Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

DRAFT PERMITS

PERMITTEE

Bartow Ethanol of Florida, L.C.
1705 East Mann Road
Bartow, FL 33830

Authorized Representative:
Mr. Jim Muntz, Vice President/General Manager

Air Permit Nos. 1050145-004-AC
1050145-005-AO
Permits Expire: 02/02/2012 (AC)
xx/xx/2016 (AO)
Minor Air Construction and Operation Permits
Project Name: Construction Modification Permit and Renewed Operation Permit

These are the final after-the-fact air construction permit and air operation permit, in one document. The permits authorize the after-the-fact construction modification and continued operation of an existing beverage grade ethanol manufacturing facility (Standard Industrial Classification No. 2085). The facility is located in Polk County at 1705 East Mann Road in Bartow, Florida. The UTM coordinates are Zone 17, 418.72 km East, and 3083.54 km North. As noted in the Final Determination provided with these final permits, no changes were made to the draft permits.

This final document is organized by the following sections:

Section 1. General Information

Section 2. Administrative Requirements and Facility-wide Specific Conditions

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, this document contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this document.

These air pollution permits are 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 these permits. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to 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.

Upon issuance of these final permits, 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 Hillsborough County, Florida

DRAFT

_____ _____

Cindy Zhang-Torres, P.E. Effective Date
Air Permitting Manager
Southwest District

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination, the Final Permits and the 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.

Mr. Jim Muntz, Vice President/General Manager
Bartow Ethanol of Florida, L.C.
muntzjim@hotmail.com

Mr. John Mc Kelvey, P.E.
Case Engineering, Inc.
jmck@caseinc.com

Mr. Richard Murphy, Project Manager
Case Engineering, Inc.
crmwcc@aol.com

Clerk Stamp

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

DRAFT

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Existing Facility

The facility is a natural non-Title V batch beverage grade ethanol manufacturing facility and consists of the following emissions units.

Facility ID No. 1050145	
ID No.	Emission Unit Description
002	Boiler – Fired w/Natural Gas at 59.5 MMBTU/hr. Max.
004	Process and Storage Tanks
006	Fermentation Unit

Project Description and Affected Emissions Units

A fire on April 24, 2009, destroyed parts of the beverage grade ethanol manufacturing facility. The primary modifications to the facility are:

- Added new tanks (Facility Plot Plan attached to application dated August 3, 2011, shows new and existing tanks).
- Change the use of some of the existing tanks.
- Delete the (standby) boiler (Emission Unit No. 002).
- Increase the maximum allowable beverage grade ethanol production rate from 812,200 to 2,010,600 gallons per any consecutive 12-month period.
- Delete the limitation requiring a maximum of 70 fermentation batches.
- Delete the facility-wide allowable VOC emission limitation of 9.0 tons per any consecutive 12-month period.
- Delete the maximum allowable throughput limitations for the bonded, methanol, and fusel oil tanks.

Therefore, this project will delete Emission Unit No. 002 and modify the following emissions units.

Facility ID No. 1050145	
ID No.	Emission Unit Description
004	Process, Storage, and Loadout Tanks
006	Fermenting and Distillation Processes

NOTE: *Please reference the Permit No., Facility ID, and Emission Unit ID in all correspondence, test report submittals, applications, etc.*

Exempt Emission Units/Activities

Each of the following emission units/activities are exempt pursuant to Rule 62-210.300(3)(b)1., F.A.C.:

- Slop Tanks, Tank No. 233, Capacity 30,879 gals.
- Evaporator Feed Tank No. 231, Capacity 28,786 gals.
- Evaporator Feed Tank No. 232, Capacity 28,786 gals.
- Wash Tank No. 234, Capacity 28,786 gals.
- Residum Tank No. RI, Capacity 98,755 gals.
- Residum Tank No. R2, Capacity 98,755 gals.
- Finish Water Tank No. W1, Capacity 39,655 gals.
- Finish Water Tank No. W2, Capacity 28,786 gals.
- Finish Water Tank No. W3, Capacity 28,786 gals.
- Finish Water Tank No. W4, Capacity 28,786 gals.
- Cane Molasses Tank No. C-1, Capacity 9,987 gals.
- Yeast Propagation Tank No. Y-1, Capacity 2,133 gals.
- Yeast Propagation Tank No. Y-2, Capacity 2,133 gals.
- Yeast Propagation Tank No. Y-3, Capacity 2,979 gals.
- Caustic Tank No. C-2, Capacity 1,986 gals.
- Caustic Mix Tank No. C-3, Capacity 3,965 gals.
- Settling Pond
- DAF Lift Sump, Capacity 1,410 gals.
- DAF Sump, Capacity 1,410 gals.
- DAF Treatment Tank, Capacity 7,244 gals.
- DAF Overflow Tank, Capacity 117 gals.
- Wastewater Treat Tank 1, Capacity 44,731 gals.
- Wastewater Treat Tank 2, Capacity 44,731 gals.
- Wastewater Treat Tank 3, Capacity 44,731 gals.
- P_2O_5 Tank, Capacity 2,399 gals.
- NH_3OH Tank, Capacity 10,877 gals.

