



OCT 26 2015

Mr. Michael Kandris
Pacific Ethanol Stockton, LLC
3028 Navy Drive
Stockton, CA 95206

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-7365
Project # 1151366

Dear Mr. Kandris:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project authorizes modifications to an ethanol manufacturing facility.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Thank you for your cooperation in this matter.

Sincerely,


Arnaud Marjollet
Director of Permit Services

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email
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
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

**San Joaquin Valley Air Pollution Control District
Authority to Construct
Modifications to Ethanol Manufacturing Facility**

Facility Name: Pacific Ethanol Stockton, LLC Date: October 6, 2015
Mailing Address: 3028 Navy Drive Engineer: Richard Edgehill
 Stockton, CA 95206 Lead Engineer: Dan Klevann
Contact Person: Michael Kandris and Carol Romero (cromero@pacificethanol.com)
Telephone: (916) 403-2124
Fax: (916) 446-3937
Application #(s): N-7365-1-3, '-4-5, '-5-5, '-6-4, '-7-5, '-8-6, '-9-3, '-10-4, '-11-7, '-13-3, '-14-3, '-15-3, '-16-3, '-17-3, '-19-5 and '-33-2
Project #: N-1151366
Deemed Complete: August 17, 2015

PROPOSAL

Pacific Ethanol Stockton, LLC (PES) has requested Authorities to Construct (ATCs) for the modification of their ethanol production facility. The following specific changes are proposed:

N-7365-1-3: Truck and railcar grain receiving operation

- Increase grain receiving rate from 12,330 tons/day to 13,330 tons/day.

N-7365-4, '-5, '-6, '-8, '-10 (Slurry, Yeast, Liquefaction, Beerwell, Condensate Collection Tanks), '-7 and '-9 (Fermentation and Distillation Processes), '-11 (Wet Cake Process)

- Increase ethanol production limit from 60 million gallons per year to 70 million gallons per year
- Reduce the combined VOC emissions factor for N-7365-4, '-5, '-6, '-9, '-10, '-11 from 0.01161 to 0.000995 lb VOC/1000 gal ethanol produced
- Reduce the combined emissions factor for N-7365-7 and '-8 from 0.0626 to 0.05365 lb VOC/1000 gal ethanol produced

N-7365-11-7 (Wet Cake Process)

- Reduce VOC emission factor for corn oil load out operation and demonstrate no fugitive emissions associated with the corn oil process (based on updated vapor pressure information).
- Increase annual corn oil load out rate from 1,722,500 gallons per year to 5,000,000 gallons per year.

N-7365-13: Internal floating roof tank storing 190-proof ethanol

- Increase throughput from 600,000 gallons per year to 25 million gallons per year.

N-7365-14, '-15: Internal floating roof tank storing 200-proof ethanol

- Increase throughput from 60 million gallons per year to 70 million gallons per year.

N-7365-16, '-17: Internal floating roof tank storing denatured ethanol

- Correct the storage capacity to 582,750 gallons.
- Increase daily throughput rate from 360,000 gallons to 1,000,000 gallons.
- Increase annual throughput rate from 93,000,000 gallons to 300,000,000 gallons.
- Increase the combined annual throughput rate for N-7365-16 and '-17 from 93,000,000 gallons to 300,000,000 gallons.

N-7365-19-5: Denatured Ethanol Load out

- Reduce VOC emission factor from 0.0834 lb/1,000 gallons of denatured ethanol loaded to 0.0188 lb/1,000 gallons of denatured ethanol loaded.
- Increase daily loading rate from 720,000 gallons to 1,000,000 gallons.
- Increase annual loading rate from 93,000,000 gallons to 300,000,000 gallons.
- Increase the number of disconnects for the existing rack from 200/day to 210/day and 73,000/yr to 76,650/yr.
- Install a new loading rack (identical to existing rack) served by existing vapor control system with 210/day and 76,650/yr disconnects.

N-7365-33-2: Denatured Ethanol Offloading

- Install three new offloading stations

The project triggers BACT and Public Notice. Offsets are not required.

Disposition of Outstanding ATCs

ATCs N-7365-4-4, '-11-6, and '-19-4 have been implemented and serve as the base document. Current PTOs and base document ATCs are included in **Attachment I**.

Pacific Ethanol has a Title V Permit. This modification can be classified as a Title V Significant Modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Pacific Ethanol must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410 Prevention of Significant Deterioration (11/26/12)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4101 Visible Emissions (02/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4455 Components at Petroleum Refineries, Gas Liquids Processing, Facilities, and Chemical Plants (4/20/05)
Rule 4623 Storage of Organic Liquids (5/19/05)
Rule 4624 Transfer of Organic Liquid (12/20/07)
Rule 4801 Sulfur Compounds (12/17/92)
California Health & Safety Code 41700 (Public Nuisance)
California Health & Safety Code 42301.6 (School Notice)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located at 3028 Navy Drive, Stockton, California. There is no K-12 within 1,000 feet of this address. Therefore, school notice is not required under California Health & Safety Code 42301.6.

IV. Process Description

The facility manufactures denatured ethanol and has requested to increase throughput from 60,000,000 gal/yr to 70,000,000 gal/yr. Tank ('-13 through '-17) throughputs are increased to meet the higher production rate. Liquid transfer operations will be expanded to meet the higher throughput. Various emissions factors are lowered based on updated source test/vapor pressure information (**Attachment II**). Additional modifications are described in the proposal section.

V. Equipment Listing

Pre-Project Equipment Description:

N-7365-1-2: TRUCK AND RAILCAR GRAIN RECEIVING AND STORAGE OPERATION INCLUDING A RECEIVING SHED, RAILCAR AND TRUCK RECEIVING HOPPERS, A RECEIVING DRAG CONVEYOR, A RECEIVING LEG (ELEVATOR), ALL SERVED BY A 25,000 CFM MAC EQUIPMENT MODEL 120MCF255 STYLE III BAGHOUSE; AND TWO (2) 500,000 BUSHEL CAPACITY STORAGE SILOS, TWO 5,000 BUSHEL CAPACITY INTERSTICE BINS AND ENCLOSED MECHANICAL CONVEYORS ALL SERVED BY A 3,500 CFM MAC EQUIPMENT MODEL 96AVS36N STYLE III BAGHOUSE (BAGHOUSE SHARED WITH PERMITS N-7365-2 AND '-3)

ATC N-7365-4-4: MODIFICATION OF ONE 18,500 GALLON SLURRY TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-5, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-5, '-6, '-7, '-8, '-9, -10 AND '-11): ADD ONE 78,050 GALLON SLURRY MIX TANK CONNECTED TO THE VENT GAS SCRUBBER

N-7365-5-4: 29,653 GALLON YEAST TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-6, '-7, '-8, '-9, -10 AND '-11)

N-7365-6-3: ONE 177,748 GALLON LIQUEFACTION TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW

NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-7, '-8, '-9, -10 AND '-11)

N-7365-7-4: FERMENTATION PROCESS CONSISTING OF FOUR 705,000 GALLON FIXED ROOF PROCESS TANKS, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-8) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-8). THE EXHAUST FROM THE PROCESS TANKS IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11)

N-7365-8-5 ONE 928,526 GALLON FIXED ROOF BEERWELL PROCESS TANK, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-7) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-7). THE EXHAUST FROM THE PROCESS TANK IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11)

N-7365-9-2 DISTILLATION PROCESS CONSISTING OF ONE DE-GAS VESSEL, ONE BEER STRIPPER, ONE SIDE STRIPPER, ONE RECTIFIER, TWO MOLECULAR SIEVES AND ONE 200 PROOF ETHANOL CONDENSER, ALL SERVED BY KOCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-10 AND '-11)

N-7365-10-3 ONE 190,400 GALLON PROCESS CONDENSATE TANK, COLLECTING WATER FROM THE CO2 AND VENT GAS SCRUBBERS, SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-11)

ATC N-7365-11-6 MODIFICATION OF WET CAKE PROCESS CONSISTING OF ONE 194,400 GALLON WHOLE STILLAGE TANK, ONE CENTRIFUGE SYSTEM WITH FIVE CENTRIFUGES, ONE 127,000 GALLON THIN STILLAGE TANK, THREE EVAPORATORS, ONE 129,600 GALLON SYRUP TANK, CORN OIL EXTRACTION SYSTEM CONSISTING OF ONE 36,000 GALLON HEAT SOAK TANK, THREE CENTRIFUGES, ONE 800 GALLON BUFFER TANK, ONE 1,285 GALLON FINAL PRODUCT TANK, TWO 10,500 GALLON CORN OIL LOADOUT STORAGE TANKS ALL SERVED BY AN KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-10) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-10) AND A TRUCK LOADOUT SYSTEM: ADD A NEW 10,500 GALLON CORN OIL STORAGE TANK CONNECTED TO THE VENT GAS SCRUBBER LISTED ON PERMIT N-7365-4

N-7365-13-2 190,357 GALLON INTERNAL FLOATING ROOF 190-PROOF ETHANOL STORAGE TANK WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-14-2 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-15-2 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-16-2 635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-17-2 635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

ATC N-7365-19-4 MODIFICATION OF DENATURED ETHANOL BOTTOM TRUCK LOADING RACK WITH DRY BREAK COUPLERS SERVED BY A JOHN ZINK MODEL S3-AAD-1-70-90-6 HYDROCARBON VAPOR RECOVERY UNIT (VRU): CHANGE VOC MONITORING FREQUENCY FROM "MONTHLY" TO "DAILY" FOR THE VRU SYSTEM

N-7365'-33-1 DENATURED-ETHANOL TRANSFER OPERATION FROM RAIL CAR TANKS TO THE TANKS UNDER PERMITS N-7365-16 AND '-17 CONSISTING OF TWO PUMPS AND ASSOCIATED PIPING SYSTEM

Proposed Modification:

N-7365-1-3: MODIFICATION OF TRUCK AND RAILCAR GRAIN RECEIVING AND STORAGE OPERATION INCLUDING A RECEIVING SHED, RAILCAR AND TRUCK RECEIVING HOPPERS, A RECEIVING DRAG CONVEYOR, A RECEIVING LEG (ELEVATOR), ALL SERVED BY A 25,000 CFM MAC EQUIPMENT MODEL 120MCF255 STYLE III BAGHOUSE; AND TWO (2) 500,000 BUSHEL CAPACITY STORAGE SILOS, TWO 5,000 BUSHEL CAPACITY INTERSTICE BINS AND ENCLOSED MECHANICAL CONVEYORS ALL SERVED BY A 3,500 CFM MAC EQUIPMENT MODEL 96AVS36N STYLE III BAGHOUSE (BAGHOUSE SHARED WITH PERMITS N-7365-2 AND '-3): INCREASE GRAIN RECEIVING RATE FROM 12,330 TONS/DAY TO 13,330 TONS/DAY

N-7365 '-4-5: MODIFICATION OF ONE 18,500 GALLON SLURRY TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-5, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-5, '-6, '-7, '-8, '-9, '-10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

N-7365-5-5: MODIFICATION OF 29,653 GALLON YEAST TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-6, '-7, '-8, '-9, '-10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

N-7365-6-4: MODIFICATION OF ONE 177,748 GALLON LIQUEFACTION TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-7, '-8, '-9, '-10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

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N-7365-8-6 MODIFICATION OF ONE 928,526 GALLON FIXED ROOF BEERWELL PROCESS TANK, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-7) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-7). THE EXHAUST FROM THE PROCESS TANK IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

N-7365-9-3 MODIFICATION OF DISTILLATION PROCESS CONSISTING OF ONE DE-GAS VESSEL, ONE BEER STRIPPER, ONE SIDE STRIPPER, ONE RECTIFIER, TWO MOLECULAR SIEVES AND ONE 200 PROOF ETHANOL CONDENSER, ALL SERVED BY KOCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

N-7365-10-4 MODIFICATION OF ONE 190,400 GALLON PROCESS CONDENSATE TANK, COLLECTING WATER FROM THE CO2 AND VENT GAS SCRUBBERS, SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG

ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

N-7365-11-7 MODIFICATION OF WET CAKE PROCESS CONSISTING OF ONE 194,400 GALLON WHOLE STILLAGE TANK, ONE CENTRIFUGE SYSTEM WITH FIVE CENTRIFUGES, ONE 127,000 GALLON THIN STILLAGE TANK, THREE EVAPORATORS, ONE 129,600 GALLON SYRUP TANK, CORN OIL EXTRACTION SYSTEM CONSISTING OF ONE 36,000 GALLON HEAT SOAK TANK, THREE CENTRIFUGES, ONE 800 GALLON BUFFER TANK, ONE 1,285 GALLON FINAL PRODUCT TANK, THREE 10,500 GALLON CORN OIL LOADOUT STORAGE TANKS ALL SERVED BY AN KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-10) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-10) AND A TRUCK LOADOUT SYSTEM: INCREASE ANNUAL ETHANOL PRODUCTION, REDUCE CORN OIL LOADOUT EMISSION FACTOR, INCREASE CORN OIL LOADOUT RATE, REDUCE CORN OIL FUGITIVE EMISSIONS

N-7365-13-3 MODIFICATION OF 190,357 GALLON INTERNAL FLOATING ROOF 190-PROOF ETHANOL STORAGE TANK WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: INCREASE THROUGHPUT FROM 600,000 GALS PER YR TO 25 MILLION GALS PER YR

N-7365-14-3 MODIFICATION OF 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: INCREASE THROUGHPUT FROM 60 MILLION GALS PER YR TO 70 MILLION GALS PER YR

N-7365-15-3 MODIFICATION OF 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: INCREASE THROUGHPUT FROM 60 MILLION GALS PER YR TO 70 MILLION GALS PER YR

N-7365-16-3 MODIFICATION OF 635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: CORRECT THE STORAGE CAPACITY TO 582,750 GALS, INCREASE DAILY THROUGHPUT RATE FROM 360,000 GALS TO 1,000,000 GALS, INCREASE ANNUAL THROUGHPUT RATE FROM 93,000,000 GALS TO 300,000,000 GALS,

INCREASE THE COMBINED ANNUAL THROUGHPUT RATE FOR N-7365-16 AND '-17 FROM 93,000,000 GALS TO 300,000,000 GALS

N-7365-17-3 MODIFICATION OF 635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: CORRECT THE STORAGE CAPACITY TO 582,750 GALS, INCREASE DAILY THROUGHPUT RATE FROM 360,000 GALS TO 1,000,000 GALS, INCREASE ANNUAL THROUGHPUT RATE FROM 93,000,000 GALS TO 300,000,000 GALS, INCREASE THE COMBINED ANNUAL THROUGHPUT RATE FOR N-7365-16 AND '-17 FROM 93,000,000 GALS TO 300,000,000 GALS

N-7365-19-5 MODIFICATION OF DENATURED ETHANOL BOTTOM TRUCK LOADING RACK WITH DRY BREAK COUPLERS SERVED BY A JOHN ZINK MODEL S3-AAD-1-70-90-6 HYDROCARBON VAPOR RECOVERY UNIT (VRU): INSTALL A NEW LOADING TRUCK LOADING RACK (IDENTICAL TO EXISTING RACK), REDUCE VOC EMISSION FACTOR FROM 0.0834 LB/1,000 GAL TO 0.0188 LB/1,000 GAL, INCREASE DAILY LOADING RATE FROM 720,000 GAL TO 1,000,000 GAL, INCREASE ANNUAL LOADING RATE FROM 93,000,000 GAL TO 300,000,000 GALS, INCREASE THE NUMBER OF DISCONNECTS FOR THE EXISTING RACK FROM 200/DAY TO 210/DAY

N-7365'-33-1 MODIFICATION OF DENATURED-ETHANOL TRANSFER OPERATION FROM RAIL CAR TANKS TO THE TANKS UNDER PERMITS N-7365-16 AND '-17 CONSISTING OF TWO PUMPS AND ASSOCIATED PIPING SYSTEM: INSTALL THREE NEW RAILCARS UNLOADING STATIONS

Post Project Equipment Description:

N-7365-1-2: TRUCK AND RAILCAR GRAIN RECEIVING AND STORAGE OPERATION INCLUDING A RECEIVING SHED, RAILCAR AND TRUCK RECEIVING HOPPERS, A RECEIVING DRAG CONVEYOR, A RECEIVING LEG (ELEVATOR), ALL SERVED BY A 25,000 CFM MAC EQUIPMENT MODEL 120MCF255 STYLE III BAGHOUSE; AND TWO (2) 500,000 BUSHEL CAPACITY STORAGE SILOS, TWO 5,000 BUSHEL CAPACITY INTERSTICE BINS AND ENCLOSED MECHANICAL CONVEYORS ALL SERVED BY A 3,500 CFM MAC EQUIPMENT MODEL 96AVS36N STYLE III BAGHOUSE (BAGHOUSE SHARED WITH PERMITS N-7365-2 AND '-3)

N-7365 '-4-3: ONE 18,500 GALLON SLURRY TANK AND ONE 78,050 GALLON SLURRY MIX TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-5, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG

ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-5, '-6, '-7, '-8, '-9, -10 AND '-11)

N-7365-5-4: 29,653 GALLON YEAST TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-6, '-7, '-8, '-9, -10 AND '-11)

N-7365-6-3: ONE 177,748 GALLON LIQUEFACTION TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-7, '-8, '-9, -10 AND '-11)

N-7365-7-4: FERMENTATION PROCESS CONSISTING OF FOUR 705,000 GALLON FIXED ROOF PROCESS TANKS, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-8) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-8). THE EXHAUST FROM THE PROCESS TANKS IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11)

N-7365-8-5 ONE 928,526 GALLON FIXED ROOF BEERWELL PROCESS TANK, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-7) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-7). THE EXHAUST FROM THE PROCESS TANK IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11)

N-7365-9-2 DISTILLATION PROCESS CONSISTING OF ONE DE-GAS VESSEL, ONE BEER STRIPPER, ONE SIDE STRIPPER, ONE RECTIFIER, TWO

MOLECULAR SIEVES AND ONE 200 PROOF ETHANOL CONDENSER, ALL SERVED BY KOCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-10 AND '-11)

N-7365-10-3 ONE 190,400 GALLON PROCESS CONDENSATE TANK, COLLECTING WATER FROM THE CO2 AND VENT GAS SCRUBBERS, SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-11)

N-7365-11-6 WET CAKE PROCESS CONSISTING OF ONE 194,400 GALLON WHOLE STILLAGE TANK, ONE CENTRIFUGE SYSTEM WITH FIVE CENTRIFUGES, ONE 127,000 GALLON THIN STILLAGE TANK, THREE EVAPORATORS, ONE 129,600 GALLON SYRUP TANK, CORN OIL EXTRACTION SYSTEM CONSISTING OF ONE 36,000 GALLON HEAT SOAK TANK, THREE CENTRIFUGES, ONE 800 GALLON BUFFER TANK, ONE 1,285 GALLON FINAL PRODUCT TANK, THREE 10,500 GALLON CORN OIL LOADOUT STORAGE TANKS ALL SERVED BY AN KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-10) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-10) AND A TRUCK LOADOUT SYSTEM

N-7365-13-2 190,357 GALLON INTERNAL FLOATING ROOF 190-PROOF ETHANOL STORAGE TANK WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-14-2 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-15-2 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

N-7365-16-2 582,750 GALLON INTERNAL FLOATING ROOF DENATURED
ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL
ULTRASEAL SEAL SYSTEM

N-7365-17-2 582,750 GALLON INTERNAL FLOATING ROOF DENATURED
ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL
ULTRASEAL SEAL SYSTEM

N-7365-19-3 DENATURED ETHANOL BOTTOM TRUCK LOADING RACK WITH DRY
BREAK COUPLERS SERVED BY A JOHN ZINK MODEL S3-AAD-1-70-
90-6 HYDROCARBON VAPOR RECOVERY UNIT (VRU)

N-7365'-33-1 DENATURED-ETHANOL TRANSFER OPERATION FROM RAIL CAR
TANKS TO THE TANKS UNDER PERMITS N-7365-16 AND '-17
CONSISTING OF TWO PUMPS AND ASSOCIATED PIPING SYSTEM

VI. Emission Control Technology Evaluation

Applicant is not proposing to install any new emission control equipment. Therefore, no further discussion is necessary.

VII. General Calculations

A. Assumptions

Operational Time: 24 hr/day, 365 days/yr

Ethanol Production

Pre-Project	Post-Project
360,000 gal/day	360,000 gal/day
60,000,000 gal/yr	70,000,000 gal/yr

RTO, Vent Gas Scrubber (VGS), CO2 Scrubber (CO2):

VGS followed by RTO (VGS/RTO) serves N-7365- 4, '-5, '-6, '-9, '-10, '-11
(Process Tanks, Distillation, Wet Cake)

CO2 followed by RTO (CO2/RTO) serves N-7365-7, '-8 (Beerwell and
Fermentation)

N-7365-1 (Grain Handling Receiving)

Pre- and Post-Project baghouse airflow rate and operational time

25,000 cfm, 3,500 hr/yr *

* PTO Equipment Description, PTO Permit Condition

Throughput

Pre-Project	Post-Project
12,330 tons/day	13,330 tons/day
646,800 tons/yr	646,800 tons/yr

N-7365-4 through '11 Process Tanks, Distillation, Wet Cake, Beerwell, Fermentation)

Throughput

Pre-Project	Post-Project
360,000 gal/day	360,000 gal/day
60,000,000 gal/yr	70,000,000 gal/yr

N-7365-11 (Wet Cake Process)

Loading Throughput

	Pre-Project gal/day	Pre-Project gal/yr	Post-Project gal/day	Post-Project gal/yr
Distiller Syrup	67,371	24,590,415	67,371	24,590,415
Corn Oil	26,000	1,722,500	26,000	5,000,000

* Pacific Ethanol tested a corn oil sample in October 2014 and found that the VOC is content is about 1% (by wt.)

