001-AC; Rule 62-210.200(PTE), F.A.C.; Rule 62-4.070(3), F.A.C. Reasonable Assurance and NSPS, Subpart VVa]