FACILITY REGULATORY CLASSIFICATION

– The facility is not a major source of hazardous air pollutants (HAP).

– The facility has no units subject to the acid rain provisions of the Clean Air Act (CAA).

– The facility is not a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

– The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

– This facility is a natural minor source of air pollution.

PERMIT HISTORY/AFFECTED PERMITS

Replaces all previous construction and operation permits.

SECTION 2. ADMINISTRATIVE REQUIREMENTS AND FACILITY-WIDE SPECIFIC CONDITIONS (DRAFT)

1. Permitting Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Southwest District's Air Resource Management Section. The Southwest District's mailing address and phone number is:

   Florida Department of Environmental Protection
   Southwest District Office
   Air Resource Management Section
   13051 North Telecom Parkway
   Temple Terrace, Florida 33637-0926
   Telephone: 813-632-7600

   All documents related to applications for permits shall be submitted to the above address.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Southwest District Office's Air Resource Management Section (see above mailing address and phone number).

3. Appendices: The following Appendices are attached as part of this document:

   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions; and
   d. Appendix D. Common Testing Requirements.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this document, 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 these permits does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.
   [Rule 62-4.080, F.A.C.]

6. Modifications: Unless otherwise exempt by rule, the permittee shall not initiate any construction, reconstruction, or modification at the facility and shall not install/modify any pollution control device at the facility without obtaining prior authorization from the Department. Modification is defined as: Any physical change or changes in the method of operations or addition to a facility that would result in an increase in the actual emissions of any air pollutant subject to air regulations, including any not previously emitted, from any emission unit or facility.
   [Rules 62-210.200 - Definition of "Modification" and 62-210.300(1)(a), F.A.C.]

7. Volatile Organic Compounds (VOC)/Organic Solvents (OS) Requirements: No person shall store, pump, handle, process, load, unload, or use in any process or installation any VOC/OS without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. The following procedures shall be utilized to minimize pollutant emissions:

    a. Maintain covers, lids, etc, on all containers of VOC/OS when they are not being handled, tapped, etc.

    b. Prevent excessive air turbulence across exposed VOC/OS.

    c. Where possible and practical, procure, fabricate a tightly fitting cover for any open trough, basin, bath, etc., of VOC/OS so that it can be covered when not in use.

    d. All fittings, valve, lines, etc., shall be properly maintained.

    e. All VOC/OS spills shall be attended to in a timely manner and the waste properly disposed of, recycled, etc.

    [Rule 62-296.320(1), F.A.C.]

8. Federal Regulatory Requirements: The facility shall comply with the following:

    a. This facility is subject to 40 CFR 60, Subpart VVa – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, which is adopted by reference in Rule 62-204.800, F.A.C.

    b. Since the facility qualifies for the exemption of 40 CFR 60.480a(d)(4), the facility is only required to maintain records as required by 40 CFR 60.486a(i). 40 CFR 60.480a(d)(4) states, "Any affected facility that produces beverage alcohol is exempt from 40 CFR 60.482-1a through 60.482-11a."

    c. Pursuant to 40 CFR 60.486a(i), the following information shall be recorded in a log that is kept on a readily accessible location for use in determining exemptions as provided in 40 CFR 60.480a(d):

        1. An analysis demonstrating the design capacity of the affected facility.

        2. A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol.

    [Rule 62-204.800(8), F.A.C.]

9. Operation Permit Renewal Application: A completed application for renewal of the operation permit shall be submitted to the Permitting Authority no later than 60 days prior to the expiration date of this operation permit. To properly apply for an operation permit, the applicant shall submit the following:

   a. the appropriate permit application form *(see current version of Rule 62-210.900, F.A.C. (Forms and Instructions), and/or FDEP Division of Air Resource Management website at: http://www.dep.state.fl.us/air/)*;

   b. the appropriate operation permit application fee from Rule 62-4.050(4)(a), F.A.C.; and

   c. copies of the most recent operational month of records/logs specified in Specific Condition No. A.3.

   [Rules 62-4.030, 62-4.050, 62-4.070(3), 62-4.090, 62-210.300(2), and 62-210.900, F.A.C.]

A. EU No. 004 – Process, Storage, and Loadout Tanks
EU No. 006 – Fermenting and Distillation Processes

This section of the document addresses the following emission units.