Post-Project Corn Oil Fugitive Emissions = 0.01 x pre-project fugitive emissions

N-7365-13 (190 Proof Ethanol Tank)

Throughput

Pre-Project	Post-Project
206,000 gal/day	206,000 gal/day
600,000 gal/yr	25,000,000 gal/yr

N-7365-14, '15 (200 Proof Ethanol Tank)

Throughput

Pre-Project	Post-Project
342,000 gal/day	342,000 gal/day
60,000,000 gal/yr	70,000,000 gal/yr

*also combined throughput limit for '14 and '15

N-7365-16 and '-17 (Denatured Ethanol Tanks)

Throughput (each of '-16 or '-17)

Pre-Project	Post-Project
360,000 gal/day	1,000,000 gal/day
93,000,000 gal/yr*	300,000,000 gal/yr*

*also combined throughput limit for '-16 and '-17

N-7365-19-5: Denatured Ethanol Loading Operation

Denatured Ethanol Loading Rate

Pre-Project	Post-Project
720,000 gal/day	1,000,000 gal/day
93,000,000 gal/yr	300,000,000 gal/yr

Number of Disconnects

Pre-Project	Post-Project
200/day	2 x 210 = 420/day*

* increase disconnects from 200 to 210/day for existing rack, new loading rack has same number of disconnects as existing loading rack

Number of Fugitive Components

Component Type	Existing *	New	LDAR control efficiency (CE)
Valves (gas/vapor)	8	0	92%
Valves (light liquid)	4	15	92%
Pressure-relief valves	6	0	95%
Pumps (light liquid)	3	1	75%
Open Ended Lines	0	0	93%
Flanges (connectors)	100	50	93%

* project N-1082713

N-7365-33 (Denatured Ethanol Offloading)

Number of Fugitive Components

Component Type	Existing *	New	LDAR control efficiency (CE)
Valves (light liquid)	17	12	92%
Pumps (light liquid)	2	0	75%
Flanges (connectors)	9	12	93%
Pressure relief valve (gas/vapor)	1	4	95%
Sampling connection	1	0	0%

* project N-1140084 (p 5)

Number of Disconnects*

Pre-Project	Post-Project
20/day	96/day**
1,200/yr	35,040/yr (96 x 365)

* 1 disconnect/railcar/hr, 20 hr/day

** 4 railcars/hr offloaded from rail to tanks in an hour, 24 hr/day.

B. Emission Factors (EF)

N-7365-1

EF1	EF2
0.004 gr-PM ₁₀ /dscf	0.004 gr-PM ₁₀ /dscf

N-7365-4, '-5, '-6, '-9, '-10, '-11 (EF1 by permit condition, EF2 proposed)

EF1	EF2
0.01161 lb VOC/1,000 gallon of ethanol produced (VGS/RTO exhaust)	0.00995 lb-VOC/1,000 gallon of ethanol produced*

* **Attachment II**, source test result, average (2013 and 2014) VOC from RTO exhaust is 0.045 lb VOC/1000 gal of ethanol produced

VGS/RTO contribution is 14.5% or $0.145 \times 0.045 = 0.0065 < 0.00995$ (proposed)

2.4 MMBtu/hr RTO (EF1 = EF2)		
Pollutant	Emission Factor	Source
NO _x	0.050 lb/MMBtu	Manufacturer Guarantee
SO _x	0.00285 lb/MMBtu	District Policy APR 1720
PM ₁₀	0.0076 lb/MMBtu	AP-42 (07/98) Table 1.4-2
CO	0.084 lb/MMBtu	AP-42 (07/98) Table 1.4-1
VOC	0.0055 lb/MMBtu	AP-42 (07/98) Table 1.4-2

N-7365-7, '-8 (EF1 by permit condition, EF2 proposed)

EF1	EF2
0.0626 lb VOC/1,000 gallon of ethanol produced (CO ₂ /RTO exhaust)	0.05365 lb-VOC/1,000 gallon of ethanol produced

* **Attachment II**, source test result average (2013 and 2014) VOC from RTO exhaust is 0.045 lb VOC/1000 gal of ethanol produced

CO₂/RTO contribution is 85.5% or $0.855 \times 0.045 = 0.0038 < 0.05365$ (proposed)

Combined Emissions Factor

N-7365-4 through '-11

EF1	EF2
0.0626 (4 thru 6, 9 thru 11) + 0.01161 (7,8) = 0.07421 lb VOC/1,000 gallon of ethanol produced (vent gas exhaust)	0.00995 (4 thru 6, 9 thru 11) + 0.05365 (7,8) = 0.0636 lb-VOC/1,000 gallon of ethanol produced

N-7365-11

	EF1 (lb VOC/1000 gallon)	EF2 (lb VOC/1000 gallon)
Process	0.01161	0.00995
Syrup Loading	0.526*	0.526
Corn Loading	0.526*	0.000175**

* Project 1143274 EE, p 11)

** (Attachment II)

Corn Loading

EF2 is calculated using the following equation from EPA's AP-42, Section 5.2:

EF2 = 12.46 SPM/T, where

EF2 = loading loss, lb/1000 gal of liquid loaded

S = Saturation factor (1.45, splash loading of a clean cargo tank stated in AP-42, Table 5.2-1)

P = True vapor pressure of liquid loaded, psia (2.12×10^{-5} psia at bulk liquid temperature of 150°F)

M = Molecular weight of vapors (278.76 lb/lb-mol)

T = Temperature of bulk liquid loaded, °R (150+ 460 = 610°R)

$$\begin{aligned} \text{EF2} &= (12.45)(1.45)(2.12 \times 10^{-5})(278.76)/(610) \\ &= \underline{0.000175 \text{ lb-VOC/1,000 gal of liquid loaded}} \end{aligned}$$

N-7365-16, '-17

VOC emissions calculated using EPA's TANKS program using the proposed throughput limits of 1,000,000 gal/day and 300,000,000 gal/yr. Please see **Attachment III**.

N-7365-19-3: Denatured ethanol loading operation

EF1	EF2
0.0834 lb VOC/1,000 gallon of ethanol produced (vent gas exhaust)	0.0188 lb-VOC/1,000 gallon of ethanol produced*
0.0173 lb-VOC/disconnect**	0.0173 lb-VOC/disconnect

* please see **Attachment II** source test data

** (10 mL/disconnect) (1 gal/3,785 mL) (6.55 lb/gal)
= 0.0173 lb-VOC/disconnect

N-7365-33-1: Denatured ethanol offloading operation

	EF1 = EF2*
Valves (light liquid)	0.00888
Flanges (connectors)	0.00403
Pressure relief valve (gas/vapor)	0.22928
Disconnect	0.0173 lb-VOC/disconnect*

* project N-1140084

C. Calculations

1. Pre-Project Potential to Emit (PE1)

N-7365-1 (Truck and Railcar Receiving Storage)

Grain receiving:

$$\begin{aligned} & (0.004\text{gr-PM}_{10}/\text{dscf})(25,000\text{ft}^3/\text{min})(60\text{min}/\text{hr})(24\text{hr}/\text{day})(\text{lb}/7,000\text{ gr}) \\ & \quad = 20.6\text{ lb-PM}_{10}/\text{day} \\ & (0.004\text{gr-PM}_{10}/\text{dscf})(25,000\text{ft}^3/\text{min})(60\text{min}/\text{hr})(3,500\text{hr}/\text{yr})(\text{lb}/7,000\text{ gr}) \\ & \quad = 3,000\text{ lb-PM}_{10}/\text{yr} \end{aligned}$$

Grain handling/transfer:

$$\begin{aligned} & (0.004\text{gr-PM}_{10}/\text{dscf})(3,500\text{ft}^3/\text{min})(60\text{min}/\text{hr})(24\text{hr}/\text{day})(\text{lb}/7,000\text{ gr}) \\ & \quad = 2.9\text{ lb-PM}_{10}/\text{day} \\ & = (0.004\text{gr-PM}_{10}/\text{dscf})(3,500\text{ft}^3/\text{min})(60\text{min}/\text{hr})(8,760\text{hr}/\text{yr})(\text{lb}/7,000\text{ gr}) \\ & \quad = 1,051\text{ lb-PM}_{10}/\text{yr} \end{aligned}$$

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	20.6 + 2.9 = 23.3 lb/day	3,000 + 1,051 = 4,051 lb/y=
CO	0	0
VOC	0	0

VGS/RTO followed by RTO N-7365-4, 5, 6, 9, 10, 11 (each)

$$\begin{aligned}
 \text{PE1} &= (0.01161 \text{ lb-VOC}/1,000 \text{ gallon of ethanol produced}) (360,000 \text{ gal/day}) \\
 &= 4.2 \text{ lb-VOC/day}/6 \text{ units} \\
 &= 0.7 \text{ lb/day}
 \end{aligned}$$

$$\begin{aligned}
 &= (0.01161 \text{ lb-VOC}/1,000 \text{ gallon of ethanol produced}) (60 \times 10^6 \text{ gal/yr}) \\
 &= 697 \text{ lb-VOC/yr}/6 \text{ units} \\
 &= 116 \text{ lb/yr}
 \end{aligned}$$

N-7365-4 (RTO + fugitives) (Slurry Tank)

Fugitive emissions 0 lb/day, 0 lb/yr (PTO '4-3)

Pollutant	Daily PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day)	Daily PE1 (lb/day)
NO _x	0.050	2.4	24	2.9
SO _x	0.00285	2.4	24	0.2
PM ₁₀	0.0076	2.4	24	0.4
CO	0.084	2.4	24	4.8
VOC	0.0055	2.4	24	0.3

Pollutant	Annual PE1			
	EF1 (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/year)	Annual PE1 (lb/year)
NO _x	0.050	2.4	8,760	1,051
SO _x	0.00285	2.4	8,760	60
PM ₁₀	0.0076	2.4	8,760	160
CO	0.084	2.4	8,760	1,766
VOC	0.0055	2.4	8,760	116

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	2.9	1,051
SO _x	0.2	60
PM ₁₀	0.4	160
CO	4.8	1,766
VOC	0.3 (RTO) + 0.7 (VGS/RTO) + 0 (fugitives) = 1.0	116 (RTO) + 116 (VGS/RTO) + 0 (fugitives) = 232 lb/yr

N-7365-5 (Yeast Tank)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.7 (VGS/RTO) + 0.6 (fugitives)* = 1.3	116 (VGS/RTO) + 223 (fugitives) = 339 lb/yr

* 0.6 lb/day, 223 lb/yr Current PTO, Project N-1091307

N-7365-6 (Liquefaction Tank)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.7 (VGS/RTO) + 0.6 (fugitives) = 1.3	116 (VGS/RTO) + 218 (fugitives) = 334 lb/yr

* 0.6 lb/day, 218 lb/yr Current PTO, Project N-1091307

N-7365-7, 8 (Fermentation, Beerwell Processes)

CO2 scrubber (combined) emissions

0.0626 lb/1000 gal x 360,000 gal/day = 22.5 lb/day

0.0626 lb/1000 gal x 60,000,000 gal/yr = 3,756 lb/yr or 1,878 lb/yr/tank

Fugitives

N-7365-7: 3.8 lb VOC/day, 1,389 lb VOC/yr (current PTO, N-1082713 EE)

N-7365-8: 0.6 lb VOC/day, 228 lb VOC/yr (current PTO N-1091307 EE)

N-7365-7 (Fermentation Tanks)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	22.5 + 3.8 (fugitives) = 26.3 lb/day	1878 lb/yr + 1,389 lb/yr (fugitives) = 3,267 lb/yr

N-7365-8 (Beerwell Process)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	22.5 + 0.6 (fugitives) = 23.1 lb/day	1878 lb/yr (tank) + 228 lb/yr (fugitives) = 2106 lb/yr

N-7365-9 (Distillation)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.7 (VGS/RTO) + 3.9 (fugitives) = 4.6	116 (VGS/RTO) + 1401 (fugitives) = 1,517 lb/yr

* 3.9 lb/day, 1,401 lb/yr Current PTO, Project N-1082713

N-7365-10 Condensate Tank)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	2.9	1,051
SO _x	0.2	60
PM ₁₀	0.4	160
CO	4.8	1,766
VOC	0.7 (VGS/RTO) + 0.2 (fugitives) = 0.9	116 (VGS/RTO) + 92 (fugitives) = 208 lb/yr

* 0.2 lb/day, 92 lb/yr Project N-1091307

N-7365-11 (Wet Cake, project 1143274 EE)

Distiller's Syrup Loading Operation Daily Pre-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Daily Throughput (gal/day)	Daily PE1 (lb-VOC/day)
N-7365-11	0.526	67,371	35.4

Distiller's Syrup Loading Operation Annual Pre-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Annual Throughput (gal/year)	Annual PE1 (lb-VOC/year)
N-7365-11	0.526	24,590,415	12,935

Corn Oil Loading Operation Daily Pre-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Daily Throughput (gal/day)	Daily Emissions (lb-VOC/day)
N-7365-11	0.526	26,000	13.7

Corn Oil Loading Operation Annual Pre-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Annual Throughput (gal/year)	Annual Emissions (lb-VOC/year)
N-7365-11	0.526	1,722,500	906

Total Fugitive Component Pre-Project Potential to Emit*		
Process	Daily PE1 (lb-VOC/day)	Annual PE1 (lb-VOC/year)
Wet Cake Process	2.5	936
Corn Oil Operation	2.8	1,037
Distiller's Syrup Operation	2.9	1,041
Total	8.1	3,014

* Project N-1143274

N-7365-11

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.7 (VGS/RTO) + 35.4 (syrup load) +13.7 (corn load)+ 8.1 (fugitives) =57.9	116 (VGS/RTO) + 12,935 (syrup load) + 906 (corn load) + 3,014 (fugitives) = 16,971

N-7365-13 (190 Proof, DELs current PTO, annual emissions from project 1091307 EE pgs 21 and 22)

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	2.4 (tank) + 0.9 (fugitives) * = 3.3 lb/day	158 lb/yr (tank) + 337 lb/yr (fugitives) = 495 lb/yr

* 0.9 lb-VOC/day, 337 lb-VOC/yr, current PTO, project N-1091307

N-7365-14, 15 (200 Proof, PTO DELs and annual from project 1091307 EE pgs 21 and 22)

PE1 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	3.7 (tank) + 1 (fugitives) * = 4.7 lb/day	430 lb/yr (tank) + 338 lb/yr (676/2, fugitives) = 768 lb/yr

* 1.0 lb-VOC/day, 338 lb-VOC/yr, current PTO, project N-1091307

N-7365-16, 17 (Denatured ethanol, PTO DELs and annual from project 1091307 EE pgs 21 and 22)

PE1 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	2.7 (tank) + 1 (fugitives) * = 3.7 lb/day	660 lb/yr (tank) + 338 lb/yr (676/2, fugitives) = 880 lb/yr

* 1.0 lb-VOC/day, 338 lb-VOC/yr, current PTO, project N-1091307

N-7365-19 (Denatured Truck Loading Rack)

Fugitive emissions: 3.5 lb-VOC/day, 1,237 lb-VOC/yr, current PTO, project N-1082713,

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC*	60 (loading) + 3.5 (disconnects) + 3.5 (fugitives) = 67.0 lb/day	7,756 (loading) + 1,263 (disconnect) + 1,237 (fugitives) = 10,256 lb/yr

*

0.0834 lb-VOC/1,000 gal loaded)(720,000 gal/day)
= 60.0 lb-VOC/day

(0.0834 lb-VOC/1,000 gal loaded)(93,000,000 gal/yr)
= 7,756 lb-VOC/yr

= (0.0173 lb-VOC/disconnect)(200 disconnects/day)
= 3.5 lb-VOC/day (1,263 lb-VOC/yr)

N-7365-33 (Denatured Unloading, project 1140084 EE p 5)

Fugitive emissions: 1.6 lb-VOC/day, 97 lb-VOC/yr, project N-1140084 (not listed as condition on current PTO)

PE1 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC*	1.6 lb/day (fugitives) + 0.3 lb/day (disconnect) = 1.9 lb/day	97 lb/yr (fugitives) + 20 lb/yr* (disconnect) = 117 lb/yr

* Disconnect emissions:

There will be one disconnect per railcar. Therefore,

$$\text{PE2} = (0.017 \text{ lb-VOC/disconnect})(20 \text{ railcars/day})(1 \text{ disconnect/railcar}) \\ = 0.3 \text{ lb-VOC/day}$$

$$\text{PE2} = (0.017 \text{ lb-VOC/disconnect})(1,200 \text{ railcars/yr})(1 \text{ disconnect/railcar}) \\ = 20 \text{ lb-VOC/yr}$$

2. Post Project Potential to Emit (PE2)

N-7365-1-3: Truck and railcar grain receiving operation

No change in emissions.

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	23.3 lb/day	4,051 lb/yr
CO	0	0
VOC	0	0

N-7365-4, 5, 6, 9, 10, 11 (each, VGS/RTO exhaust)

$$\text{PE2} = (0.00995 \text{ lb-VOC/1,000 gallon of ethanol produced}) (360,000 \text{ gal/day}) \\ = 3.6 \text{ lb-VOC/day/6 tanks} \\ = 0.6 \text{ lb/day/tank}$$

$$= (0.00995 \text{ lb-VOC/1,000 gallon of ethanol produced}) (70 \times 10^6 \text{ gal/yr}) \\ = 697 \text{ lb-VOC/yr/6 tanks}$$

= 116 lb/yr

N-7365-4 (Slurry Tank)

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	2.9	1,051
SO _x	0.2	60
PM ₁₀	0.4	160
CO	4.8	1,766
VOC	0.3 (RTO) + 0.6 (VGS/RTO) + 0 (fugitives) = 0.9	116 (RTO) + 116 (VGS/RTO) + 0 (fugitives) = 232 lb/yr

N-7365-5 (Yeast Tank)

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.6 (VGS/RTO) + 0.6 (fugitives) = 1.2	116 (VGS/RTO) + 223 (fugitives) = 339 lb/yr

N-7365-6 (Liquefaction Tank)

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.6 (VGS/RTO) + 0.6 (fugitives) = 1.2	116 (VGS/RTO) + 218 (fugitives) = 334 lb/yr

N-7365-7, 8 (Fermentation, Beerwell Processes)

CO2 scrubber (combined) emissions

$$\text{PE2} = (0.05365 \text{ lb-VOC}/1,000 \text{ gal-ethanol produced})(360,000 \text{ gallons/day})$$

$$= 19.3 \text{ lb-VOC/day}$$

$$\text{PE2} = (0.05365 \text{ lb-VOC}/1,000 \text{ gal-ethanol produced})(70,000,000 \text{ gallons/yr})$$

$$= 3,756 \text{ lb-VOC/yr (1,878 lb/yr/tank)}$$

Fugitives (no change)

N-7365-7: 3.8 lb VOC/day, 1,389 lb VOC/yr

N-7365-8: 0.6 lb VOC/day, 228 lb VOC/yr

N-7365-7 (Fermentation Tanks)

PE2 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	19.3 (CO2) + 3.8 (fugitives) = 23.1 lb/day	1878 lb/yr (CO2) + 1,389 lb/yr (fugitives) = 3,267 lb/yr

N-7365-8 (Beerwell Process)

PE2 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	19.3 (CO2 scrubber) + 0.6 (fugitives) = 19.9 lb/day	1878 lb/yr (CO2 scrubber) + 228 lb/yr (fugitives) = 2,106 lb/yr

N-7365-9 (Distillation)

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.6 (VGS/RTO) + 3.9 (fugitives) = 4.5	116 (VGS/RTO) + 1401 (fugitives) = 1,517 lb/yr

N-7365-10 Condensate Tank)

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.6 (VGS/RTO) + 0.2 (fugitives) = 0.9	116 (VGS/RTO) + 92 (fugitives) = 208 lb/yr

N-7365-11-7: Wet cake process served by VGS/RTO and RTO system

$$\begin{aligned}
 \text{PE2} &= (0.00995 \text{ lb-VOC/1,000 gallon of ethanol produced})(360,000 \text{ gal/day}) \\
 &= \underline{3.6 \text{ lb-VOC/day/6 units}} \\
 &= 0.6 \text{ lb-VOC/day} \\
 \\
 &= (0.00995 \text{ lb-VOC/1,000 gallon of ethanol produced})(70 \times 10^6 \text{ gal/yr}) \\
 &= 697 \text{ lb-VOC/yr/6 units} \\
 &= 116 \text{ lb-VOC/yr}
 \end{aligned}$$

