



October 24, 2014

Ms. Carol Romero
Pacific Ethanol Stockton LLC
3028 Navy Drive
Stockton, CA 95206

Re: Notice of Minor Title V Permit Modification
District Facility # N-7365
Project # N-1143325

Dear Ms. Romero:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued Authority to Construct N-7365-34-0 into the Title V operating permit. This permit is for a pilot anaerobic digester system. The system will be installed to collect data to design a full scale anaerobic digester system.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued Authority to Construct N-7365-34-0, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

If you have any questions, please contact Mr. Nick Peirce, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

Arnaud Marjollet
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

Title V APPLICATION REVIEW Minor Modification

Facility Number: N-7365
Facility Name: Pacific Ethanol Stockton LLC
Mailing Address: 3028 Navy Drive
Stockton, CA 95206

Contact Name: Carol Romero
Phone: (209) 235-6014

Responsible Official: Michael Kandris
Title: Chief Operating Officer

Processing Staff: Jag Kahlon
Project Number: N-1143325
Date: October 22, 2014

I. PROPOSAL

Pacific Ethanol Stockton LLC (PES) has proposed to incorporate Authority to Construct (ATC) permit N-7365-34-0 for a pilot anaerobic digester system into their Title V operating permit. This permit was issued without Certificate of Conformity (COC). The anaerobic digester system will consist of two mixing tanks, a digester tank, a gas bag, carbon canisters and associated piping arrangement including valves, pumps, and pressure relief valves. The biogas generated by the system will be routed to an existing regenerative thermal oxidizer (RTO) at the facility. The purpose of this project is to collect data to design a full scale anaerobic digester system.

The purpose of this document is to identify all applicable requirements, determine if the facility will comply with the applicable requirements, and to provide the legal and factual basis for permit requirements.

II. FACILITY LOCATION

This facility is located at 3028 Navy Drive, Stockton, California.

III. EQUIPMENT DESCRIPTION

N-7365-34-1
PILOT SCALE ANAEROBIC DIGESTER SYSTEM

The following conditions will be included in the permit as a part of the equipment description:

- The pilot scale anaerobic digester system includes two mixing tanks, a digester tank, a gas bag, carbon canisters and associated pipes, valves, flanges, connectors and pumps. [District Rule 2201]
- The biogas shall be disposed in the 2.4 MMBtu/hr A.H. Lundberg Associates Inc, regenerative thermal oxidizer shared with permit units N-7365-4, '-5, '-6, '-7, '-8, '-9, -10 and '-11. [District Rule 2201]

IV. SCOPE OF EPA AND PUBLIC REVIEW

This project is a Minor Modification under Rule 2520 since the project under which ATC N-7365-34-0 was not an SB-288 or Federal Major Modification under Rule 2201. Therefore, public review is not required for this project.

V. APPLICABLE REQUIREMENTS

Rule 2520 Federally Mandated Operating Permits (6/21/01)

VI. DESCRIPTION OF PROPOSED MODIFICATIONS

N-7365-34-0

PES will divert some of its production streams including syrup, thin stillage, and process condensate to a mixing tank to make a homogeneous mixture. This mixture will then be pumped to a digester tank. Once solid and hydrostatic equilibrium is reached the flow of the mixture will be at a continuous rate. The liquid from the digester will be recirculated through an effluent mixing tank and pumped back to the digester tank.

Bacteria will grow in absence of oxygen (i.e. anaerobic) to breakdown the organic matter in the digester tank. As bacteria works, biogas will produce and accumulate in the head space of the digester tank. When sufficient pressure is reached, a valve will open that would allow biogas to flow into a gas bag. Once the bag accumulates sufficient amount of gas, another valve will open and release the gas into a carbon canister system for removing gas impurities including sulfur compounds. The polished gas will be released into the existing RTO for disposal.

The conditions in N-7365-34 are now federally enforceable through the Title V permit.

VII. COMPLIANCE

In accordance with Rule 2520, 3.20, the proposed project:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include;
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act;
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs (Appendix IV) ;
2. The source's suggested draft permit (Appendix I); and

3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used (Appendix III).

Compliance is expected with this Rule.