ID No.	Emission Unit Description
006	Fermenting and Distillation Processes: Citrus molasses as a raw material and yeast bacteria are fermented to produce a wine, which is then distilled to produce an ethyl alcohol product. These processes also produce fusel oil and methanol as by-products. The emission unit consists of 12 fermentation process tanks (10 tanks each 33,000 galllons, one 101,000 gallon tank, one mash holding tank), a beer well, a beer still, a methanol column, a fusel oil column, and a rectifying column. The fermentation process tanks are loaded with molasses, yeast, and water. This mixture ferments to produce a mixture of water, alcohols, and starch, with an 8-10% alcohol concentration. Alcohols produced during fermentation include methanol, ethanol, and fusel oil. Approximately 168 fermentation batches a year are expected to be produced during the citrus season, where one batch typically uses 3 or 4 fermentation process tanks. The fermentation process produces a maximum of 239 gals./hr. (8,766 tons/yr.) of raw alcohol. This alcohol is then distilled to produce a maximum of 2,010,600 gallons per any consecutive 12-month period of product ethanol. The processes are also expected to produce a maximum of 64,600 gallons of fusel oil and 14,000 gallons of methanol per any consecutive 12-month period. The maximum potential VOC emissions from this emission unit are expected to be 21.93 tons per any consecutive 12-month period, which are primarily fugitive emissions from the fermentation tank vents. In addition to these tanks, the emission unit also has two yeast propagation tanks. The yeast propagation process is aerobic and does not produce alcohols.
004	Process, Storage, and Loadout Tanks: This emission unit addresses the breathing and working losses from the following listed process tanks, storage, and loadout tanks along with fugitive emission from associated pumps, valves, and piping. The tanks do not transfer liquids back to other tanks or back and forth between the tanks, unless during an emergency. High Wine Tank No. 14, Capacity 25,908 gals. High Wine Tank No. 15, Capacity 25,908 gals. High Wine Tank No. 16, Capacity 86,576 gals. Bonded Storage Tank No. 216, Capacity 14,217 gals. Bonded Storage Tank No. 217, Capacity 56,868 gals. Bonded Storage Tank No. 218, Capacity 113,507 gals. Bonded Storage Tank No. 219, Capacity 113,507 gals. Bonded Storage Tank No. 220, Capacity 113,507 gals. Bonded Storage Tank No. 221, Capacity 113,507 gals. Bonded Storage Tank No. 222, Capacity 113,507 gals. Wine Storage Tank No. 224, Capacity 27,538 gals. Fusel Storage Tank No. 225, Capacity 27,538 gals. Fusel Storage Tank No. 226, Capacity 27,538 gals.

A. EU No. 004 – Process, Storage, and Loadout Tanks
EU No. 006 – Fermenting and Distillation Processes

ID No.	Emission Unit Description
	Fusel Storage Tank No. 227, Capacity 4,957 gals. Methanol Storage Tank No. 228, Capacity 4,957 gals. Product (loadout) Storage Tank 1 (Tank No. 229), Capacity 4,957 gals. Product (loadout) Storage Tank 2 (Tank No. 230), Capacity 4,957 gals. A maximum of 2,010,600 gallons per any consecutive 12-month period of product ethanol in Product Storage Tank No. 229 and 230 are loaded into trucks. Displaced vapors from filling the trucks are transferred back to the associated storage tank(s). Based on the maximum amount of product ethanol allowed to be produced, an expected maximum of 64,600 gallons of fusel oil and 14,000 gallons of methanol per any consecutive 12-month period is also transferred to tanker trucks. The maximum potential VOC and methanol emissions from this emission unit are expected to be 19.53 and 0.31 tons per any consecutive 12-month period, respectively.

PERFORMANCE RESTRICTIONS

A.1. Permitted Capacity: The production rate of product ethanol is limited to a maximum of 2,010,600 gallons per any consecutive 12-month period.
[Rule 62-210.200(PTE), F.A.C.]

A.2. Restricted Operation: The hours of operation are not limited (8760 hours per year).
[Rules 62-4.070(3) and 62-210.200(PTE), F.A.C.]

RECORDS AND REPORTS

A.3. Monthly Records: The permittee shall monthly record the following:

a. Facility name, Facility ID No. 1050145, and Emission Unit Nos. 004 & 006.

b. Date (month/year)

c. The amount of product ethanol produced, in gallons.

d. The most recent consecutive 12-month period total amount of product ethanol produced, in gallons.

The monthly records shall be completed by the end of the following month. The records shall be kept at the facility for the most recent three (3) years and made available to the Department upon request.
[Rule 62-4.070(3), F.A.C.]