Distiller's Syrup Loading Operation Daily Post-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Daily Throughput (gal/day)	Daily PE1 (lb-VOC/day)
N-7365-11	0.526	67,371	35.4

Distiller's Syrup Loading Operation Annual Post-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Annual Throughput (gal/year)	Annual PE1 (lb-VOC/year)
N-7365-11	0.526	24,590,415	12,935

Corn Oil Loading Operation Daily Post-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Daily Throughput (gal/day)	Daily Emissions (lb-VOC/day)
N-7365-11	0.000175	26,000	0.0

Corn Oil Loading Operation Annual Post-Project Potential to Emit			
Permit Unit	Loading Loss EF (lb/1000 gal)	Annual Throughput (gal/year)	Annual Emissions (lb-VOC/year)
N-7365-11	0.000175	5,000,000	1

Total Fugitive Component Post-Project Potential to Emit (Project N-1143274)		
Process	Daily PE2 (lb-VOC/day)	Annual PE2 (lb-VOC/year)
Wet Cake Process	2.5	936
Corn Oil Operation	$0.01 \times 2.9 = 0.03$	11
Distiller's Syrup Operation	2.9	1,041
Total	5.4	1,988

N-7365-11

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	0.6 (VGS/RTO) + 35.4 (pre-project syrup load) + 0 (corn loading) + 5.4 (fugitives) = 41.4	116 (VGS/RTO) + 12,935 (syrup load) + 1 (corn load) + 1,988 (fugitives) = 15,040

N-7365-13 (190 Proof, DELs current PTO, and annual from project 1091307 EE pgs 21 and 22)

PE2 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	2.4 (tank) + 0.9 (fugitives) = 3.3 lb/day*	384 lb/yr (tank) + 337 lb/yr (fugitives) = 721 lb/yr*

* Calculations in **Attachment III**

N-7365-14, 15 (200 Proof, PTO DELs and annual from project 1091307 EE pgs 21 and 22)

PE2 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	3.7 (tank) + 1 (fugitives) = 4.7 lb/day*	479 lb/yr (tank) + 338 lb/yr (676/2, fugitives) = 817 lb/yr*

* Calculations in **Attachment III**

N-7365-16, 17 (Denatured ethanol, PTO DELs and annual from project 1091307 EE pgs 21 and 22)

PE2 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC	5.6 (tank) + 1 (fugitives) = 6.6 lb/day*	992 lb/yr (tank) + 338 lb/yr (676/2, fugitives) = 1,330 lb/yr*

* Calculations in **Attachment III**

N-7365-19-5: Denatured ethanol loading operation

$$\text{PE2} = (0.0188 \text{ lb-VOC}/1,000 \text{ gal loaded})(1,000,000 \text{ gal/day})$$

$$= 18.8 \text{ lb-VOC/day}$$

$$= (0.0188 \text{ lb-VOC}/1,000 \text{ gal loaded})(300,000,000 \text{ gal/yr})$$

$$= 5,640 \text{ lb-VOC/yr}$$

New Fugitive Emissions

Component Type	EF2 (lb/hr/unit)	Count	LDAR (CE)	PE2 (lb/day)	PE2 (lb/yr)
Valves (light liquid)	0.00888	15	92%	0.3	110
Pumps (light liquid)	0.04387	1	75%	0.3	110
Flanges (connectors)	0.00403	50	93%	0.3	110
Total:				0.9	329

PE2		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC*	18.8 (loading) + 3.6 (existing rack, 210/day) + 3.6 (new disconnects) + 3.5 (pre-project fugitives) + 0.9 (new fugitives) = 30.4 lb/day	5,640 (loading) + 1,326 (existing rack) + 1326 (new disconnects) + 1,237 (pre-project fugitives) + 329 (new fugitives) = 9,858 lb/yr

*

0.0188 lb-VOC/1,000 gal loaded)(1,000,000 gal/day)
= 18.8 lb-VOC/day

(0.0188 lb-VOC/1,000 gal loaded)(300,000,000 gal/yr)
= 5,640 lb-VOC/yr

= (0.0173 lb-VOC/disconnect)(210 disconnects/day)
= 3.6 lb-VOC/day

= (0.0173 lb-VOC/disconnect)(76,650 disconnects/yr)
= 1,326 lb-VOC/yr

N-7365-33-2: Denatured ethanol offloading operation

New Fugitive Emissions with 3 unloading stations

PE2 (lb/day) = (EF2 lb/hr/component)(Count)(1-CE)(24 hr/day)

Component Type	Count	EF (lb/hr/count)	LDAR (CE)	PE2 (lb/day)	PE2 (lb/yr)
Valves (light liquid)	12	0.00888	92%	0.2	73
Flanges (connectors)	12	0.00403	93%	0.1	37
Pressure relief valve (gas/vapor)	4	0.22928	95%	1.1	402
Total:				1.4	511

Revised Disconnection emissions:

Per applicant, 4 railcars will be offloaded in an hour for 24 hr/day. There will be one disconnect per railcar. Therefore,

$$\begin{aligned}\text{PE2} &= (0.0173 \text{ lb-VOC/disconnect})(96 \text{ railcars/day})(1 \text{ disconnect/railcar}) \\ &= 1.7 \text{ lb-VOC/day}\end{aligned}$$

$$\begin{aligned}\text{PE2} &= (0.0173 \text{ lb-VOC/disconnect})(35,040 \text{ railcars/yr})(1 \text{ disconnect/railcar}) \\ &= 606 \text{ lb-VOC/yr}\end{aligned}$$

PE2 (each unit)		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	0	0
SO _x	0	0
PM ₁₀	0	0
CO	0	0
VOC*	1.6 lb/day (existing fugitives) + 1.4 (new fugitives) + 1.7 lb/day (disconnect) = 4.7 lb/day	97 lb/yr (existing fugitives) + 511 (new fugitives) + 606 lb/yr (disconnect) = 1,214 lb/yr

Greenhouse Gas (GHG) Emissions

The processed chemicals are not GHGs. Therefore, the project results in no increase in GHG emissions.

Emissions Profiles are included in **Attachment IV**.

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

SSPE1 (lb/yr)					
Permit #	NO _x	SO _x	PM ₁₀	CO	VOC
N-7365-1-2	0	0	4,051	0	0
N-7365-2-2	0	0	2,162	0	0
N-7365-3-2	0	0	2,162	0	0
N-7365-4-3	1,051	60	160	1,766	232
N-7365-5-4	0	0	0	0	116
N-7365-6-3	0	0	0	0	116
N-7365-7-3	0	0	0	0	1,878
N-7365-8-4	0	0	0	0	1,878
N-7365-9-2	0	0	0	0	116
N-7365-10-3	0	0	0	0	116
N-7365-11-6	0	0	0	0	13,957 (116 ⁷ +12,935 +906)
N-7365-12-2	0	0	0	0	4,420
N-7365-13-2	0	0	0	0	158
N-7365-14-2	0	0	0	0	430
N-7365-15-2	0	0	0	0	430
N-7365-16-2	0	0	0	0	660
N-7365-17-2	0	0	0	0	660
N-7365-19-3	0	0	0	0	7,756 + 1,263 = 9,019
N-7365-20-4	15,321	3,970	10,586	51,535	1,811
N-7365-21-4					
N-7365-22-4					
N-7365-23-2	0	0	934	0	0
N-7365-29-1	313	0	6	49	15
N-7365-30-1	220	0	4	28	20
N-7365-31-1	0	0	0	0	18
ATC N-7365-32-0	0	0	584	0	0
N-7365-33-1	0	0	0	0	20
N-7365-34-1	0	73	0	0	0
Plant Fugitive Emissions	0	0	0	0	11,615 (11,518* + 97)
ERC	0	0	0	0	0
SSPE1 w/o fugitives	16,905	4,103	20,649	53,378	36,070
SSPE1 with fugitives	16,905	4,103	20,649	53,378	47,685

* project N-1043274 (EE SSPE2 Table) + 97 lb/yr existing fugitives from '-33

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/yr)					
Permit #	NO _x	SO _x	PM ₁₀	CO	VOC
N-7365-1-3	0	0	4,051	0	0
N-7365-2-2	0	0	2,162	0	0
N-7365-3-2	0	0	2,162	0	0
N-7365-4-5	1,051	60	160	1,766	232
N-7365-5-5	0	0	0	0	116
N-7365-6-4	0	0	0	0	116
N-7365-7-5	0	0	0	0	1,878
N-7365-8-6	0	0	0	0	1,878
N-7365-9-3	0	0	0	0	116
N-7365-10-4	0	0	0	0	116
N-7365-11-7	0	0	0	0	116 + 12,935 + 1 = 13,052
N-7365-12-2	0	0	0	0	4,420
N-7365-13-3	0	0	0	0	384
N-7365-14-3	0	0	0	0	479
N-7365-15-3	0	0	0	0	479
N-7365-16-2	0	0	0	0	992
N-7365-17-2	0	0	0	0	992
N-7365-19-5	0	0	0	0	8,292 (5,640+1,326 +1,326)
N-7365-20-4	15,321	3,970	10,586	51,535	1,811
N-7365-21-4					
N-7365-22-4					
N-7365-23-2	0	0	934	0	0
N-7365-29-1	313	0	6	49	15
N-7365-30-1	220	0	4	28	20
N-7365-31-1	0	0	0	0	18
N-7365-32-0	0	0	584	0	0
N-7365-33-2	0	0	0	0	606
N-7365-34-0	0	73	0	0	0
Plant Fugitive* Emissions	0	0	0	0	11,429 (11,615-1,026+329 +511)
ERC	0	0	0	0	0
SSPE2 w/o fugitives	16,905	4,103	20,649	53,378	36,012
SSPE2 with fugitives	16,905	4,103	20,649	53,378	47,441

* -1026 lb/yr ('-11), +329 lb/yr ('-19), +511 lb/yr ('-33)

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1	16,905	4,103	20,649	20,649	53,378	36,070
SSPE2	16,905	4,103	20,649	20,649	53,378	36,012
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	No	No	No	No	No	Yes

Note: PM2.5 assumed to be equal to PM10

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	8.5	18	2.1	26.7	10.3	10.3
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

Section 3.13 of Rule 2201 defines Clean Emission Unit as an emission unit that meets one of the following criteria:

- The unit is equipped with an emissions control technology with a minimum control efficiency of at least 95% (or at least 85% for lean-burn, internal combustion engines); or
- The unit is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

N-7365-1-3

N-7365 is not a Major Source for PM10 emissions.

Therefore, BE = PE1.

N-7365-4, '-5, '-6, '-7, '-8, '-10, '-11, '-13 through '-17, '-19, and '-33 fugitive emissions

VOC concentration from valves, threaded connections, flanges, pressure relief valves, and process drains is limited to 100 ppmv, above the background concentration. In addition, VOC concentration from pumps and compressor is limited to 500 ppmv above the background concentration. These are considered achieved-in-practice standard per BACT guidelines 4.12.1 (valves and connectors) and 4.12.2 (pumps and compressor seals). These units are clean emission units, therefore, and BE is set equal to PE1.

N-7365-4, '-5, '-6, '-7, '-8, '-10, '-11*

These units are either served by VGS/RTO or CO2/RTO which are required to achieve 99.5% control for VOC emissions.

Therefore, BE = PE1.

* Note that permit unit N-7365-11 also includes corn oil and distiller syrup loading operations which are Fully Offset Emission Units (defined in section 3.20 of Rule 2201).

Therefore, BE = PE1.

N-7365-13 through '-17: Internal floating roof tanks

Each tank is equipped with wiper seals capable of reducing 95% of VOC emissions. Therefore, these units are clean emission units,

Therefore, BE = PE1.

N-7365-19-5: Denatured ethanol loading operation

Denatured ethanol loading emissions:

The vapors from the loading process are routed to a vapor recovery unit with a carbon adsorption system required by permit condition to have a vapor control efficiency of 99%. Therefore, the existing loading operation is a clean emission unit and the BE = PE1.

Connection emissions:

Denatured ethanol is bottom loaded using dry break coupler to minimize the spillage. Further, the vapors are routed to a carbon adsorber system. This is Achieved-in-Practice BACT. Therefore, loading process is considered a clean emission unit and BE = PE1.

N-7365-33-2: Denatured ethanol offloading operation

Disconnection emissions:

Dry break couplers are used to unload the product into storage tanks. Further, the tanks are equipped with primary and secondary seals capable of reducing at least 95% emissions. The product is completely vacuumed to have minimal residual of liquid. Therefore, this operation is a clean emissions unit, and BE is set equal to PE1.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is a major source for VOCs, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x		50,000	
SO _x		80,000	
PM ₁₀		30,000	
VOC	29,728*	50,000	No

Na is not applicable

$$\begin{aligned}
 * \quad \Sigma \text{PE2} &= 232 + 116 + 116 + 1,878 + 1,878 + 116 + 116 + 13,052 + 384 + 479 + 479 + 992 \\
 &\quad + 992 + 8,292 + 606 \\
 &= 29,728 \text{ lb-VOC/yr}
 \end{aligned}$$

Since the SB 288 Major Modification Thresholds for VOCs is not surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

NO_x, SO_x, PM₁₀

The source is not a major source for these air contaminants and therefore the project is not a Federal Major Modification for NO_x, SO_x, and PM₁₀.

VOCs

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

For existing emissions units, the increase in emissions is calculated as

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where:

PAE = Projected Actual Emissions, and

BAE = Baseline Actual Emissions

UBC = Unused baseline capacity

Note that UBC cannot be used in this project because the applicant has proposed to increase the utilization of this unit. Therefore, UBC = 0 lb-VOC/yr.

PAE was not provided by the applicant and was therefore set equal to PE2.

BAE is calculated in the following tables (refer to **Attachments II and III** for source test and Tanks 4.0 Calculations).

N-7365-4 thru '-11

Source Test Date	EF (lb-VOC/1,000 gal)	Production (gal/yr)	Total BAE (lb/yr)	VGS/RTO (%)	CO2/RTO %	VGS/RTO BAE (lb/yr)	CO2/RTO BAE (lb/yr)
5/13-4/14	0.04589	55,107,690	2,529	14.5 %	85.5	367	2,162
5/14 – 4/15	0.04354	57,169,591	2,489	9.5 %	90.5	237	2,289
average						302	2,226

N-7365-13 thru '-17

Permit Units	5/13-4/14 (gal/yr)	Tanks 4.0 (lb/yr)	5/14 – 4/15 (gal/yr)	Tanks 4.0 (lb/yr)	Average BAE (lb/yr)
'-13	444,407	156	699,780	158 (at 600,000 permit limit)	157
'-14	26,028,794	393	26,652,106	399	396
'-15	25,992,257	393	25,881,901	392	393
'-16	7,030,823	359	41,070,886	507	433
'-17	7,494,756	361	36,363,821	487	424

N-7365-19

Source Test Date	EF (loading) (lb-VOC/1,000 gal)	Production (gal/yr)	Loading BAE (lb/yr)	EF (connects)	# Connects	Connection BAE (lb/yr)
5/13-4/14	9 E -06	54,424,105	0	0.0173	26,608	460
5/14 – 4/15	33 E -06	82,198,616	3	0.0173	37,035	641
average			2			551

N-7365-33

Source Test Date	EF (connects)	# Connects	Connection BAE (lb/yr)
5/13-4/14	0.0173	29	1
5/14 – 4/15	0.0173	771	13
average			7

Emissions Increase (PAE = PE2 – BAE)

Permit Units	PE2 (lb/yr)	BAE (lb/yr)	Emissions Increase (lb/yr)
'-4, '-5, '-6, '-9, '-10, and '-11 (VGS/RTO)	697 (6 tanks)	302	395
'-7, '-8 (CO2/RTO)	3756 ('-7 and '-8)	2,226	1,530
'-11 Corn Loading	0	0	0
'-13	384	157	2267
'-14	479	396	83 ~ 0 (< 0.5 lb/day)
'-15	479	393	86 ~ 0 (< 0.5 lb/day)
'-16	992	433	449
'-17	992	424	568
'-19 (loading)	5,640	2	5638
'-19 (existing connections)	1,326	551	775
'-19 (new connections)	1,326	0	1,326
'-33 (existing connections)	606 x 0.25 = 152	7	145 ~ 0 (< 0.5 lb/day)
'-33 (new connection)	606 x 0.75 = 455	0	455
Total			13,403

As the emissions increase > 0 for VOCs and the project is a Federal Major Modification for VOCs.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Sulfuric acid mist
- Hydrogen sulfide (H2S)

- Total reduced sulfur (including H₂S)
- Reduced sulfur compounds

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Total PE from New and Modified Units	0.5	14.9	0.03	0.9	2.1	2.1
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included below.

VOCs except where indicated

	PE1	PE2	QNEC
N-7365-1	4051 (PM10)	4051 (PM10)	0
N-7365-4	232	232	0
N-7365-5	339	339	0
N-7365-6	334	334	0
N-7365-7	3267	3267	0
N-7365-8	2106	2106	0
N-7365-9	1517	1517	0
N-7365-10	208	208	0
N-7365-11	16,951	15,040	-478
N-7365-13	495	721	57
N-7365-14, -15 (each)	768	817	12
N-7365-16, 17 (each)	880	1,330	113
N-7365-19 Existing Rack Disconnects	8,272	9,858	397
N-7365-33	117	1,214	274

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 above, the applicant is proposing to install a new loading rack ('-19) and 3 new unloading stations ('-33) with an increase in disconnect emissions exceeding 2.0 lb-VOC/day for N-7365-19 and '-33 respectively. Thus, both '-19 and '-33 trigger BACT.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE2 = Post-Project Potential to Emit, (lb/day)

HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE2} - (\text{PE1} \times (\text{EF2} / \text{EF1}))$$

EF1 = EF2

	PE2	PE1	EF2/EF1	AIPE
N-7365-1	PE2 = PE1		EF2 = EF1	0
N-7365-4	0.9	1	1	-0.1
N-7365-5	1.2	1.3	1	-0.1
N-7365-6	1.2	1.3	1	-0.1
N-7365-7	23.1	26.3	$0.05365/0.0626 = 0.857$	0.6
N-7365-8	19.9	23.1	$0.05365/0.0626 = 0.857$	0.1
N-7365-9	4.5	4.6	1	0.1
N-7365-10	0.9	0.9	1	0
N-7365-11 (VGS/RTO)	0.6	0.7	$0.00995/0.01161 = 0.857$	0
Syrup Load	PE2 = PE1		EF2 = EF1	
Corn Load	0	13.7	$0.000175/0.526 = 0.857$	0
Fugitives	5.4	8.1	EF2 = EF1	-2.7
N-7365-13, '-14, 15	PE2 = PE1		EF2 = EF1	0
N-7365-16, '-17	5.6	2.7	EF2 = EF1	2.9
N-7365-19 Existing Loading Rack	18.8	60	$0.0188/0.0834 = 0.225$	4.5
N-7365-19 Existing Rack Disconnects	3.6	3.5	EF2 = EF1	0.1
N-7365-19 Existing Rack Fugitives	3.5	3.5	EF2 = EF1	0.0
N-7365-33	PE2 = PE1		EF2 = EF1	0

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOC emissions from tanks '-16 and '-17 and existing loading rack '-19. Therefore BACT is triggered for modification purposes.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does constitute a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOC for all emissions units in the project for which there is an emission increase (internal floating roof tanks '-16, '-17, loading and unloading racks '-19 and '-33).

2. BACT Guidelines - Attachment V

N-7365-19

7.1.10 Loading Rack/Switch Loading

N-7365-16,17

7.3.3 Petroleum and Petrochemical Production – Floating Roof Organic Liquid Storage or Processing Tank $\geq$ 471 bbl tank capacity and $\geq$ 0.5 psia TVP

** 200 proof ethanol is a gasoline additive i.e. BACT Guideline 7.3.3 is applicable

N-7365-33

4.12.1 Chemical Plants – Valves and Compressors

4.12.2 Chemical Plants Pump and Compressor Seals

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see **Attachment VI**), BACT has been satisfied with the following:

N-7365-16 and '-17

BACT guideline 7.3.3 requires achieving 95% control for VOC emissions using dual wiper seals with drip curtain or primary metal shoe with secondary wiper seal or equal.

This tank is equipped with dual wiper seals capable of achieving at least 95% control for VOC emissions. Therefore, BACT requirements are satisfied.

N-7365-19

BACT Guideline 7.1.10 requires the use of bottom loading with dry break couplers and vapor collection vented to a thermal incinerator or flare (or equivalent technology) capable of reducing at least 99% VOC emissions.

The new loading rack will use bottom loading technique with the use of dry break couplers. The vapors discharged from the filling process will be routed to an existing carbon adsorber system capable of reducing at least 99% of VOC emissions. Therefore, BACT requirements are satisfied.