APPENDICES

- Appendix I: Proposed Title V Operating Permit No. N-7365-34-1
- Appendix II: Authority to Construct N-7365-34-0
- Appendix III: Permit Application
- Appendix IV: Emissions Change

Appendix I
Proposed Title V Operating Permit No. N-7365-34-1

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-34-1

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:
PILOT SCALE ANAEROBIC DIGESTER SYSTEM

DRAFT

PERMIT UNIT REQUIREMENTS

1. The pilot scale anaerobic digester system includes two mixing tanks, a digester tank, a gas bag, carbon canisters and associated pipes, valves, flanges, connectors and pumps. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The biogas shall be disposed in the 2.4 MMBtu/hr A.H. Lundberg Associates Inc, regenerative thermal oxidizer shared with permit units N-7365-4, '-5, '-6, '-7, '-8, '-9, -10 and '-11. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
4. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of biogas combusted in the RTO shall be utilized and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
5. No more than 2,112 cubic feet of biogas shall be incinerated in the RTO during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Hydrogen sulfide (H₂S) concentration in the biogas prior to the combustion shall not exceed 600 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emissions rates from the combustion of natural gas and biogas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NO_x/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-VOC/MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.007 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Within 60 days of initial startup, and at least once every 120 days thereafter, the hydrogen sulfide concentration of the biogas shall be determined by an independent, certified laboratory using one of the following test methods: EPA Method 11, EPA Method 15, ASTM Method D1072, D3031, D4084, D3246, or D5504. Once three consecutive 120-day laboratory tests show compliance with the permitted hydrogen sulfide concentration limit, the laboratory testing frequency may be reduced to annually. If a subsequent annual laboratory test shows a violation of the permitted hydrogen sulfide concentration limit then 120-day laboratory testing shall resume and continue until three consecutive 120-day laboratory tests show compliance. Once compliance is shown on three consecutive 120-day laboratory tests, the laboratory testing frequency may return to annually. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
9. At least once every other week, the facility shall test the biogas to demonstrate compliance with the permitted hydrogen sulfide concentration limit using Draeger tubes or a District approved equivalent method. Once 12 consecutive biweekly tests show compliance, the testing frequency may be reduced to monthly. If a subsequent test shows a violation of the permitted hydrogen sulfide concentration limit then biweekly testing shall resume and continue until 12 consecutive tests show compliance. Once compliance is shown on 12 consecutive biweekly tests, the testing frequency may return to monthly. It is not necessary for the facility to perform Draeger tube or District approved equivalent method testing during the week in which either the 120-day or annual laboratory testing is performed. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Biogas sampling shall be conducted using the methods and procedures approved by the District. The District shall be notified each time the biogas sampling frequency changes. [District Rule 1081] Federally Enforceable Through Title V Permit
11. The permittee shall maintain records of: (1) the name of the sampler, and the date and time of biogas sampling for H₂S, (2) the name of the tester, and the date and time of biogas testing for H₂S, (3) test results showing the biogas concentration (in ppmv) of H₂S. [District Rule 1081] Federally Enforceable Through Title V Permit
12. The anaerobic digester system and its associated piping shall be inspected for leaks at least monthly. Any leak detected on the basis of sight, smell, or sound, shall be recorded and a corrective action shall be taken to eliminate the leak. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Records of leak inspections shall contain at least an identification of a person performing an inspection, date and time of the inspection, leak location, and corrective action taken to eliminate leaks. The records shall be maintained, kept, and made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
14. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

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Appendix II
Authority to Construct N-7365-34-0



COPY

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-34-0

ISSUANCE DATE: 09/30/2014

LEGAL OWNER OR OPERATOR: PACIFIC ETHANOL STOCKTON LLC
MAILING ADDRESS: 400 CAPITOL MALL, STE 2060
SACRAMENTO, CA 95814

LOCATION: 3028 NAVY DRIVE
STOCKTON, CA 95206

EQUIPMENT DESCRIPTION:
PILOT SCALE ANAEROBIC DIGESTER SYSTEM

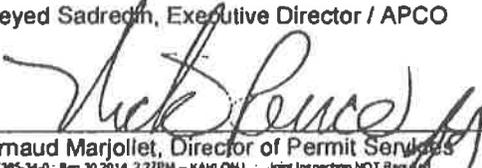
CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. The pilot scale anaerobic digester system includes two mixing tanks, a digester tank, a gas bag, carbon canisters and associated pipes, valves, flanges, connectors and pumps. [District Rule 2201]
3. The biogas shall be disposed in the 2.4 MMBtu/hr A.H. Lundberg Associates Inc, regenerative thermal oxidizer shared with permit units N-7365-4, '-5, '-6, '-7, '-8, '-9, -10 and '-11. [District Rule 2201]
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of biogas combusted in the RTO shall be utilized and maintained. [District Rule 2201]
7. No more than 2,112 cubic feet of biogas shall be incinerated in the RTO during any one day. [District Rule 2201]
8. Hydrogen sulfide (H₂S) concentration in the biogas prior to the combustion shall not exceed 600 ppmv. [District Rule 2201]
9. Emissions rates from the combustion of natural gas and biogas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NO_x/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-VOC/MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.007 lb-SO_x/MMBtu. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadregh, Executive Director / APCO