N-7365-33

Fugitive emissions:

VOC concentration from valves, threaded connections, flanges, pressure relief valves, and process drains is limited to 100 ppmv, above the background concentration. In addition, VOC concentration from pumps and compressor is limited to 500 ppmv above the background concentration. These are considered achieved-in-practice standard per BACT guidelines 4.12.1 (valves and connectors) and 4.12.2 (pumps and compressor seals). These units are clean emission units, therefore, and BE is set equal to PE1.

Disconnection emissions:

Dry break couplers are used to unload the product into storage tanks. Further, the tanks are equipped with primary and secondary seals capable of reducing at least 95% emissions. The product is completely vacuumed to have minimal residual of liquid. Therefore, this operation is a clean emissions unit, and BE is set equal to PE1.

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	16,905	4,103	20,649	53,378	47,441
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets calculations required?	No	No	No	No	Yes

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC only. Therefore offset calculations will be required for this project.

As seen above, the SSPE2 is greater than the offset thresholds for VOC only. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = HAE

The facility is proposing to install a new emissions unit; therefore BE = 0. Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = $([PE2 - BE] + ICCE) \times DOR$

$$\begin{aligned}\Sigma PE2 - BE \text{ (VOCs)} &= SSPE2 - SSPE1 \\ &= 47,430 - 47,685 \\ &= -255 \text{ lb/yr}\end{aligned}$$

Offsets will not be required for the project.

B. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSPE of greater than 20,000 lb/year for any pollutant.
- e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in Sections VII.C.7 and VII.C.8, this project is a Federal Major Modification. Therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	16,905	16,905	20,000 lb/year	No
SO _x	4,103	4,103	54,750 lb/year	No
PM ₁₀	20,649	20,649	29,200 lb/year	No
CO	53,378	53,378	200,000 lb/year	No
VOC	47,685	47,441	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSPE = SSPE2 – SSPE1. The SSPE is compared to the SSPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	16,905	16,905	0	20,000 lb/year	No
SO _x	4,103	4,103	0	20,000 lb/year	No
PM ₁₀	20,649	20,649	0	20,000 lb/year	No
CO	53,378	53,378	0	20,000 lb/year	No
VOC	47,441	47,685	-244	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V Significant Modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As discussed above, because the project is a Federal Major Modification (and Title V Significant Modification) public noticing is required. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed (New) Rule 2201 (DEL) Conditions:

N-7265-4 thru '-6, '-9, and '-10 (Process Tanks)

The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Y

Controlled VOC emissions rate from the slurry tank served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

N-7265-7 and -8 (Fermentation, Beerwell)

The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Y

Controlled VOC emissions rate from each fermentation tank served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the entire fermentation process served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the fermentation process and beerwell process tank all served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

N-7265-11 (Wet Cake)

The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Y

Controlled VOC emissions rate from the distillation process served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the

vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Y

Loading losses from the distiller's syrup load out operation shall not exceed 0.526 lb-VOC/1,000 gallons. [District Rule 2201] Y

Loading losses from the distiller's corn oil load out operation shall not exceed 0.000175 lb-VOC/1,000 gallons. [District Rule 2201] Y

The maximum throughput of distiller's syrup loaded shall not exceed any of the following: 67,371 gallons per day or 24,590,415 gallons per year. [District Rule 2201] Y

The maximum throughput of corn oil loaded shall not exceed any of the following: 26,000 gallons per day or 5,000,000 gallons per year. [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with the wet cake process shall not exceed 2.5 lb/day. [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall not exceed 0.03 lb/day. [District Rule 2201] N

Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall not exceed 2.9 lb/day. [District Rule 2201] N

N-7365-13

The maximum amount of 190-proof ethanol processed through this storage tank shall not exceed either of the following limits: 206,000 gallons/day or 25,000,000 gallons/year. [District Rule 2201] Y

VOC emissions from this 190-proof ethanol storage tank shall not exceed 2.4 lb/day or 384 lb/yr. [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with this 190-proof ethanol storage tank shall not exceed 0.9 lb/day. [District Rule 2201] Y

N-7365-14, '-15

The maximum amount of 200-proof ethanol processed through this storage tank shall not exceed either of the following limits: 342,000 gallons/day or 70,000,000 gallons/year. [District Rule 2201] Y

The combined maximum amount of 200-proof ethanol processed through the storage tanks operating under permits N-7365-14 and N-7365-15 shall not exceed 70,000,000 gallons/year. [District Rule 2201] Y

VOC emissions from the 200-proof ethanol storage tank shall not exceed 3.7 lb/day or 479 lb/yr. [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with this 200-proof ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Y

N-7365-16, '-17

The maximum amount of denatured ethanol processed through this storage tank shall not exceed either of the following limits: 1,000,000 gallons/day or 300,000,000 gallons/year. [District Rule 2201] Y

VOC emissions from the denatured ethanol storage tank shall not exceed 2.7 lb/day or 660 lb/yr. [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with this denatured ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Y

N-7365-19

The maximum amount of denatured ethanol loaded into trucks or railcars shall not exceed either of the following limits: 1,000,000 gallons/day or 300,000,000 gallons/year. [District Rule 2201] Y

Combined VOC emissions rate from existing and new loading racks shall not exceed 300,000,000 gallons/year. [District Rule 2201] Y

Controlled VOC emissions rate from the vapor recovery system serving the denatured ethanol loading rack shall not exceed 0.0188 lb/1,000 gal-denatured ethanol loaded (equivalent to 10 milligrams of VOC / liter of ethanol loaded). This VOC emission rate is based on a six hour rolling average. [District Rule 2201] Y

The maximum number of gasoline hose disconnects performed by the ethanol truck loading operation shall not exceed either of the following limits: 210 disconnects/day for existing loading rack and 210 disconnects/day for new loading rack. [District Rule 2201] Y

The maximum liquid spillage/leaks from each hose disconnect shall not exceed 10 milliliters. [District Rule 2201] Y

VOC emissions from the denatured ethanol truck loading operation shall not exceed 18.8 lb/day or 5,640 lb/yr. [District Rule 2201] Y

VOC emissions from disconnects from the denatured ethanol truck loading operation shall not exceed 7.2 lb/day. [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with the denatured ethanol truck loading operation shall not exceed 4.4 lb/day. [District Rule 2201] Y

N-7365-33

VOC emissions from disconnects from the denatured ethanol truck loading operation shall not exceed 1.7 lb/day or 606 lb/yr in any 12 consecutive month rolling period [District Rule 2201] Y

Fugitive VOC emissions from equipment leaks associated with the denatured ethanol truck loading operation shall not exceed 3.0 lb/day. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

No additional source testing is required.

2. Monitoring

No revision to existing monitoring conditions is required to demonstrate compliance with Rule 2201. For the above units, any existing monitoring requirements will be replicated in the permits being issued under this project.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

For the above units, any existing recordkeeping requirements will be replicated in the permits being issued under this project. Compliance is expected with this Rule.

4. Reporting

No new reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The proposed location is in an attainment area for NO_x, CO, and SO_x. However, the project results in changes in VOC emissions only and there is no air quality standard for VOCs. Therefore, an AAQA was not required.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. PES's compliance certification is included in **Attachment VII**.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to modify existing permits for an ethanol manufacturing facility.

Since the project will provide new equipment to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2410 Prevention of Significant Deterioration

As discussed in section VII.C.9 of this document, this project is not subject to the requirements of this rule.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

The Title V Compliance Certification form is included in **Attachment VIII**.

Rule 4001 New Sources Performance Standards

40 CFR Part 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

Pursuant to Section 60.480a(a), the provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry for which construction, reconstruction, or modification occurs after November 7, 2006.

The facility is currently operating in compliance with the subpart and the project is not expected to affect compliance status. The ATCs and PTO include the appropriate conditions ensuring continuing compliance.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. The facility is currently operating in compliance with the rule and continued compliance is expected.

California Health & Safety Code 41700 - Health Risk Assessment

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Attachment IX**), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
N-7365-1-3, '4-5, '5-5, '6-4, '7-5, '8-6, '9-3, '10-4, '11-7, '13-3, '14-3, '15-3, '16-3, '17-3, '19-5 and '33-2	0.0945 per million	No

The project is approved without TBACT. No special conditions are required.

Rule 4455 Components at Petroleum Refineries, Gas Liquids Processing, Facilities, and Chemical Plants

Purpose

The purpose of District Rule 4455 is to limit VOC emissions from leaking components at petroleum refineries, gas liquids processing facilities, and chemical plants.

PES is not a petroleum refinery or a gas liquids processing facility. Pursuant Section 3.4, a chemical plant is defined as an establishment that produces organic chemicals and/or manufactures products by organic chemical processes. The company produces ethanol by fermenting sugars in the corn using yeast, which can be considered an organic chemical process. Therefore, this facility meets the definition of a chemical plant and is subject to the requirements of this Rule.

The facility is currently operating in compliance with the rule and continued compliance is expected.

Rule 4623 Storage of Organic Liquids

This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

The process tanks and storage tanks under permit N-7365-7 and '8 either store or have organic liquid placed in them at some point during the ethanol production process. Therefore, these tanks are subject to the requirements of this rule. True vapor pressure (TVP) of the liquids in these tanks is presumed to be within the range of greater than 0.5 psia and less than 11.0 psia.

The project is not expected to affect compliance status. Continued compliance is expected.

District Rule 4624 Organic Liquid Loading

N-7365-19 (ethanol loading rack):

Denatured ethanol is an organic liquid with a TVP less than 1.5 psia, the requirements of this rule do not apply to the proposed denatured ethanol loading rack and no further discussion is required.

N-7365-33 (Denatured Ethanol Unloading)

The operation receives denatured ethanol via railroad tank cars and unload the fuel into the existing storage tanks. This operation is an "unloading rack" under Rule 2020 and therefore, it qualifies as "transfer rack", and is being called as "organic liquid transfer facility" under Rule 4624. Therefore, this operation is subject to the requirements in this rule. The unit is currently operating in compliance and the addition of 3 new unloading stations is not expected to affect compliance status. Continued compliance is expected.

District Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes. No changes to the RTO are proposed. Continued compliance is expected.

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. RECOMMENDATION

Compliance with all applicable regulations is expected. Therefore, issuance of the ATCs is recommended.

X. BILLING INFORMATION

Permit Number	Fee Schedule	Fee Description
N-7365-1	3020-01-E	3890.5 electric horsepower
N-7365-4	3020-02-E	2.4 MMBtu/hr
N-7365-5	3020-05-C	29,653 gallons
N-7365-6	3020-05-E	177,748 gallons
N-7365-7	3020-05-G	4 x 750,000 gallons
N-7365-8	3020-05-F	928,526 gallons
N-7365-9	3020-01-F	555 total electric hp
N-7365-10	3020-05-E	190,400 gallons
N-7365-11	3020-01-F	600 total electric hp
N-7365-13	3020-05-E	190,357 gallons
N-7365-14	3020-05-E	190,357 gallons
N-7365-15	3020-05-E	190,357 gallons
N-7365-16	3020-05-E	190,357 gallons
N-7365-17	3020-05-E	582,750 gallons
N-7365-19	3020-01-C	55 total electric hp
N-7365-33	3020-01-C	50 total electric hp

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue -7365-1-3, '-4-5, '-5-5, '-6-4, '-7-5, '-8-6, '-9-3, '-10-4, '-11-7, '-13-3, '-14-3, '-15-3, '-16-3, '-17-3, '-19-5 and '-33-2 in **Attachment X**.

Attachments

Attachment I: Current PTOs and Base Document ATCs
Attachment II: Source Test Vapor Pressure Information
Attachment III: Tanks 4.0
Attachment IV: Emissions Profiles
Attachment V: BACT Guidelines
Attachment VI: BACT Top Down Analyses
Attachment VII: Statewide Compliance Statement
Attachment VIII: Title V Compliance Certification Form
Attachment IX: HRA
Attachment X: Draft ATCs

Attachment I
Current PTOs and Base Document ATCs

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-1-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

TRUCK AND RAILCAR GRAIN RECEIVING AND STORAGE OPERATION INCLUDING A RECEIVING SHED, RAILCAR AND TRUCK RECEIVING HOPPERS, A RECEIVING DRAG CONVEYOR, A RECEIVING LEG (ELEVATOR), ALL SERVED BY A 25,000 CFM MAC EQUIPMENT MODEL 120MCF255 STYLE III BAGHOUSE; AND TWO (2) 500,000 BUSHEL CAPACITY STORAGE SILOS, TWO 5,000 BUSHEL CAPACITY INTERSTICE BINS AND ENCLOSED MECHANICAL CONVEYORS ALL SERVED BY A 3,500 CFM MAC EQUIPMENT MODEL 96AVS36N STYLE III BAGHOUSE (BAGHOUSE SHARED WITH PERMITS N-7365-2 AND -3)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Visible emissions from the exhaust of the baghouse serving the grain receiving pit shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Visible emissions from the exhaust of baghouse serving the storage silos, day bins and associated conveying equipment shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Each baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Each baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Material removed from each baghouse shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Replacement bags numbering at least 10% of the total number of bags in each baghouse shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Each baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Each baghouse shall operate at all times with a minimum differential pressure of 1 inches water column and a maximum differential pressure of 5 inches water column. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The exhaust stack of the baghouse serving the grain receiving pit shall have the following parameters: stack height from ground level - 75 feet; stack diameter - 35 inches; and gas exit flowrate - 25,000 dscfm. [District Rule 4102]
11. The exhaust stack of the baghouse serving the grain handling and transfer operations shall have the following parameters: stack height from ground level - 110 feet; stack diameter - 10 inches; and gas exit flowrate - 3,500 dscfm. [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

12. The grain receiving baghouse shall not operate for more than 3,500 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum amount of grain received and transferred to storage shall not exceed either of the following limits: 12,330 tons/day or 646,800 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. PM10 emissions from the grain receiving baghouse shall not exceed 0.004 gr/dscf. [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
15. PM10 emissions from the grain handling/transfer baghouse shall not exceed 0.004 gr/dscf. [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
16. Visible emissions from the baghouse serving the grain receiving operation shall be evaluated using EPA Method 22 for a period of at least 6 minutes at least once during each day that the permit unit is operated. [40 CFR Part 64] Federally Enforceable Through Title V Permit
17. Visible emissions from the baghouse serving the grain receiving pit shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. Upon determining an excursion from this requirement, the permittee shall investigate the excursion and take corrective action to minimize emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
18. The baghouse serving the grain receiving pit shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [40 CFR Part 64] Federally Enforceable Through Title V Permit
19. The baghouse serving the grain receiving pit shall operate at all times with a minimum differential pressure of 1 inches water column and a maximum differential pressure of 5 inches water column. [40 CFR Part 64] Federally Enforceable Through Title V Permit
20. Differential operating pressure shall be monitored and recorded on each day that the baghouse serving the grain receiving pit operates. [40 CFR Part 64] Federally Enforceable Through Title V Permit
21. During each day of operation, the permittee shall record the pressure drop of the baghouse serving the grain receiving pit, and compare the readings with the acceptable range. Upon detecting any excursion from the acceptable range pressure readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
22. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
23. The permittee shall maintain daily and annual records of the amount of grain received and transferred to storage, in tons, and annual records of the amount of time the grain receiving baghouse operates, in hours. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Differential operating pressure shall be monitored and recorded on each day that each baghouse operates. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Records of all maintenance of each baghouse, including all change outs of filter media, shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
26. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 10 CFR Part 64] Federally Enforceable Through Title V Permit
27. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-4-3

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

ONE 18,500 GALLON SLURRY TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-5, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-5, '-6, '-7, '-8, '-9, '-10 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. All vapors from the slurry tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Controlled VOC emissions rate from the slurry tank served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. There shall be no fugitive VOC emissions from equipment leaks associated with this slurry tank. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
11. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] 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.

12. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
13. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted within 120 days after initial start-up and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. During source testing, permittee shall maintain record of ethanol production rate measured in gal-ethanol/hour. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
23. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
25. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] 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.

28. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-5-4

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

29,653 GALLON YEAST TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-6, '-7, '-8, '-9, '-10 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the slurry tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the yeast tank served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions from equipment leaks associated with this tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 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.

13. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted within 60 days after recommencing the operation and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted within 60 days after recommencing the operation and at least once every 12 months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
22. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
25. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] 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.

28. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
35. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
36. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
37. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
38. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
39. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
40. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
41. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-6-3

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

ONE 177,748 GALLON LIQUEFACTION TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-7, '-8, '-9, '-10 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the liquefaction tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the liquefaction tank served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions from equipment leaks associated with the liquefaction tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 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.

13. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
14. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
17. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
22. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
25. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] 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.

28. The permittee shall maintain daily records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7 [40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
35. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
36. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
37. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
38. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
39. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
40. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
41. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-7-4

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

FERMENTATION PROCESS CONSISTING OF FOUR 705,000 GALLON FIXED ROOF PROCESS TANKS, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-8) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-8). THE EXHAUST FROM THE PROCESS TANKS IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the fermentation tanks shall be vented through the CO2 scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the CO2 scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from each fermentation tank served by the CO2 scrubber vented to the RTO shall not exceed 0.0626 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the entire fermentation process served by the CO2 scrubber vented to the RTO shall not exceed 0.0626 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the fermentation process and beerwell process tank all served by the CO2 scrubber vented to the RTO shall not exceed 0.0626 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 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.

11. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-VOC/MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fugitive VOC emissions from equipment leaks associated with the fermentation process shall not exceed 3.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
14. VOC content in the fluid handled through the chiller system (shared with permit N-7365-8) shall be less than or equal to 10% by weight. Compliance with this condition shall be verified by sampling fluid from chilled water tank, as well as, the sump of the CO2 scrubber within 60 days of startup under this permit and whenever required by the District, ARB, or EPA. [District Rules 2201, 4455, 40 CFR 60.480a (d)(5)] Federally Enforceable Through Title V Permit
15. The owner or operator shall keep records of the following items for VOC content testing: a.) the date, b.) vessel or location from where fluid is sampled, c.) name of the person taking and analyzing samples and company affiliation, d.) VOC content (% by wt.) in the sample, and e.) report of the test results. [District Rules 2201 and 4455, 40 CFR 60.486a (i)(3)] Federally Enforceable Through Title V Permit
16. The permittee shall include in the Operator Management Plan all components exclusively handling liquid streams with VOC content less than 10% by weight. [District Rule 4455] Federally Enforceable Through Title V Permit
17. The results of any laboratory testing or other pertinent information to demonstrate compliance with the exemption criteria for components exclusively handling liquid streams with VOC content less than 10% by weight shall be submitted with the Operator Management Plan. [District Rule 4455] Federally Enforceable Through Title V Permit
18. VOC content shall be determined using South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids, or EPA Method 8260B, or other alternative test methods approved by the District prior to their use. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
19. Tanks shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
23. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 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.

26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
28. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The CO2 scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The water flow rate through the CO2 scrubber shall not be less than 33 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The permittee shall monitor and record the water flow rate through the CO2 scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. If the water flow rate through the CO2 scrubber is less than 33 gal/minute, the permittee shall correct the water flow rate to exceed 33 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the CO2 scrubber continues to be less than 33 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall maintain daily records of (1) the date of water flow rate measurements, (2) the water flow rate through the CO2 scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 33 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
39. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
40. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] 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.

41. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
42. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
43. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
44. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
45. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
46. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
48. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-8-5

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

ONE 928,526 GALLON FIXED ROOF BEERWELL PROCESS TANK, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-7) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-7). THE EXHAUST FROM THE PROCESS TANK IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the beerwell process tank shall be vented through the CO2 scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the CO2 scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the beerwell process tank served by the CO2 scrubber vented to the RTO shall not exceed 0.0626 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the fermentation process and beerwell process tank all served by the CO2 scrubber vented to the RTO shall not exceed 0.0626 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions from equipment leaks associated with the beerwell process tank shall not exceed 0.6 lb/day. [District Rule 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.

12. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
13. VOC content in the fluid handled through the chiller system (shared with permit N-7365-7) shall be less than or equal to 10% by weight. Compliance with this condition shall be verified by sampling fluid from chilled water tank, as well as, the sump of the CO2 scrubber within 60 days of startup under this permit and whenever required by the District, ARB, or EPA. [District Rules 2201, 4455, 40 CFR 60.480a (d)(5)] Federally Enforceable Through Title V Permit
14. The owner or operator shall keep records of the following items for VOC content testing: a.) the date, b.) vessel or location from where fluid is sampled, c.) name of the person taking and analyzing samples and company affiliation, d.) VOC content (% by wt.) in the sample, and e.) report of the test results. [District Rules 2201 and 4455, 40 CFR 60.486a (i)(3)] Federally Enforceable Through Title V Permit
15. The permittee shall include in the Operator Management Plan all components exclusively handling liquid streams with VOC content less than 10% by weight. [District Rule 4455] Federally Enforceable Through Title V Permit
16. The results of any laboratory testing or other pertinent information to demonstrate compliance with the exemption criteria for components exclusively handling liquid streams with VOC content less than 10% by weight shall be submitted with the Operator Management Plan. [District Rule 4455] Federally Enforceable Through Title V Permit
17. VOC content shall be determined using South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids, or EPA Method 8260B, or other alternative test methods approved by the District prior to their use. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
18. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
20. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
22. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
26. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [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.

27. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
29. The CO2 scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The water flow rate through the CO2 scrubber shall not be less than 33 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The permittee shall monitor and record the water flow rate through the CO2 scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. If the water flow rate through the CO2 scrubber is less than 33 gal/minute, the permittee shall correct the water flow rate to exceed 33 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the CO2 scrubber continues to be less than 33 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall maintain daily records of (1) the date of water flow rate measurements, (2) the water flow rate through the CO2 scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 33 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64]
39. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
40. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
41. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] 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.

42. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
43. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
44. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
45. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
46. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
47. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-9-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

DISTILLATION PROCESS CONSISTING OF ONE DE-GAS VESSEL, ONE BEER STRIPPER, ONE SIDE STRIPPER, ONE RECTIFIER, TWO MOLECULAR SIEVES AND ONE 200 PROOF ETHANOL CONDENSER, ALL SERVED BY KOCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-10 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. All vapors from the distillation process shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Controlled VOC emissions rate from the distillation process served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOX/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOX/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Fugitive VOC emissions from equipment leaks associated with the distillation process shall not exceed 3.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 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.

12. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
13. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
18. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
20. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
21. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
23. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64]
25. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] 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.

29. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
31. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
32. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
33. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
34. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
35. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
36. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-10-3

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

ONE 190,400 GALLON PROCESS CONDENSATE TANK, COLLECTING WATER FROM THE CO₂ AND VENT GAS SCRUBBERS, SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-11)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the process condensate tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the process condensate tank served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Fugitive VOC emissions from equipment leaks associated with this process condensate tank shall not exceed 0.2 lb/day. [District Rule 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.

12. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
14. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
21. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
22. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
24. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
25. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day [District Rule 2201 and 40 CFR Part 64] 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.

27. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64]
29. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
35. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
36. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
37. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
38. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
39. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
40. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] 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.

41. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
42. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-11-5

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

WET CAKE PROCESS CONSISTING OF ONE 194,400 GALLON WHOLE STILLAGE TANK, ONE CENTRIFUGE SYSTEM WITH FIVE CENTRIFUGES, ONE 127,000 GALLON THIN STILLAGE TANK, THREE EVAPORATORS, ONE 129,600 GALLON SYRUP TANK, CORN OIL EXTRACTION SYSTEM CONSISTING OF ONE 36,000 GALLON HEAT SOAK TANK, THREE CENTRIFUGES, ONE 800 GALLON BUFFER TANK, ONE 1,285 GALLON FINAL PRODUCT TANK, TWO 10,500 GALLON CORN OIL LOADOUT STORAGE TANKS ALL SERVED BY AN KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-10) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-10) AND A TRUCK LOADOUT SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Wet cake conveyors between each tank or each emissions unit at the wet cake process unit shall be fully enclosed. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the wet cake process shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Controlled VOC emissions rate from the wet cake process served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 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.

11. Loading losses from the distiller's syrup or corn oil loadout operation shall not exceed 0.526 lb-VOC/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum throughput of distiller's syrup loaded shall not exceed any of the following: 67,371 gallons per day or 24,590,415 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The maximum throughput of corn oil loaded shall not exceed any of the following: 26,000 gallons per day or 1,722,500 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall not exceed 2.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall not exceed 2.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Fugitive VOC emissions from equipment leaks associated with the wet cake process shall not exceed 2.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-9, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Leak Rate/Screening Value Correlations Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-9, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Leak Rate/Screening Value Correlations Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The permittee shall maintain daily and annual records, in gallons, of the quantity of distiller's syrup and corn oil loaded at this facility. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain accurate component count and shall update such records when new components are approved and installed. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted within 120 days after initial start-up and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [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.

28. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
29. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
39. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
40. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
41. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
42. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455] 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.

43. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
44. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
45. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
46. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
47. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
48. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-13-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

190,357 GALLON INTERNAL FLOATING ROOF 190-PROOF ETHANOL STORAGE TANK WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of 190-proof ethanol processed through this storage tank shall not exceed either of the following limits: 206,000 gallons/day or 600,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from this 190-proof ethanol storage tank shall not exceed 2.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Fugitive VOC emissions from equipment leaks associated with this 190-proof ethanol storage tank shall not exceed 0.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The permittee shall maintain daily and annual records, in gallons, of the quantity of 190-proof ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
7. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
8. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
9. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
10. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
11. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] 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.

12. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
13. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
14. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
18. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
21. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
22. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
23. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
24. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
25. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
26. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] 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.

27. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
28. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
29. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
30. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
31. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
32. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit
33. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
34. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
35. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
36. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40 CFR 60.116b(d)] Federally Enforceable Through Title V Permit
37. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit
38. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] 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.

39. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
40. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
41. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
42. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit
43. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
44. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
45. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
46. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
47. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] 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.

49. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
50. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-14-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of 200-proof ethanol processed through this storage tank shall not exceed either of the following limits: 342,000 gallons/day or 60,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The combined maximum amount of 200-proof ethanol processed through the storage tanks operating under permits N-7365-14 and N-7365-15 shall not exceed 60,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC emissions from the 200-proof ethanol storage tank shall not exceed 3.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions from equipment leaks associated with this 200-proof ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The permittee shall maintain daily and annual records, in gallons, of the quantity of 200-proof ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
9. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
10. This storage tank shall be equipped with an Ultraflo, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] 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.

12. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
14. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
15. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
19. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
25. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
26. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] 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.

27. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
28. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
29. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
31. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
32. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
33. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit
34. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
36. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
37. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
38. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] 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.

39. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
40. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
41. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
42. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
43. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit
44. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
45. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
46. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
47. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] 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.

49. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
50. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
51. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-15-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of 200-proof ethanol processed through this storage tank shall not exceed either of the following limits: 342,000 gallons/day or 60,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The combined maximum amount of 200-proof ethanol processed through the storage tanks operating under permits N-7365-14 and N-7365-15 shall not exceed 60,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC emissions from the 200-proof ethanol storage tank shall not exceed 3.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions from equipment leaks associated with this 200-proof ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The permittee shall maintain daily and annual records, in gallons, of the quantity of 200-proof ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
9. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
10. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] 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.

12. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
14. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
15. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
19. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
25. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
26. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] 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.

27. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
28. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
29. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
31. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
32. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
33. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit
34. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
36. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
37. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
38. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] 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.

39. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
40. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
41. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
42. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
43. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit
44. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
45. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
46. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
47. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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49. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
50. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
51. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-16-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of denatured ethanol processed through this storage tank shall not exceed either of the following limits: 360,000 gallons/day or 93,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from the denatured ethanol storage tank shall not exceed 2.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Fugitive VOC emissions from equipment leaks associated with this denatured ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined maximum amount of denatured ethanol processed through the storage tanks operating under permits N-7365-16 and N-7365-17 shall not exceed 93,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The permittee shall maintain daily and annual records, in gallons, of the quantity of denatured ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
9. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
10. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
14. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
15. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
19. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
25. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
26. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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27. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
28. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
29. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
31. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
32. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
33. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit
34. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
36. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
37. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
38. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] 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.

39. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
40. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
41. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
42. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
43. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit
44. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
45. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
46. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
47. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] 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.

49. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
50. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
51. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-17-2

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The maximum amount of denatured ethanol processed through this storage tank shall not exceed either of the following limits: 360,000 gallons/day or 93,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC emissions from the denatured ethanol storage tank shall not exceed 2.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Fugitive VOC emissions from equipment leaks associated with this denatured ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The combined maximum amount of denatured ethanol processed through the storage tanks operating under permits N-7365-16 and N-7365-17 shall not exceed 93,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The permittee shall maintain daily and annual records, in gallons, of the quantity of denatured ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
8. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
9. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on it's legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
10. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
11. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] 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.

12. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
14. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
15. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
16. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
19. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
23. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
24. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
25. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
26. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] 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.

27. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
28. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
29. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
31. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
32. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
33. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit
34. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
35. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
36. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
37. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
38. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] 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.

39. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
40. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
41. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
42. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
43. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit
44. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
45. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
46. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
47. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] 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.

49. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
50. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
51. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-19-3

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

DENATURED ETHANOL BOTTOM TRUCK LOADING RACK WITH DRY BREAK COUPLERS SERVED BY A JOHN ZINK MODEL S3-AAD-1-70-90-6 HYDROCARBON VAPOR RECOVERY UNIT (VRU)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. Vapor return hose(s) shall be attached whenever loading equipment operates. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All trucks loaded shall be inspected and determined to be vapor-tight such that all vapors are displaced into vapor return hoses during loading. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All vapors displaced from trucks during load-out operations shall be routed through the hydrocarbon vapor recovery unit (VRU). [District Rule 2201] Federally Enforceable Through Title V Permit
6. The hydrocarbon vapor recovery unit shall maintain a minimum control efficiency of 99% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The VRU shall consist of two adsorption columns filled with activated carbon for VOC emission control and a dry vacuum pump and packed absorption column for activated carbon regeneration. One activated carbon column shall be on-stream receiving vapors in the adsorption mode while the other activated carbon column is off-stream in the regeneration mode. Each activated carbon column shall be regenerated at a frequency recommended by the manufacturer (typically ranging between 10 - 20 minutes). [District Rule 2201] Federally Enforceable Through Title V Permit
8. The maximum amount of denatured ethanol loaded into trucks or railcars shall not exceed either of the following limits: 720,000 gallons/day or 93,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the vapor recovery system serving the denatured ethanol loading rack shall not exceed 0.0834 lb/1,000 gal-denatured ethanol loaded (equivalent to 10 milligrams of VOC / liter of ethanol loaded). This VOC emission rate is based on a six hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The maximum number of gasoline hose disconnects performed by the ethanol truck loading operation shall not exceed either of the following limits: 200 disconnects/day or 73,000 disconnects/year. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum liquid spillage/leaks from each hose disconnect shall not exceed 10 milliliters. [District Rule 2201] Federally Enforceable Through Title V Permit
12. VOC emissions from the denatured ethanol truck loading operation shall not exceed 3.5 lb/day. [District Rule 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.

13. Fugitive VOC emissions from equipment leaks associated with the denatured ethanol truck loading operation shall not exceed 3.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Ongoing compliance with VOC emission rate from the exhaust vent of the VRU shall be demonstrated at least once per month by sampling the effluent gas stream with an FID, PID, or other District-approved VOC detection device. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Within 6 months of the Title V permit being issued, permittee shall apply for an Authority to Construct (ATC) and fully implement one of the following: 1) modify post-control VOC sampling rate to at least once per day or 2) install a continuous VOC emissions monitor. [40 CFR Part 64] Federally Enforceable Through Title V Permit
17. The permittee shall maintain daily and annual records, in gallons, of the quantity of denatured ethanol processed through the loading rack. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain daily and annual records of the quantity of ethanol hose disconnects at the ethanol truck loading operation. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of the monthly compliance demonstrations taken with a FID, PID, or other District-approved VOC detection device. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the VRU shall be conducted within 60 days after recommencing the operation and at least once every twelve (12) months thereafter, with equipment in operational condition. Source testing shall be conducted while denatured ethanol is being processed through the loading rack. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Source testing to demonstrate compliance with the 99% control efficiency of the VRU shall be conducted within 60 days after recommencing the operation, with equipment in operational condition. Source testing shall be conducted while denatured ethanol is being processed through the loading rack. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. If applicable, source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. During source testing, permittee shall maintain records of the amount of the ethanol loaded, measured in gal-ethanol/hour. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
26. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
27. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] 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.

28. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
29. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
30. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
31. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
32. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-7365-33-1

EXPIRATION DATE: 09/30/2017

EQUIPMENT DESCRIPTION:

DENATURED-ETHANOL TRANSFER OPERATION FROM RAIL CAR TANKS TO THE TANKS UNDER PERMITS N-7365-16 AND '-17 CONSISTING OF TWO PUMPS AND ASSOCIATED PIPING SYSTEM

PERMIT UNIT REQUIREMENTS

1. The operator shall design, install, maintain and operate the equipment under this permit such that there are no leaks and no excess organic liquid drainage at disconnection. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
2. The operator shall install a pressure-vacuum relief device on the top of each rail car tank prior to off loading denatured ethanol. [District Rule 2201] Federally Enforceable Through Title V Permit
3. A leak is defined as the dripping of VOC containing liquid at a rate of more than 3 drops per minute; or detection of any gaseous or vapor emissions with a concentration of VOC greater than 1,000 ppmv above a background as methane. [District Rule 4624] Federally Enforceable Through Title V Permit
4. Excess organic liquid drainage is defined as more than 10 mL liquid drainage. Such liquid drainage for disconnect operations shall be determined by computing the average drainage from three consecutive disconnects. [District Rule 4624] Federally Enforceable Through Title V Permit
5. The amount of denatured ethanol loaded into the storage tanks (N-7365-16 and '-17) using this operation shall be counted toward the daily and annual throughput of permit units N-7365-16 and '-17, and in no case shall exceed the limits in permits N-7365-16 and '-17. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emissions from this permit unit shall not exceed 1.9 pounds in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. VOC emissions from this permit unit shall not exceed 117 pounds in any 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Denatured ethanol shall be loaded into the storage vessels using bottom loading method. [District Rule 4624] Federally Enforceable Through Title V Permit
9. The operator shall determine an average organic liquid drainage (mL) for three consecutive disconnects to demonstrate compliance with the 10 mL (excess organic liquid drainage, equivalent to 0.017 pounds per disconnect). The drainage shall be determined within 60 days of initial startup under this permit and at least once a quarter thereafter at the time a leak inspection is performed. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
10. The operator shall inspect the components (e.g. valves, flanges, connectors etc.) for leaks within 60 days of initial startup under this permit and at least once every calendar quarter thereafter. The leak inspections shall be performed during product transfer using a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Method 21. The instrument shall be calibrated with methane in accordance with the procedures specified in EPA Method 21 or the manufacturer's instructions, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. [District Rules 2201 and 4624] 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.

11. Upon detection of a leaking component, the operator shall affix to that component a weatherproof readily visible tag with the date and time of leak detection, the date and time of leak measurement, and for gas leaks, the leak concentration in ppmv. The tag shall remain affixed to the component until the component is repaired or replaced. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All equipment that are found leaking shall be repaired or replaced within 72 hours. If the leaking component cannot be repaired or replaced within 72 hours, the component shall be taken out of service until such time the component is repaired or replaced. The repaired or replacement equipment shall be re-inspected the first time the equipment is in operation after the repair or replacement. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
13. The operator shall keep records of daily liquid unloaded from the rail car tanks in gallons. [District Rule 4624] Federally Enforceable Through Title V Permit
14. The operator shall keep daily records of the date, number of disconnections per day, hours of equipment in-use, and VOC emissions (lb/day). Daily emissions shall be estimated as follows: $\text{VOC (lb/day)} = 0.017 \text{ lb-VOC/disconnect} \times \text{number of disconnections per day} + 0.081 \text{ lb-VOC/hr} \times \text{hours per day of equipment in-use}$. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The operator shall keep monthly records of the month, year, number of disconnections, hours of equipment in-use, and VOC emissions (lb/month). Monthly emissions shall be estimated as follows: $\text{VOC (lb/month)} = 0.017 \text{ lb-VOC/disconnect} \times \text{number of disconnections per month} + 0.081 \text{ lb-VOC/hr} \times \text{hours per month of equipment in-use}$. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The operator shall keep record of total VOC emissions for each 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The operator shall keep records of the date, name of component and its location and measured ppmv value, name of the operator and the company conducting the leak inspection. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit
18. The operator shall keep daily, monthly, and annual records of the amount of denatured ethanol loaded in each storage tanks N-7365-16 and -17 using the equipment under this permit, and amount of denatured ethanol loaded from plant production. [District Rule 2201] Federally Enforceable Through Title V Permit
19. All records shall be retained for a minimum of five years and shall be made available to the APCO, ARB, or EPA during normal business hours and submitted upon request. [District Rules 2201 and 4624] Federally Enforceable Through Title V Permit

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

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-4-4

ISSUANCE DATE: 11/13/2014

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:

MODIFICATION OF ONE 18,500 GALLON SLURRY TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-5, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-5, '-6, '-7, '-8, '-9, '-10 AND '-11): ADD ONE 78,050 GALLON SLURRY MIX TANK CONNECTED TO THE VENT GAS SCRUBBER

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. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
3. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All vapors from the slurry tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
N-7365-4-4 : Aug 31 2015 8:38AM - EDGEHLR : Joint Inspection NOT Required

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7. Controlled VOC emissions rate from the slurry tank served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The VOC content of the vapor in the slurry tank and slurry mix tank shall not exceed 10% by weight. [District Rules 2201 and 4455]
12. Operator shall conduct initial sampling from the slurry mix tank to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. [District Rule 2201]
13. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
14. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
15. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted within 120 days after initial start-up and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. During source testing, permittee shall maintain record of ethanol production rate measured in gal-ethanol/hour. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
24. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
25. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-11-6

ISSUANCE DATE: 11/13/2014

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:

MODIFICATION OF WET CAKE PROCESS CONSISTING OF ONE 194,400 GALLON WHOLE STILLAGE TANK, ONE CENTRIFUGE SYSTEM WITH FIVE CENTRIFUGES, ONE 127,000 GALLON THIN STILLAGE TANK, THREE EVAPORATORS, ONE 129,600 GALLON SYRUP TANK, CORN OIL EXTRACTION SYSTEM CONSISTING OF ONE 36,000 GALLON HEAT SOAK TANK, THREE CENTRIFUGES, ONE 800 GALLON BUFFER TANK, ONE 1,285 GALLON FINAL PRODUCT TANK, TWO 10,500 GALLON CORN OIL LOADOUT STORAGE TANKS ALL SERVED BY AN KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-10) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-10) AND A TRUCK LOADOUT SYSTEM: ADD A NEW 10,500 GALLON CORN OIL STORAGE TANK CONNECTED TO THE VENT GAS SCRUBBER LISTED ON PERMIT N-7365-4

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. Authority to Construct (ATC) N-7365-11-4 shall be implemented concurrently, or prior to the modification and startup of the equipment authorized by this Authority to Construct. [District Rule 2201]
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Wet cake conveyors between each tank or each emissions unit at the wet cake process unit shall be fully enclosed. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 60,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director / APCO

Arnaud Marjollet, Director of Permit Services
N-7365-11-6 : Aug 31 2015 8:39AM - EDGEHLR : Joint Inspection NOT Required

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6. All vapors from the wet cake process shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the wet cake process served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.01161 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.07421 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Loading losses from the distiller's syrup or corn oil loadout operation shall not exceed 0.526 lb-VOC/1,000 gallons. [District Rule 2201]
14. The maximum throughput of distiller's syrup loaded shall not exceed any of the following: 67,371 gallons per day or 24,590,415 gallons per year. [District Rule 2201]
15. The maximum throughput of corn oil loaded shall not exceed any of the following: 26,000 gallons per day or 1,722,500 gallons per year. [District Rule 2201]
16. Fugitive VOC emissions from equipment leaks associated with the wet cake process shall not exceed 2.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall not exceed 2.8 lb/day. [District Rule 2201]
18. Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall not exceed 2.9 lb/day. [District Rule 2201]
19. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-9, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Leak Rate/Screening Value Correlations Emission Factors. [District Rule 2201]
21. Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-9, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Leak Rate/Screening Value Correlations Emission Factors. [District Rule 2201]
22. The permittee shall maintain daily and annual records, in gallons, of the quantity of distiller's syrup and corn oil loaded at this facility. [District Rule 2201]
23. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Permittee shall maintain accurate component count and shall update such records when new components are approved and installed. [District Rule 2201]
25. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted within 120 days after initial start-up and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
29. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
30. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
39. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

40. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
41. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
43. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
44. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
45. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
46. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
47. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
48. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
49. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
50. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-19-4

ISSUANCE DATE: 08/25/2014

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:

MODIFICATION OF DENATURED ETHANOL BOTTOM TRUCK LOADING RACK WITH DRY BREAK COUPLERS SERVED BY A JOHN ZINK MODEL S3-AAD-1-70-90-6 HYDROCARBON VAPOR RECOVERY UNIT (VRU): CHANGE VOC MONITORING FREQUENCY FROM "MONTHLY" TO "DAILY" FOR THE VRU 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. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [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. Vapor return hose(s) shall be attached whenever loading equipment operates. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All trucks loaded shall be inspected and determined to be vapor-tight such that all vapors are displaced into vapor return hoses during loading. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All vapors displaced from trucks during load-out operations shall be routed through the hydrocarbon vapor recovery unit (VRU). [District Rule 2201] Federally Enforceable Through Title V Permit
7. The hydrocarbon vapor recovery unit shall maintain a minimum control efficiency of 99% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director / APCO

8. The VRU shall consist of two adsorption columns filled with activated carbon for VOC emission control and a dry vacuum pump and packed absorption column for activated carbon regeneration. One activated carbon column shall be on-stream receiving vapors in the adsorption mode while the other activated carbon column is off-stream in the regeneration mode. Each activated carbon column shall be regenerated at a frequency recommended by the manufacturer (typically ranging between 10 - 20 minutes). [District Rule 2201] Federally Enforceable Through Title V Permit
9. The maximum amount of denatured ethanol loaded into trucks or railcars shall not exceed either of the following limits: 720,000 gallons/day or 93,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the vapor recovery system serving the denatured ethanol loading rack shall not exceed 0.0834 lb/1,000 gal-denatured ethanol loaded (equivalent to 10 milligrams of VOC / liter of ethanol loaded). This VOC emission rate is based on a six hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The maximum number of gasoline hose disconnects performed by the ethanol truck loading operation shall not exceed either of the following limits: 200 disconnects/day or 73,000 disconnects/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The maximum liquid spillage/leaks from each hose disconnect shall not exceed 10 milliliters. [District Rule 2201] Federally Enforceable Through Title V Permit
13. VOC emissions from the denatured ethanol truck loading operation shall not exceed 3.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions from equipment leaks associated with the denatured ethanol truck loading operation shall not exceed 3.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Ongoing compliance with VOC emission rate from the exhaust vent of the VRU shall be demonstrated at least once per day by sampling the effluent gas stream with an FID, PID, or other District-approved VOC detection device. The VOC detection device shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations. [District Rule 2201 and 40 CFR Part 64]
17. The permittee shall maintain daily and annual records, in gallons, of the quantity of denatured ethanol processed through the loading rack. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
18. The permittee shall maintain daily and annual records of the quantity of ethanol hose disconnects at the ethanol truck loading operation. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the daily compliance demonstrations taken with a FID, PID, or other District-approved VOC detection device, (2) make and model of the VOC detection device, and (3) calibration records of the VOC detection device. [District Rules 1070 and 2201, 40 CFR Part 64]
20. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the VRU shall be conducted at least once every 12 months, with equipment in operational condition. Source testing shall be conducted while denatured ethanol is being processed through the loading rack. [District Rule 2201]
21. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. If applicable, source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. During source testing, permittee shall maintain records of the amount of the ethanol loaded, measured in gal-ethanol/hour. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
25. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
26. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
27. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
28. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
29. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
30. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
31. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

Attachment II
Source Test/ Vapor Pressure Information

Attachment 1
Description of Change Requested

Pacific Ethanol Stockton (PES) requests that the Corn Oil Loading Operation's Annual Throughput in gallons per year be increased from 1,772,000 gallons per year to 5,000,000 gallons per year. This increase in annual throughput will result in less annual emissions than the permitted 906 lb VOC/year based on permit N-7365-11-6 condition 13's emission factor of 0.526 lb VOC/1,000 gallons corn oil because PES believes that the vapor pressure assumed for corn oil in the original PES ATC application and District's ATC Application Review dated November 19, 2013, was too high based on data used by CARB (attached) and other sources for the actual vapor pressure of corn oil.