Arnaud Marjollet, Director of Permit Services

N-7365-34-0: Sep 30 2014 2:27PM - KARE,ONU : Joint Inspection NOT Required

10. Within 60 days of initial startup, and at least once every 120 days thereafter, the hydrogen sulfide concentration of the biogas shall be determined by an independent, certified laboratory using one of the following test methods: EPA Method 11, EPA Method 15, ASTM Method D1072, D3031, D4084, D3246, or D5504. Once three consecutive 120-day laboratory tests show compliance with the permitted hydrogen sulfide concentration limit, the laboratory testing frequency may be reduced to annually. If a subsequent annual laboratory test shows a violation of the permitted hydrogen sulfide concentration limit then 120-day laboratory testing shall resume and continue until three consecutive 120-day laboratory tests show compliance. Once compliance is shown on three consecutive 120-day laboratory tests, the laboratory testing frequency may return to annually. [District Rules 1081 and 2201]
11. At least once every other week, the facility shall test the biogas to demonstrate compliance with the permitted hydrogen sulfide concentration limit using Draeger tubes or a District approved equivalent method. Once 12 consecutive biweekly tests show compliance, the testing frequency may be reduced to monthly. If a subsequent test shows a violation of the permitted hydrogen sulfide concentration limit then biweekly testing shall resume and continue until 12 consecutive tests show compliance. Once compliance is shown on 12 consecutive biweekly tests, the testing frequency may return to monthly. It is not necessary for the facility to perform Draeger tube or District approved equivalent method testing during the week in which either the 120-day or annual laboratory testing is performed. [District Rules 1081 and 2201]
12. Biogas sampling shall be conducted using the methods and procedures approved by the District. The District shall be notified each time the biogas sampling frequency changes. [District Rule 1081]
13. The permittee shall maintain records of: (1) the name of the sampler, and the date and time of biogas sampling for H₂S, (2) the name of the tester, and the date and time of biogas testing for H₂S, (3) test results showing the biogas concentration (in ppmv) of H₂S. [District Rule 1081]
14. The anaerobic digester system and its associated piping shall be inspected for leaks at least monthly. Any leak detected on the basis of sight, smell, or sound, shall be recorded and a corrective action shall be taken to eliminate the leak. [District Rule 2201]
15. Records of leak inspections shall contain at least an identification of a person performing an inspection, date and time of the inspection, leak location, and corrective action taken to eliminate leaks. The records shall be maintained, kept, and made available for District inspection upon request. [District Rule 2201]
16. All records shall be retained for a minimum of 5 years, and shall be made available for District inspection upon request. [District Rule 2201]

Appendix III
Permit Application

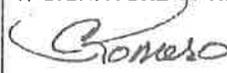


San Joaquin Valley Air Pollution Control District
www.valleyair.org



Permit Application For:

ADMINISTRATIVE AMENDMENT MINOR MODIFICATION SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: Pacific Ethanol Stockton LLC	
2. MAILING ADDRESS: STREET/P.O. BOX: 3028 Navy Drive CITY: Stockton STATE: CA 9-DIGIT ZIP CODE: 95206	
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: 3028 Navy Drive CITY: Stockton ¼ SECTION _____ TOWNSHIP _____ RANGE _____	INSTALLATION DATE:
4. GENERAL NATURE OF BUSINESS: Process corn to ethanol.	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary) Corrected Description Permit No.: N-7365-34-0 Install an Anaerobic Digester Pilot Plant and ancillary equipment to produce biogas from liquid byproducts of the ethanol production process. The biogas produced will be sent to the RTO for destruction.	
6. TYPE OR PRINT NAME OF APPLICANT: Carol Romero	TITLE OF APPLICANT: EHS Manager
7. SIGNATURE OF APPLICANT: 	DATE: October 22, 2014 PHONE: 209-235-6014 FAX: 209-235-0376 EMAIL: cromero@pacificethanol.com

For APCD Use Only:

DATE STAMP	FILING FEE RECEIVED: \$ _____ CHECK#: _____
	DATE PAID: _____
	PROJECT NO: _____ FACILITY ID: _____



San Joaquin Valley Unified Air Pollution Control District



TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Pacific Ethanol Stockton LLC	FACILITY ID: N - 7365
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: NA	
3. Agent to the Owner: NA	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Michael Kandris

Signature of Responsible Official

October 3, 2014

Date

Michael Kandris

Name of Responsible Official (please print)

Chief Operating Officer

Title of Responsible Official (please print)

Appendix IV
Emissions Change

Emissions Change

N-7365-34

The emissions changes are taken from the application review under project N-1143010.

Emissions Change			
Pollutant	PE2 (lb/yr)	PE1 (lb/yr)	(PE2 – PE1)/4 (lb/qtr)
NOx	0	0	0
SOx	73	0	18.25
PM ₁₀	0	0	0
CO	0	0	0
VOC	0	0	0