CARB lists the vapor pressure of corn oil as < 1 mm Hg, where the original vapor pressure used for corn oil was the lowest value for a surrogate compound furfural, and listed as 8.17 mm Hg or 0.158 psia. Using 1 mm Hg and 0.5 mm Hg as the range of vapor pressures representative of corn oil, the corresponding values of vapor pressure in psia are 0.0193 and 0.0096. Substituting those vapor pressures for corn oil into Loading Loss equation on Page 10 of the District's ATC Application Review (Loading Loss {lbs/1,000 gal} = 12.46 SPM/T [AP-42 Section 5.2 1/95]) yields two Loading Loss Emission Factors much lower than the original Loading Loss Emission Factor for corn oil:

At a 1 mm Hg vapor pressure for corn oil, the emission factor is 0.064 lb VOC/1,000 gallons of corn oil, and at a 0.5 mm Hg vapor pressure of corn oil, the emission factor is 0.032 lb VOC/ 1,000 gallons of corn oil versus 0.526 lb VOC/1,000 gallons corn oil. Thus, the annual lb VOC PTE at the requested increase to 5,000,000 gallons of corn oil annual throughput, ranges from 160 lb VOC per year to 320 lb VOC per year, well below the 906 lb VOC per year listed on Page 16 of the District's ATC Application Review and offset in the corn oil ATC issued by the District.

PES additionally requests that the Fugitive Component PTE for Corn Oil be adjusted to reflect the lower vapor pressure of corn oil. Additionally, the VOC's in corn oil as measured by EPA method 8260A is less than one percent by weight (see analytical enclosed). District Rule 4455 section 4.0 Exemptions stipulates that "4.2.4. components exclusively handling liquid streams with a VOC content less than 10 percent by weigh (<10 wt%)," shall not be subject to the rule.

PES's permit N-7365-11-6 condition 17 requires VOC emissions from corn oil equipment leaks not exceed 2.8 lb VOC/day. The Table on Page 14 of the District's ATC Application Review shows the Fugitive Component PTE of 2.7 lb VOC/day and 986 lb VOC/year based on a Screening Value of 100 ppm. This

screening value was determined originally from testing the head space above the corn syrup (surrogate used at the time) in a storage tank. PES has test data now showing that a screening value of 1 ppm should have been used. PES has modified the table in its application for the ATC, as shown below:

Pacific Ethanol - Stockton Corn Oil System - Estimated VOC Emissions						
Equipment Type	Equipment Stream	Screening Value	Emission Factor (kg/hr/source)	Component Count	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)
Gas Valves	Corn Oil ¹	1	0.00000187	0	0	0
Light Liquid Valves	Corn Oil ¹	1	0.00000641	57	0.0008055	0.01933
Light Liquid Pumps	Corn Oil ¹	1	0.000019	3	0.0001257	0.00302
Connectors	Corn Oil ¹	1	0.00000305	68	0.0004572	0.01097
Pressure Relief Valves ¹	Corn Oil ¹	1	0.000019	3	0.0001257	0.00302
Open Ended Lines ¹	Corn Oil ¹	1	0.000019	23	0.0009634	0.02312

The revised Fugitive Component PTE using the PES screening value of 1 ppm shows a daily PTE of 0.06 lb VOC/day and an annual PTE of 2.2 lb VOC/year versus a daily PTE of 2.7 lb VOC/day and an annual PTE of 986 lb VOC/year, the same values as shown in the Table on Page 14. The Table on Page 14 uses different Emission Factors for the Light Liquid Valves, Light Liquid Pumps and Connectors than those in the above table. If the Emission Factors in the table above are replaced with the District's emission factors in Table 14, the Fugitive Component PTE increases to 1.55 lb VOC/day and 566 lb VOC/year. Using either approach to determine the Fugitive Component PTE, the current PTE using PES site-specific data, is well below the original PTE and therefore, an increase to 5,000,000 gallons of corn oil per year will either be equal to, or well under, the Fugitive Component PTE shown in Table 14.

Corn Oil	Lipid #	Molecular Weight (MW)	Fraction (%) ²	MW Fraction	Moles (100 g basis) ³	Mole Fraction ⁴	Antoine's Constants ¹			Bulk liquid temperature ⁵	Antoine's Equation ⁶	Raoult's Law ⁷
							A	B	C			
Palmitic acid	C16:0	256.4276	9.9	25.39	0.04	0.11	9.5714	2229.94	-111.01	339	0.62	6.64E-02
Stearic acid	C18:0	284.4812	3.1	8.82	0.01	0.03	9.3746	2174.39	-131.23	339	0.08	2.46E-03
Oleic acid	C18:1	282.4654	29.1	82.20	0.10	0.29	9.9155	2583.52	-96.15	339	0.19	5.43E-02
Linoleic acid	C18:2	280.45	56.8	159.30	0.20	0.56	8.2175	1450.62	-188.03	339	0.04	2.29E-02
Alpha Linoleic acid	C18:3	278.43	1.1	3.06	0.00	0.01	8.1397	1387.93	-196.16	339	0.03	2.91E-04
	Total:		100	278.76	0.36	1.00						1.46E-01

2.12E-05 psi⁸
1.10E-03 mm of Hg⁹

¹Antoine's constants are taken from Table 3 of "Vapor pressure and normal boiling point predictions for pure methyl esters and biodiesel fuels" (see att

²Corn oil composition is taken from Table 5 of "Vapor pressure and normal boiling point predictions for pure methyl esters and biodiesel fuels" (see att

³Moles = Fraction/Molecular Weight

⁴Mole Fraction = Moles/(Total Moles)

⁵Per applicant, average bulk liquid temperature is 150°F (339 K)

⁶Pv (Pa) = 10(A-B/(T+C))

⁷Partial Pressures (Pa) = Mole Fraction x Pv (Pa)

⁸Total Partial Pressures (psi) = Total Partial Pressures (Pa) x 0.000145 (psi/Pa)

⁹Total Partial Pressures (mm of Hg) = Total Partial Pressures (Pa) x 0.007501 (mm of Hg/Pa)

Source test 2/15/2013

$$VOC_{RTO\ exhaust} = 0.04589\ 16-vol\ 1000\ gal.\ of\ ethanol$$

$$VOC_{CO2\ scrubber\ inlet} = 842.6\ 16-vol\ hr$$

$$VOC_{Vent\ gas\ scrubber\ inlet} = 143.4\ 16-vol\ hr$$

Source test 2/20/2014

$$VOC_{RTO\ exhaust} = 0.0435\ 16-vol\ 1000\ gals\ of\ ethanol$$

$$VOC_{CO2\ scrubber\ inlet} = 868.5\ 16-vol\ hr$$

$$VOC_{Vent\ gas\ scrubber} = 91.0\ 16-vol\ hr$$

Vent gas scrubber contribution

$$(102) \quad 91 \quad 868.5 + 91 = 959$$

$$(102) \quad 143.4 \quad 842.6 + 143.4 = 14.59$$

2015

2014

Attachment 1
Description of Change Requested

Title V Permit N-7365-19-4 conditions 9, 10 & 11

N-7365-19-4 (11) Denatured EtoH Loading Rack Disconnects 200/day up to 440/day
N-7365-19-4 (11) Denatured EtoH Loading Rack Disconnects 73,000/year up to 90,000/day
N-7365-19-4 (9) Denatured EtoH Loading Rack 720,000/day up to 1,000,000 day in progress
N-7365-19-4 (9) Denatured EtoH Loading Rack 93,000,000/year up to 300,000,000/year in progress
N-7365-19-4 (10) Denatured EtoH Loading Rack VRU VOC Emission Limit of 0.0834 lb/1,000 gallon down to 0.0259 lb/1,000 gallon

These conditions are consistent with the other permit modification and the emission calculations are included there.

Pacific Ethanol Stockton (PES) requests that, based on the actual process performance at PES since its permitting ten years ago, to increase the maximum amount of denatured ethanol loaded into trucks at this facility which is limited in the following permit conditions:

The increase shall be for the permit limit "not exceed the following limit: 720,000 gallon/day and 93,000,000 gallon/year" for the amount of denatured ethanol loaded into trucks from throughput in the product tanks. Additionally the Permit limit -19-4 condition 11, the daily and annual truck loadout disconnects of 200 disconnects per day and 73,000 disconnects per year shall be increased.

The increase in the annual denatured ethanol loaded limit that is requested is 1,000,000 gallon/day and 300,000,000 gallon/year. To achieve this increase without increasing the annual VOC emissions from the facility's VRU, PES requests that the emission limit in the above listed permit -19-4, condition 10, for the VRU.

"Controlled VOC emissions rate from the vapor recovery system serving the denatured ethanol loading rack shall not exceed 0.0834 lb/1,000 gal-denatured ethanol loaded (equivalent to 10 milligrams of VOC / liter of ethanol loaded). This VOC emission rate is based on a six hour rolling average."

be reduced, such that the total annual VOC emissions from the VRU remains unchanged at 3.50 tons VOC per year as listed in the above permit -19-4, condition 13, as follows:

1. at 93,000,000 gallon denatured ethanol loaded per year, the limit is 0.0834 lbVOC/1,000 gallon denatured ethanol loaded, and
2. up to 300,000,000 gallon denatured ethanol loaded per year, the limit would be reduced to 0.0259 lb VOC/1,000 gallon denatured ethanol loaded.

PES is not requesting any changes to the VRU's control efficiency limit as listed in the above permit -19-4, condition 7, as follows:

The hydrocarbon vapor recovery unit shall maintain a minimum control efficiency of 99% for VOC emissions.

To confirm this request, PES presents the VRU's compliance source test emission data for the four most recent years:

2011: 0.00003 lb VOC/1,000 gallon denatured ethanol loaded
2012: 0.00009 lb VOC/1,000 gallon denatured ethanol loaded
2013: 0.00019 lb VOC/1,000 gallon denatured ethanol loaded
2014: 0.00004 lb VOC/1,000 gallon denatured ethanol loaded.

19

$$PEI = 7756 \frac{\text{lb}}{\text{yr}}$$
$$\frac{300,000,000 \text{ gal}}{\text{yr}} \times 1000 \times 0.0259 = 7756 \frac{\text{lb}}{\text{yr}}$$

PES is not requesting any changes to the RTO's control efficiency limit as listed in several of the above permits, as follows:

Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency(%)= $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$.

To confirm this request, PES presents the RTO's compliance source test emission data for the four most recent years:

2011: 0.0158 lb VOC/1,000 gallon ethanol
2012: 0.0599 lb VOC/1,000 gallon ethanol
2013: 0.0459 lb VOC/1,000 gallon ethanol
2014: 0.0435 lb VOC/1,000 gallon ethanol.



**PRECISION
ENVIRO-TECH**
Analytical Laboratory

CERTIFICATE OF ANALYSIS

Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95206

Report Page 2 of 7

Volatile Organic Compounds by EPA Method 8260B

Sample Information

Sample ID: CO VOC 1
Laboratory ID: 4092513-01
Date/Time Sampled: 25-Sep-14 11:30 by Joe Mooring

Sample Type: Grab
Project Name: Com Oil VOC
Sample Matrix: Water

Test Parameter	Result	DLR	Unit	Dilution	Batch	Prepared	Analysis Date	Method	Notes
1,2-Dichloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1-Dichloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
cis-1,2-Dichloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
trans-1,2-Dichloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2-Dichloropropane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,3-Dichloropropane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
2,2-Dichloropropane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1-Dichloropropane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
cis-1,3-Dichloropropane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
trans-1,3-Dichloropropane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Ethylbenzene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Hexachlorobutadiene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
2-Hexanone	ND	50.0	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Isopropylbenzene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
p-Isopropylbenzene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Methylene chloride	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
4-Methyl-2-pentanone	ND	20.0	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Naphthalene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
n-Propylbenzene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Styrene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Tetrachloroethene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Toluene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2,3-Trichlorobenzene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2,4-Trichlorobenzene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1,2-Trichloroethene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1,1-Trichloroethane	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	
Trichloroethene	ND	2.00	ug/l	1	A142508	25-Sep-14	25-Sep-14	EPA 8260B	

ug/L = micrograms per Liter = ppm
ug/L = micrograms per Liter = ppm

DLR = Detection Limit for Purpose of Reporting
Exceptional sample matrices or interferences may
result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan Le, Laboratory Director



**PRECISION
ENVIRO-TECH**
Analytical Laboratory

CERTIFICATE OF ANALYSIS

Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95208

Report Page 3 of 7

Volatile Organic Compounds by EPA Method 8260B

Sample Information

Sample ID: CO VOC 1
Laboratory ID: 4092513-01
Date/Time Sampled: 25-Sep-14 11:30 by Joe Mooring

Sample Type: Grab
Project Name: Corn Oil VOC
Sample Matrix: Water

Test Parameter	Result	DLR	Unit	Dilution	Batch	Prepared	Analysis Date	Method	Notes
Trichlorofluoromethane	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2,3-Trichloropropane	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,3,5-Trimethylbenzene	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2,4-Trimethylbenzene	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
Vinyl acetate	ND	20.0	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
Vinyl chloride	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
Methyl tert-butyl Ether (MTBE)	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
Ethyl tert-butyl Ether (ETBE)	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
m,p-Xylene	32.8	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
o-Xylene	12.3	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
tert-Amyl Methyl Ether (TAME)	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
tert-Butyl Alcohol (TBA)	208	50.0	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	2.00	ug/l	1	A42508	25-Sep-14	25-Sep-14	EPA 8260B	
Surrogate: Toluene-d8		97 %		88-113					
Surrogate: 4-Bromofluorobenzene		112 %		88-130					

ug/L = micrograms per Liter = ppm
ug/g = micrograms per Liter = ppb

DLR = Detection Limit for Purpose of Reporting.
Exceptional sample matrices or interferences may
result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan L., Laboratory Director



**PRECISION
ENVIRO-TECH**
Analytical Laboratory

CERTIFICATE OF ANALYSIS

Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95208

Report Page 1 of 7

Volatile Organic Compounds by EPA Method 8260B

Sample Information

Sample ID: CO VOC 1
Laboratory ID: 4092513-01
Date/Time Sampled: 25-Sep-14 11:30 by Joe Mooring

Sample Type: Grab
Project Name: Corn Oil VOC
Sample Matrix: Water

Test Parameter	Result	DLR	Unit	Dilution	Batch	Prepared	Analysis Date	Method	Notes
1,2-Dichloroethane-d4	41.0		ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Acetone	ND	100	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Benzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Bromobenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Bromodichloromethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Bromoform	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Bromomethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
2-Butanone	ND	20.0	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
n-Butylbenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
sec-Butylbenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
tert-Butylbenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Carbon disulfide	ND	20.0	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Carbon tetrachloride	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Chlorobenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Chloroethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
2-Chloroethyl vinyl ether	ND	20.0	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Chloroform	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Chloromethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
2-Chlorotoluene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
4-Chlorotoluene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Dibromochloromethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2-Dibromo-3-chloropropane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Dibromomethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,2-Dichlorobenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,3-Dichlorobenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,4-Dichlorobenzene	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
Dichlorodifluoromethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	
1,1-Dichloroethane	ND	2.00	ug/l	1	AJ42508	25-Sep-14	25-Sep-14	EPA 8260B	

mg/L = milligrams per Liter = ppm
ug/L = micrograms per Liter = ppb

DLR = Detection Limit for Purpose of Reporting.
Exceptional sample matrices or interferences may
result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan Le, Laboratory Director



**PRECISION
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Attention: Joe Mooring
Pacific Ethanol, Inc
3026 Navy Drive
Stockton, CA 95208

Report Page 6 of 6

Notes and Definitions

- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

mg/L = milligrams per Liter = ppm
ug/L = micrograms per Liter = ppb

DLR = Detection Limit for Purpose of Reporting
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result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan Le, Laboratory Director

3035 N. Camanche Ave. Ste. 101 Stockton, CA 95210



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Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95208

Report Page 4 of 7

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Precision Enviro-Tech

Analyte	Result	Reporting Limit	Units	Spikes Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A142508 - Volatiles										
Blank (A142508-BLK1)										
Prepared & Analyzed: 25-Sep-14										
1,2-Dichloroethane-d4	53.2		ug/L	40.0		133	76-130			
Acetone	ND									
Benzene	ND	100	"							
Bromobenzene	ND	2.00	"							
Bromodichloromethane	ND	2.00	"							
Bromoforn	ND	2.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	20.0	"							
n-Butylbenzene	ND	2.00	"							
sec-Butylbenzene	ND	2.00	"							
tert-Butylbenzene	ND	2.00	"							
Carbon disulfide	ND	20.0	"							
Carbon tetrachloride	ND	2.00	"							
Chlorobenzene	ND	2.00	"							
Chloroethane	ND	2.00	"							
2-Chloroethylvinyl ether	ND	20.0	"							
Chloroform	ND	2.00	"							
Chloromethane	ND	2.00	"							
1-Chloroethane	ND	2.00	"							
4-Chlorotoluene	ND	2.00	"							
Dibromochloromethane	ND	2.00	"							
1,2-Dibromo-3-chloropropane	ND	2.00	"							
1,2-Dibromoethane (EDB)	ND	2.00	"							
Dibromomethane	ND	2.00	"							
1,2-Dichlorobenzene	ND	2.00	"							
1,3-Dichlorobenzene	ND	2.00	"							
1,4-Dichlorobenzene	ND	2.00	"							
Dichlorodifluoroethane	ND	2.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,3-Dichloroethane	ND	2.00	"							
1,1-Dichloroethene	ND	2.00	"							
cis-1,2-Dichloroethane	ND	2.00	"							
trans-1,2-Dichloroethane	ND	2.00	"							

ug/L = micrograms per Liter = ppb
ng/L = nanograms per Liter = ppb

DLR = Detection Limit for Purpose of Reporting.
Exceptional sample matrices or interferences may result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan Le, Laboratory Director

7045 N Comanche Ave. Stockton, CA 95210



**PRECISION
ENVIRO-TECH**
Analytical Laboratory

CERTIFICATE OF ANALYSIS

Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95206

Report Page 5 of 7

Volatile Organic Compounds by EPA Method 8260B - Quality Control Precision Enviro-Tech

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch A142508 - Volatiles										
Blank (A142508-BLK1)										
Prepared & Analyzed: 25-Sep-14										
1,2-Dichloropropane	ND	2.00	ug/l							
1,3-Dichloropropane	ND	2.00	"							
2,2-Dichloropropane	ND	2.00	"							
1,1-Dichloropropane	ND	2.00	"							
cis-1,3-Dichloropropene	ND	2.00	"							
trans-1,3-Dichloropropene	ND	2.00	"							
Ethylbenzene	ND	2.00	"							
Hexachlorobutadiene	ND	2.00	"							
2-Hexanone	ND	50.0	"							
Isopropylbenzene	ND	2.00	"							
p-Isopropyltoluene	ND	2.00	"							
Methylcyclohexane	ND	2.00	"							
4-Methyl-2-pentanone	ND	20.0	"							
Naphthalene	ND	2.00	"							
n-Propylbenzene	ND	2.00	"							
Styrene	ND	2.00	"							
1,1,2,2-Tetrachloroethane	ND	2.00	"							
1,1,1,2-Tetrachloroethane	ND	2.00	"							
Trichloroethene	ND	2.00	"							
Toluene	ND	2.00	"							
1,2,3-Trichlorobenzene	ND	2.00	"							
1,2,4-Trichlorobenzene	ND	2.00	"							
1,1,2-Trichloroethane	ND	2.00	"							
1,1,1-Trichloroethane	ND	2.00	"							
Trichloroethene	ND	2.00	"							
Trichlorofluoromethane	ND	2.00	"							
1,2,3-Trichloropropane	ND	2.00	"							
1,3,5-Trimethylbenzene	ND	2.00	"							
1,2,4-Trimethylbenzene	ND	2.00	"							
Vinyl acetate	ND	20.0	"							
Vinyl chloride	ND	2.00	"							
Methyl tert-butyl Ether (MTBE)	ND	2.00	"							
m,p-Xylene	ND	2.00	"							

mg/L = milligrams per Liter = ppm
ug/L = micrograms per Liter = ppb

DLA = Detection Limit for Purpose of Reporting.
Exceptional sample matrices or interferences may result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan Le, Laboratory Director

3015 N Comstock Ave Stockton, CA 95210



PRECISION ENVIRO-TECH

**2935 N. Coronado Ave
Stockton, CA 95204
Phone: 209-477-8105**

www.petalab.com
email: info@petalab.com
Fax: 209-545-7497

CHAIN OF CUSTODY

Page 1 of 1

COC Number

4097513-0

[illegible]

**CERTIFICATE OF ANALYSIS**

Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95206

Report Page 1 of 6

Volatile Organic Compound by EPA 1666 GC/MS**Sample Information**

Sample ID: CO VOC 1
Laboratory ID: 4092513-01
Date/Time Sampled: 25-Sep-14 11:30 by Joe Mooring

Sample Type: Grab
Project Name: Corn Oil VOC
Sample Matrix: Water

Test Parameter	Result	DLE	Unit	Dilution	Batch	Prepared	Analysis Date	Method	Notes
Ethanol	8000000	60000	ug/l	250	A143022	30-Sep-14	30-Sep-14	EPA 1666	
Surrogate: 4-Bromofluorobenzene		100 K		75-125					

mg/L = milligrams per Liter = ppm
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DLE = Detection Limit for Purpose of Reporting.
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RESPECTFULLY SUBMITTED,

Jonathan La, Laboratory Director



**PRECISION
ENVIRO-TECH**
Analytical Laboratory

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Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95206

Report Page 6 of 7

Volatile Organic Compounds by EPA Method 8260B - Quality Control Precision Enviro-Tech

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AI42508 - Volatiles										
Blank (AI42508-BLK1)										
Prepared & Analyzed: 23-Sep-14										
Ethyl tert-Butyl Ether (ETBE)	ND	2.00	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	2.00	"							
o-Xylene	ND	2.00	"							
tert-Butyl Alcohol (TBA)	ND	50.0	"							
Diisopropyl Ether (DIPE)	ND	2.00	"							
LCS (AI42508-B51)										
Prepared & Analyzed: 25-Sep-14										
1,2-Dichloroethane-d4	42.8		ug/l	40.0		107	76-130			
Benzene	41.0	2.00	"	40.0		102	88-124			
Chlorobenzene	36.0	2.00	"	40.0		90	83-117			
1,1-Dichloroethene	40.3	2.00	"	40.0		101	79-133			
Toluene	44.4	2.00	"	40.0		111	88-122			
Trichloroethene	44.9	2.00	"	40.0		112	85-117			
Matrix Spike (AI42508-MS1)										
Source: 4092513-01 Prepared & Analyzed: 25-Sep-14										
1,2-Dichloroethane-d4	42.0		ug/l	40.0	41.0	2	76-130			
Benzene	46.0	2.00	"	40.0	ND	115	88-124			
Chlorobenzene	42.2	2.00	"	40.0	ND	106	80-117			
1,1-Dichloroethene	38.0	2.00	"	40.0	ND	95	76-133			
Toluene	41.0	2.00	"	40.0	ND	102	65-122			
Trichloroethene	38.0	2.00	"	40.0	ND	95	65-117			
Matrix Spike Dup (AI42508-MSD1)										
Source: 4092513-01 Prepared & Analyzed: 25-Sep-14										
1,2-Dichloroethane-d4	41.1		ug/l	40.0	41.0	0.2	76-130	2		
Benzene	41.0	2.00	"	40.0	ND	102	88-124	11	15	
Chlorobenzene	38.0	2.00	"	40.0	ND	93	80-117	10	15	
1,1-Dichloroethene	35.5	2.00	"	40.0	ND	89	76-133	7	15	
Toluene	36.8	2.00	"	40.0	ND	92	65-122	11	15	
Trichloroethene	38.2	2.00	"	40.0	ND	96	65-117	0.3	15	

ug/L = micrograms per Liter = ppm
ug/L = micrograms per Liter = ppb

DLR = Detection Limit for Purpose of Reporting.
Exceptional sample matrices or interferences may
result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan Le, Laboratory Director

7033 N. Comanche Ave. Stockton, CA 95206



**PRECISION
ENVIRO-TECH**
Analytical Laboratory

CERTIFICATE OF ANALYSIS

Thursday, October 2, 2014

Attention: Joe Mooring
Pacific Ethanol, Inc
3028 Navy Drive
Stockton, CA 95206

Report Page 7 of 7

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

mg/L = milligrams per Liter = ppm
ug/L = micrograms per Liter = ppb

DLR = Detection Limit for Purpose of Reporting
Exceptional sample matrices or interferences may
result in higher detection limits.

RESPECTFULLY SUBMITTED,

Jonathan La, Laboratory Director

3028 N. Comstock Ave. Ste. 101 Stockton, CA 95210

Attachment III
Tanks 4.0 Calculations

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-13-3
City: Stockton
State: California
Company: Pacific Ethanol Stockton LLC
Type of Tank: Internal Floating Roof Tank
Description: 190 Proof Ethanol Tank

Tank Dimensions

Diameter (ft): 25.00
Volume (gallons): 190,357.00
Turnovers: 131.33
Self Supp. Roof? (y/n): N
No. of Columns: 1.00
Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
Shell Color/Shade: White/White
Shell Condition: Good
Roof Color/Shade: White/White
Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
Deck Type: Welded

Deck Fitting/Status**Quantity**

Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed
Automatic Gauge Float Well/Unbolted Cover, Gasketed
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed
Roof Leg or Hanger Well/Adjustable
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.

1
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Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-13-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Ethyl alcohol	All	63.76	57.19	70.34	61.57	0.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-13-3 - Internal Floating Roof Tank
Stockton, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Ethyl alcohol	24.02	231.52	128.25	0.00	383.79

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-14-3
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: 200-Proof Ethanol Storage Tank

Tank Dimensions

Diameter (ft): 25.00
 Volume (gallons): 190,357.00
 Turnovers: 183.87
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Ethyl alcohol	Jan	55.08	51.49	58.67	61.57	0.5545	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Feb	57.96	53.17	62.75	61.57	0.6131	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Mar	60.22	54.36	66.07	61.57	0.6627	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Apr	63.26	54.98	70.54	61.57	0.7350	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	May	67.10	54.83	75.36	61.57	0.8360	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Jun	70.33	61.45	79.22	61.57	0.9304	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Jul	72.25	63.02	81.48	61.57	0.9906	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Aug	71.45	62.84	80.06	61.57	0.9650	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Sep	69.03	61.28	76.77	61.57	0.8912	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Oct	64.64	58.13	71.16	61.57	0.7702	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Nov	58.67	54.21	63.53	61.57	0.6327	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52
Ethyl alcohol	Dec	54.98	51.51	58.44	61.57	0.5526	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

Month	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	1.4744	1.6334	1.7687	1.9669	2.2449	2.5069	2.6749	2.6033	2.3979	2.0635	1.6868	1.4691
Seal Factor A (lb-mole/ft-yr):	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000
Seal Factor B (lb-mole/ft-yr (mph) ² /n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.0096	0.0106	0.0115	0.0128	0.0146	0.0163	0.0174	0.0170	0.0156	0.0134	0.0110	0.0096
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.5545	0.6131	0.6827	0.7350	0.8360	0.9304	0.9906	0.9650	0.8912	0.7702	0.6327	0.5526
Tank Diameter (ft):	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000
Vapor Molecular Weight (lb/lb-mole):	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107	27.0107
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/min):	2,915,666.6660	2,916,666.6660	2,916,666.6660	2,916,666.6660	2,916,666.6660	2,915,666.6660	2,916,666.6660	2,916,666.6660	2,916,666.6660	2,916,666.6660	2,916,666.6660	2,916,666.6660
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100	6.6100
Tank Diameter (ft):	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000
Deck Fitting Losses (lb):	7.6734	8.7223	9.4448	10.5030	11.9879	13.3867	14.2839	13.9017	12.8050	11.0188	9.0075	7.8450
Value of Vapor Pressure Function:	0.0096	0.0106	0.0115	0.0128	0.0146	0.0163	0.0174	0.0170	0.0156	0.0134	0.0110	0.0096
Vapor Molecular Weight (lb/lb-mole):	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact. (lb-mole/yr):	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000	213.6000
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor (ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000
Vapor Molecular Weight (lb/lb-mole):	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700	46.0700
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	36.3565	37.3664	38.2241	39.4805	41.2435	42.9042	43.9694	43.5157	42.2137	40.0930	37.7050	36.3247
Roof Fitting Loss Factors												
Roof Fitting/Status	Quantity	KFa (lb-mole/yr)		KFB (lb-mole/yr mph ² /n)		m		Losses (lb)				
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1	31.00		5.20		1.30		19.0013				
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	4.30		17.00		0.38		2.6357				
Column Well (24-in. Diam.)/Built-Up Coll./Sliding Cover, Gask	1	33.00		0.00		0.00		20.2272				
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	56.00		0.00		0.00		34.3250				
Roof Leg or Hanger Well/Adjustable	9	7.90		0.00		0.00		43.5805				
Sample Pipe or Well (24-in. Diam.)/Silt Fabric Seal 10% Open	1	12.00		0.00		0.00		7.3554				
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask	1	6.20		1.20		0.94		3.8003				

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Ethyl alcohol	24.49	324.13	130.78	0.00	479.40

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: July

N-7365-16 or '-17 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured ethanol	8.73	134.66	31.44	0.00	174.82
Ethyl alcohol	7.83	131.29	28.21	0.00	167.33
Gasoline (RVP 11)	0.90	3.37	3.23	0.00	7.50

31
= 5.6

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-16 or '17
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: Denatured Ethanol Storage Tanks (POST-PROJECT)

Tank Dimensions

Diameter (ft): 52.00
 Volume (gallons): 582,750.00
 Turnovers: 257.40
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: Aluminum/Diffuse
 Shell Condition: Good
 Roof Color/Shade: Aluminum/Diffuse
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	19
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Drain (3-in. Diameter)/90% Closed	4

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

N-7365-16 or '17 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
		Avg.	Min	Max		Avg	Min	Max					
Denatured ethanol	Jan	58.55	54.16	63.94	64.15	0.6889	N/A	N/A	48.0238			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.6258	N/A	N/A	46.0700	0.9750	0.8503	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						5.6099	N/A	N/A	65.0000	0.0250	0.1397	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Feb	62.59	54.98	70.21	64.15	0.7863	N/A	N/A	47.9191			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.7188	N/A	N/A	46.0700	0.9750	0.8675	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						6.0567	N/A	N/A	65.0000	0.0250	0.1325	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Mar	66.61	56.37	76.86	64.15	0.8951	N/A	N/A	47.8219			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.6227	N/A	N/A	46.0700	0.9750	0.8742	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						6.5346	N/A	N/A	65.0000	0.0250	0.1258	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Apr	71.51	58.20	84.83	64.15	1.0454	N/A	N/A	47.7122			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.9670	N/A	N/A	46.0700	0.9750	0.8818	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						7.1537	N/A	N/A	65.0000	0.0250	0.1182	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	May	76.81	64.22	92.40	64.15	1.2327	N/A	N/A	47.6031			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						1.1474	N/A	N/A	46.0700	0.9750	0.8894	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						7.6751	N/A	N/A	65.0000	0.0250	0.1105	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Jun	80.90	63.94	97.96	64.15	1.3965	N/A	N/A	47.5254			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						1.3057	N/A	N/A	46.0700	0.9750	0.8948	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						8.4696	N/A	N/A	65.0000	0.0250	0.1052	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Jul	82.83	65.51	100.15	64.15	1.4805	N/A	N/A	47.4904			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						1.3870	N/A	N/A	46.0700	0.9750	0.8973	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						8.7630	N/A	N/A	65.0000	0.0250	0.1027	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Aug	80.94	65.20	96.66	64.15	1.3983	N/A	N/A	47.5247			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						1.3074	N/A	N/A	46.0700	0.9750	0.8949	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						8.4759	N/A	N/A	65.0000	0.0250	0.1051	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Sep	76.55	61.47	90.43	64.15	1.2379	N/A	N/A	47.6004			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						1.1524	N/A	N/A	46.0700	0.9750	0.8896	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						7.8946	N/A	N/A	65.0000	0.0250	0.1104	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Oct	70.56	60.08	81.03	64.15	1.0145	N/A	N/A	47.7329			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.9372	N/A	N/A	46.0700	0.9750	0.8804	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						7.0294	N/A	N/A	65.0000	0.0250	0.1196	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Nov	62.97	55.96	69.98	64.15	0.7960	N/A	N/A	47.9097			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.7279	N/A	N/A	46.0700	0.9750	0.8881	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						6.1022	N/A	N/A	65.0000	0.0250	0.1319	92.00	Option 4: RVP=11, ASTM Slope=3
Denatured ethanol	Dec	58.25	51.16	63.34	64.15	0.6821	N/A	N/A	48.0319			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.5193	N/A	N/A	46.0700	0.9750	0.8598	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						5.5764	N/A	N/A	65.0000	0.0250	0.1402	92.00	Option 4: RVP=11, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

N-7365-16 or -17 - Internal Floating Roof Tank
Stockton, California

Month	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	3.9905	4.5602	5.2008	6.0929	7.2184	8.2110	8.7253	8.2219	7.2479	5.9084	4.6172	3.9508
Seal Factor A (lb-mole/ft-yr):	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000
Seal Factor B (lb-mole/ft-yr (mph)*n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.0120	0.0137	0.0157	0.0184	0.0219	0.0249	0.0265	0.0250	0.0220	0.0179	0.0139	0.0119
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.6889	0.7663	0.8951	1.0454	1.2327	1.3965	1.4805	1.3983	1.2379	1.0145	0.7960	0.6821
Tank Diameter (ft):	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Vapor Molecular Weight (lb/lb-mole):	48.0238	47.9191	47.8219	47.7122	47.6031	47.5254	47.4904	47.5247	47.6004	47.7329	47.9097	48.0319
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976	54.2976
Number of Columns:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Effective Column Diameter (ft):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Net Throughput (gal/mo):	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000	12,500,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803	6.5803
Tank Diameter (ft):	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Deck Fitting Losses (lb):	14.3794	16.4322	19.7404	21.9549	26.0033	29.5874	31.4403	29.6267	26.1169	21.2901	16.6373	14.2360
Value of Vapor Pressure Function:	0.0120	0.0137	0.0157	0.0184	0.0219	0.0249	0.0255	0.0250	0.0220	0.0179	0.0139	0.0119
Vapor Molecular Weight (lb/lb-mole):	48.0238	47.9191	47.8219	47.7122	47.6031	47.5254	47.4904	47.5247	47.6004	47.7329	47.9097	48.0319
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact (lb-mole/yr):	299.8000	299.6000	299.8000	299.8000	299.8000	299.8000	299.8000	299.8000	299.8000	299.8000	299.8000	299.8000
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor (ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000	52.0000
Vapor Molecular Weight (lb/lb-mole):	48.0238	47.9191	47.8219	47.7122	47.6031	47.5254	47.4904	47.5247	47.6004	47.7329	47.9097	48.0319
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	72.6875	75.2900	78.2388	82.3453	87.5173	92.0960	94.4631	92.1462	87.6624	81.4961	75.5520	72.4844
Roof Fitting Status												
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	Quantity	KFa (lb-mole/yr)		KFb (lb-mole/yr mph*n)		m		Losses (lb)				
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1	31.00		5.20		1.30		27.5912				
Column Well (24-in. Diam.)/Built-Up Col-Sliding Cover, Gask	1	4.30		17.00		0.38		3.8272				
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1	33.00		0.00		0.00		29.3713				
Roof Leg or Hanger Well/Adjustable	1	56.00		0.00		0.00		49.8422				
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	19	7.90		0.00		0.00		133.5950				
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask	1	12.00		0.00		0.00		10.6805				
Roof Drain (3-in. Diameter)/90% Closed	1	8.20		1.20		0.94		5.5182				
	4	1.80		0.14		1.10		6.4083				

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TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

N-7365-16 or '-17 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured ethanol	73.94	651.57	266.44	0.00	991.96
Ethyl alcohol	65.32	635.28	235.36	0.00	935.95
Gasoline (RVP 11)	8.63	16.29	31.09	0.00	56.00

116,117

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-13-3
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: 190 Proof Ethanol Tank (ACTUAL EMISSIONS MAY 2013 -APRIL 2014)

Tank Dimensions

Diameter (ft): 25.00
 Volume (gallons): 190,357.00
 Turnovers: 2.33
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

BALE 113

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-13-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg.	Min	Max.		Avg.	Min	Max.					
Ethyl alcohol	All	63.76	57.19	70.34	61.57	0.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-13-3 - Internal Floating Roof Tank
Stockton, California

Losses(lbs)					
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Ethyl alcohol	24.02	4.12	128.25	0.00	156.39

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-13-3
City: Stockton
State: California
Company: Pacific Ethanol Stockton
Type of Tank: Internal Floating Roof Tank
Description: 190 Proof Ethanol Tank (ACTUAL EMISSIONS MAY 2014 -APRIL 2015, AT 600,000 GAL/YR)

Tank Dimensions

Diameter (ft): 25.00
Volume (gallons): 190,357.00
Turnovers: 3.15
Self Supp. Roof? (y/n): N
No. of Columns: 1.00
Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
Shell Color/Shade: White/White
Shell Condition: Good
Roof Color/Shade: White/White
Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-13-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg.	Min	Max		Avg	Min	Max					
Ethyl alcohol	All	63.76	57.19	70.34	61.57	0.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-13-3 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Ethyl alcohol	24.02	5.56	128.25	0.00	157.83

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-14-3
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: 200-Proof Ethanol Storage Tank (ACTUAL EMISSIONS MAY 2013-APRIL 2014)

Tank Dimensions

Diameter (ft): 25.00
 Volume (gallons): 190,357.00
 Turnovers: 136.74
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	9
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Ethyl alcohol	All	63.76	57.19	70.34	61.57	9.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Ethyl alcohol	24.02	241.05	128.25	0.00	393.32

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-14-3
City: Stockton
State: California
Company: Pacific Ethanol Stockton
Type of Tank: Internal Floating Roof Tank
Description: 200-Proof Ethanol Storage Tank (ACTUAL EMISSIONS MAY 2014-APRIL 2015)

Tank Dimensions

Diameter (ft): 25.00
Volume (gallons): 190,357.00
Turnovers: 136.74
Self Supp. Roof? (y/n): N
No. of Columns: 1.00
Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
Shell Color/Shade: White/White
Shell Condition: Good
Roof Color/Shade: White/White
Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg.	Min	Max		Avg	Min.	Max					
Ethyl alcohol	Alt	63.76	57.19	70.34	61.57	0.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-14-3 - Internal Floating Roof Tank
Stockton, California

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Ethyl alcohol	24.02	246.82	128.25	0.00	399.09

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-15-3
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: 200-Proof Ethanol Storage Tank (ACTUAL EMISSIONS MAY 2013-APRIL 2014)

Tank Dimensions

Diameter (ft): 25.00
 Volume (gallons): 190,357.00
 Turnovers: 136.74
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: White/White
 Shell Condition: Good
 Roof Color/Shade: White/White
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-15-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol Weight	Basis for Vapor Pressure Calculations
		Avg.	Min	Max		Avg	Min	Max					
Ethyl alcohol	Alt	63.78	57.19	70.34	61.57	0.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=17.821, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-15-3 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Ethyl alcohol	24.02	240.71	128.25	0.00	392.98

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-15-3
City: Stockton
State: California
Company: Pacific Ethanol Stockton
Type of Tank: Internal Floating Roof Tank
Description: 200-Proof Ethanol Storage Tank (ACTUAL EMISSIONS MAY 2014-APRIL 2015)

Tank Dimensions

Diameter (ft): 25.00
Volume (gallons): 190,357.00
Turnovers: 136.74
Self Supp. Roof? (y/n): N
No. of Columns: 1.00
Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
Shell Color/Shade: White/White
Shell Condition: Good
Roof Color/Shade: White/White
Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	9
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-15-3 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract.	Vapor Mass Fract.	Moi Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Ethyl alcohol	All	63.76	57.19	70.34	61.57	0.7477	N/A	N/A	46.0700			46.07	Option 2: A=8.321, B=1718.21, C=237.52

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-15-3 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Ethyl alcohol	24.02	239.69	128.25	0.00	391.96

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-16
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: Denatured Ethanol Storage Tanks (ACTUAL EMISSIONS MAY 2013-APRIL 2014)

Tank Dimensions

Diameter (ft): 52.00
 Volume (gallons): 582,750.00
 Turnovers: 12.06
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: Aluminum/Diffuse
 Shell Condition: Good
 Roof Color/Shade: Aluminum/Diffuse
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	19
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Drain (3-in. Diameter)/90% Closed	4

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-16 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Denatured ethanol	Aug	70.79	58.27	82.31	64.15	1.0219	N/A	N/A	47.7278			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.9444	N/A	N/A	46.0700	0.9750	0.8807	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						7.0595	N/A	N/A	65.0000	0.0250	0.1193	92.00	Option 4: RVP=11, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-16 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured ethanol	71.43	30.54	257.40	0.00	359.37
Ethyl alcohol	62.91	29.78	226.70	0.00	319.39
Gasoline (RVP 11)	8.52	0.76	30.70	0.00	39.98

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-16
City: Stockton
State: California
Company: Pacific Ethanol Stockton
Type of Tank: Internal Floating Roof Tank
Description: Denatured Ethanol Storage Tanks (ACTUAL EMISSIONS MAY 2014-APRIL 2015)

Tank Dimensions

Diameter (ft): 52.00
Volume (gallons): 582,750.00
Turnovers: 70.48
Self Supp. Roof? (y/n): N
No. of Columns: 1.00
Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
Shell Color/Shade: Aluminum/Diffuse
Shell Condition: Good
Roof Color/Shade: Aluminum/Diffuse
Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	19
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Drain (3-in. Diameter)/90% Closed	4

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-16 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Denatured ethanol	Aug	70.79	59.27	82.31	64.15	1.0219	N/A	N/A	47.7278			46.65	Option 2: A=8.12187, B=1598.673, C=226.726
Ethyl alcohol						0.9444	N/A	N/A	46.0700	0.9750	0.8807	46.07	Option 2: A=8.321, B=1718.21, C=237.52
Gasoline (RVP 11)						7.0585	N/A	N/A	65.0000	0.0250	0.1193	92.00	Option 4: RVP=11, ASTM Slope=3

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-16 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured ethanol	71.43	178.40	257.40	0.00	507.24
Ethyl alcohol	62.91	173.94	226.70	0.00	463.55
Gasoline (RVP 11)	8.52	4.46	30.70	0.00	43.68

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-17
 City: Stockton
 State: California
 Company: Pacific Ethanol Stockton
 Type of Tank: Internal Floating Roof Tank
 Description: Denatured Ethanol Storage Tanks (ACTUAL EMISSIONS MAY 2013-APRIL 2014)

Tank Dimensions

Diameter (ft): 52.00
 Volume (gallons): 582,750.00
 Turnovers: 12.86
 Self Supp. Roof? (y/n): N
 No. of Columns: 1.00
 Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
 Shell Color/Shade: Aluminum/Diffuse
 Shell Condition: Good
 Roof Color/Shade: Aluminum/Diffuse
 Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
 Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
 Deck Type: Welded

Deck Fitting/Status

	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	1
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	19
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Drain (3-in. Diameter)/90% Closed	4

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

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TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-17 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol Weight	Liquid Mass Fract	Vapor Mass Fract	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max		Avg.	Min.	Max					
Denatured ethanol	All	70.79	59.27	82.31	64.15	1.0219	N/A	N/A	47.7278			46.65	Option 2: A=8.12187, B=1588.673, C=226.726 Option 2: A=8.321, B=1718.21, C=237.52 Option 4: RVP=11, ASTM Slope=3
Ethyl alcohol						0.9444	N/A	N/A	46.0700	0.9750	0.8807	46.07	
Gasoline (RVP 11)						7.0595	N/A	N/A	65.0000	0.0250	0.1193	92.00	

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-17 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured ethanol	71.43	32.55	257.40	0.00	361.39
Ethyl alcohol	62.91	31.74	226.70	0.00	321.35
Gasoline (RVP 11)	8.52	0.81	30.70	0.00	40.03

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Identification and Physical Characteristics

Identification

User Identification: N-7365-17
City: Stockton
State: California
Company: Pacific Ethanol Stockton
Type of Tank: Internal Floating Roof Tank
Description: Denatured Ethanol Storage Tanks (ACTUAL EMISSIONS MAY 2014-APRIL 2015)

Tank Dimensions

Diameter (ft): 52.00
Volume (gallons): 582,750.00
Turnovers: 62.40
Self Supp. Roof? (y/n): N
No. of Columns: 1.00
Eff. Col. Diam. (ft): 1.00

Paint Characteristics

Internal Shell Condition: Light Rust
Shell Color/Shade: Aluminurn/Diffuse
Shell Condition: Good
Roof Color/Shade: Aluminurn/Diffuse
Roof Condition: Good

Rim-Seal System

Primary Seal: Mechanical Shoe
Secondary Seal: Shoe-mounted

Deck Characteristics

Deck Fitting Category: Detail
Deck Type: Welded

Deck Fitting/Status

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Gasketed	1
Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Gask.	1
Ladder Well (36-in. Diam.)/Sliding Cover, Gasketed	1
Roof Leg or Hanger Well/Adjustable	19
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Drain (3-in. Diameter)/90% Closed	4

Meteorological Data used in Emissions Calculations: Stockton, California (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

N-7365-17 - Internal Floating Roof Tank
Stockton, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract	Vapor Mass Fract	Mol Weight	Basis for Vapor Pressure Calculations
		Avg	Min	Max		Avg	Min	Max					
Denatured ethanol	All	70.79	59.27	82.31	64.15	1.0219	N/A	N/A	47.7278			46.65	Option 2: A=8.12187, B=1598.673, C=226.726 Option 2: A=8.321, B=1718.21, C=237.52 Option 4: RVP=11, ASTM Slope=3
Ethyl alcohol						0.9444	N/A	N/A	46.0700	0.9750	0.8807	46.07	
Gasoline (RVP 11)						7.0565	N/A	N/A	65.0000	0.0250	0.1193	92.00	

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

N-7365-17 - Internal Floating Roof Tank
Stockton, California

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	
Denatured ethanol	71.43	157.96	257.40	0.00	486.79
Ethyl alcohol	62.91	154.01	226.70	0.00	443.62
Gasoline (RVP 11)	8.52	3.95	30.70	0.00	43.17

Attachment IV
Emissions Profiles

Permit #: N-7365-1-3	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	4051.0	0.0	0.0
Daily Emis. Limit (lb/Day)	0.0	0.0	23.2	0.0	0.0
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-4-5	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	1051.0	60.0	160.0	1766.0	232.0
Daily Emis. Limit (lb/Day)	2.9	0.2	0.4	4.8	0.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-5-5	Last Updated
Facility: PACIFIC ETHANOL STOCKTON LLC	08/30/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	339.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-6-4	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015
STOCKTON LLC	EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	334.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	1.2
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-7-5	Last Updated
Facility: PACIFIC ETHANOL STOCKTON LLC	08/30/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	3267.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	23.1
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-8-6	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	2106.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	19.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-9-3	Last Updated
Facility: PACIFIC ETHANOL STOCKTON LLC	08/30/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1517.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-10-4	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	208.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	0.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-11-7	Last Updated
Facility: PACIFIC ETHANOL	10/19/2015
STOCKTON LLC	EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	15040.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	41.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	-477.0
Q2:	0.0	0.0	0.0	0.0	-478.0
Q3:	0.0	0.0	0.0	0.0	-478.0
Q4:	0.0	0.0	0.0	0.0	-478.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-13-3	Last Updated
Facility: PACIFIC ETHANOL STOCKTON LLC	08/30/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	721.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	3.3
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	56.0
Q2:	0.0	0.0	0.0	0.0	56.0
Q3:	0.0	0.0	0.0	0.0	57.0
Q4:	0.0	0.0	0.0	0.0	57.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-14-3	Last Updated
Facility: PACIFIC ETHANOL STOCKTON LLC	08/30/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	817.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	12.0
Q2:	0.0	0.0	0.0	0.0	12.0
Q3:	0.0	0.0	0.0	0.0	12.0
Q4:	0.0	0.0	0.0	0.0	13.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-15-3	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	817.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	12.0
Q2:	0.0	0.0	0.0	0.0	12.0
Q3:	0.0	0.0	0.0	0.0	12.0
Q4:	0.0	0.0	0.0	0.0	13.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-16-3	Last Updated
Facility: PACIFIC ETHANOL STOCKTON LLC	08/30/2015 EDGEHILR

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1330.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	6.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	112.0
Q2:	0.0	0.0	0.0	0.0	112.0
Q3:	0.0	0.0	0.0	0.0	113.0
Q4:	0.0	0.0	0.0	0.0	113.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-17-3	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1330.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	6.6
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	112.0
Q2:	0.0	0.0	0.0	0.0	112.0
Q3:	0.0	0.0	0.0	0.0	113.0
Q4:	0.0	0.0	0.0	0.0	113.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-19-5	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	9858.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	30.4
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	396.0
Q2:	0.0	0.0	0.0	0.0	396.0
Q3:	0.0	0.0	0.0	0.0	397.0
Q4:	0.0	0.0	0.0	0.0	397.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: N-7365-33-2	Last Updated
Facility: PACIFIC ETHANOL	08/30/2015 EDGEHILR
STOCKTON LLC	

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	0.0	0.0	0.0	0.0	1214.0
Daily Emis. Limit (lb/Day)	0.0	0.0	0.0	0.0	4.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	274.0
Q2:	0.0	0.0	0.0	0.0	274.0
Q3:	0.0	0.0	0.0	0.0	274.0
Q4:	0.0	0.0	0.0	0.0	275.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Attachment V BACT Guidelines

4.12.1 Chemical Plants – Valves and Compressors

4.12.2 Chemical Plants Pump and Compressor Seals

7.1.10 Loading Rack/Switch Loading

7.3.3 Petroleum and Petrochemical Production – Floating Roof Organic Liquid
Storage or Processing Tank $\geq$ 471 bbl
tank capacity and $\geq$ 0.5 psia TVP

**** 200 proof ethanol is a gasoline additive i.e. BACT Guideline 7.3.3 is applicable**

Attachment VI
BACT Analysis

BACT TOP-DOWN ANALYSES

ATCs #N-7365-16 and '-17: Denatured ethanol storage tanks

Ethanol is produced for the sole purpose of producing a oxygenating additive which is mixed with gasoline. Therefore, for both the internal floating roof natural gasoline storage tank and internal floating roof denatured ethanol storage tank, the applicable BACT requirements guideline is: BACT Clearinghouse (1st quarter, 2004) Guideline 7.3.3, *Petroleum and Petrochemical Production – Floating Roof Organic Liquid Storage or Processing Tank, ≥ 471 bbl Tank Capacity, ≥ 0.5 psia TVP.*

Top-Down BACT Analysis for VOC Emissions

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse, Guideline 7.3.3 identifies the following options:

Option I: Technologically Feasible: 95% VOC Control with Dual Wiper Seal

95% Control (Dual wiper seal, with drip curtain or primary metal shoe seal with secondary wiper seal, or equal.)

Option II: Achieved in Practice: 95% VOC Control with Primary Metallic Shoe

95% Control (Primary metal shoe seal with secondary wiper seal, or equal).

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option I: Technologically Feasible: 95% VOC Control with Dual Wiper Seal.

95% Control (Dual wiper seal, with drip curtain or primary metal shoe seal with secondary wiper seal, or equal.)

Option II: Achieved in Practice: 95% VOC Control with Primary Metallic Shoe

95% Control (Primary metal shoe seal with secondary wiper seal, or equal).

Step 4 - Cost Effectiveness Analysis

The applicant proposed the use of an internal floating roof tank with a dual wiper seal and with 95% VOC emissions control efficiency.

Since the applicant has chosen the most effective control technology listed in step 3 as a technologically feasible option; a cost effectiveness analysis is not required.

Step 5 - Select BACT

The proposed use of an internal floating roof tank with dual wiper seal (double seal type, one above the other), and with 95% VOC emissions control efficiency meets BACT requirements.

ATC #N-7365-19: Denatured Ethanol Transfer Operations

Top-Down BACT Analysis for VOC Emissions

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse, Guideline 7.1.10 identifies the following option:

Option I: Bottom loading with dry break couplers and vapor collection vented to a thermal oxidizer or flare with destruction efficiency = 99%

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Option I: Achieved in Practice: Bottom loading with dry break couplers and vapor collection vented to a thermal oxidizer or flare with destruction efficiency = 99%

Step 4 - Cost Effectiveness Analysis

The equipment is served by 99% vapor control (vapor control unit with activated carbon).

Therefore, since the applicant has proposed the most effective control technology listed in step 3, a cost effectiveness analysis is not required.

Step 5 - Select BACT

The proposed use of a flare, meets BACT requirements.

ATC N-7365-33 Fugitive Emissions – Valves and Connectors

Top-Down Analysis for VOC Emissions

Facility fugitive emissions are included on this permit unit. For the facility fugitive emissions from valves and connectors the applicable BACT requirements guideline is: BACT Clearinghouse (4th quarter, 2003) Guideline 4.12.1, Chemical Plants – Valves & Connectors

Step 1 - Identify All Possible Control Technologies

Leak defined as a reading of methane, in excess of 100 ppmv above background when measured at a distance of one (1) cm from the potential source and an Inspection and Maintenance Program pursuant to District Rule 4451.

Step 2 - Eliminate Technologically Infeasible Options

There is no technologically infeasible option.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Leak defined as a reading of methane, in excess of 100 ppmv above background when measured at a distance of one (1) cm from the potential source and an Inspection and Maintenance Program pursuant to District Rule 4451.

Step 4 - Cost Effectiveness Analysis

Since the applicant has chosen the most effective control technology listed in step 3 as a technologically feasible option; a cost effectiveness analysis is not required.

Step 5 - Select BACT

Leak defined as a reading of methane, in excess of 100 ppmv above background when measured at a distance of one (1) cm from the potential source and an Inspection and Maintenance Program pursuant to District Rule 4451.

Attachment VII
Statewide Compliance Statement



Pacific Ethanol, Inc.

June 1, 2015

Mr. Nick Peirce
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way
Modesto CA 95356-8718

Subject: Compliance Statement for Pacific Ethanol Stockton

Dear Mr. Gill:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Pacific Ethanol Stockton is pleased to provide this compliance statement regarding its proposed increased denatured ethanol loadout operation project N-1151308.

All major stationary sources in California owned or operated by Pacific Ethanol, Inc., or by any entity controlling, controlled by, or under common control with Pacific Ethanol, Inc., and which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards. These sources include one or more of the following facilities:

Facility #1: Pacific Ethanol Stockton LLC, 3028 Navy Drive, Stockton, CA 95206

Facility #2: Pacific Ethanol Madera LLC, 31470 Avenue 12, Madera, CA 93638

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Please contact me if you have any questions regarding this certification.

Sincerely,

Mike Kandris,
COO
Pacific Ethanol, Inc.

cc: J. Teubner
J. Unsinger

Attachment VIII
Title V Compliance Certification Form

**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: ☒ Corporation ☐ Sole Ownership ☐ Government ☐ Partnership ☐ Utility	
2. Owner's Name: Pacific Ethanol Stockton LLC	
3. Agent to the Owner: Mike Kandris	

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

MR 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).

MR 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.

MR Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

MR 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 foregoing is correct and true:

Mike Kandris

Signature of Responsible Official

June 1, 2015

Date

Mike Kandris
Name of Responsible Official (please print)

COO
Title of Responsible Official (please print)

Attachment IX
HRA

San Joaquin Valley Air Pollution Control District

Risk Management Review

To: Richard Edgehill – Permit Services
From: Leland Villalvazo – Technical Services
Date: October 15, 2015
Facility Name: Pacific Ethanol Stockton, LLC
Location: 3028 Navy Drive Stockton, CA 95206
Application #(s): N-7365-1-3, '-4-5, '-5-5, '-6-4, '-7-5, '-8-6, '-9-3, '-10-4, '-11-7, '-13-3, '-14-3, '-15-3, '-16-3, '-17-3, '-19-5 and '-33-2
Project #: N-1151366

A. RMR SUMMARY

RMR Summary				
Categories	Type of Unit Project Total		Project Totals	Facility Totals
Prioritization Score	NA		NA	NA
Acute Hazard Index	3.49E-02		3.49E-02	0.4
Chronic Hazard Index	9.77E-04		9.77E-04	0.0
Maximum Individual Cancer Risk (10^{-6})	0.0945		0.0945	0.2145
T-BACT Required?	No			
Special Permit Conditions?	No			

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 1-3, '-4-5, '-5-5, '-6-4, '-7-5, '-8-6, '-9-3, '-10-4, '-11-7, '-13-3, '-14-3, '-15-3, '-16-3, '-17-3, '-19-5 and '-33-2

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on August 27, 2015, to perform a Risk Management Review for a proposed modification to ethanol plant. The modification consisted of increasing the yearly production rate from 60 MM gal to 70 MM gal/yr., as well as lowering VOC emissions rates.

II. Analysis

Since modeling has been conducted for this facility for previous projects no prioritization was performed, a refined health risk assessment was required. Emissions calculated using District approved Ethanol Plant spreadsheet were input into the SHARP database. The AERMOD model was used, with the parameters outlined below and meteorological data for 2009-2013 from Stockton to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP) and the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The parameters used for this analysis are included in the AERMOD.

III. Conclusion

The acute and chronic indices are below 1.0 and the cancer risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

Attachment X
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-1-3

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:

MODIFICATION OF TRUCK AND RAILCAR GRAIN RECEIVING AND STORAGE OPERATION INCLUDING A RECEIVING SHED, RAILCAR AND TRUCK RECEIVING HOPPERS, A RECEIVING DRAG CONVEYOR, A RECEIVING LEG (ELEVATOR), ALL SERVED BY A 25,000 CFM MAC EQUIPMENT MODEL 120MCF255 STYLE III BAGHOUSE; AND TWO (2) 500,000 BUSHEL CAPACITY STORAGE SILOS, TWO 5,000 BUSHEL CAPACITY INTERSTICE BINS AND ENCLOSED MECHANICAL CONVEYORS ALL SERVED BY A 3,500 CFM MAC EQUIPMENT MODEL 96AVS36N STYLE III BAGHOUSE (BAGHOUSE SHARED WITH PERMITS N-7365-2 AND -3): INCREASE GRAIN RECEIVING RATE FROM 12,330 TONS/DAY TO 13,330 TONS/DAY

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Visible emissions from the exhaust of the baghouse serving the grain receiving pit shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Amaud Marjolle, Director of Permit Services

N-7365-1-3: Oct 8 2016 2:46PM - EDOEHILR : Joint Inspection NOT Required

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5. Visible emissions from the exhaust of baghouse serving the storage silos, day bins and associated conveying equipment shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Each baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Each baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Material removed from each baghouse shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Replacement bags numbering at least 10% of the total number of bags in each baghouse shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Each baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Each baghouse shall operate at all times with a minimum differential pressure of 1 inches water column and a maximum differential pressure of 5 inches water column. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The exhaust stack of the baghouse serving the grain receiving pit shall have the following parameters: stack height from ground level - 75 feet; stack diameter - 35 inches; and gas exit flowrate - 25,000 dscfm. [District Rule 4102]
13. The exhaust stack of the baghouse serving the grain handling and transfer operations shall have the following parameters: stack height from ground level - 110 feet; stack diameter - 10 inches; and gas exit flowrate - 3,500 dscfm. [District Rule 4102]
14. The grain receiving baghouse shall not operate for more than 3,500 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The maximum amount of grain received and transferred to storage shall not exceed either of the following limits: 13,330 tons/day or 646,800 tons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. PM10 emissions from the grain receiving baghouse shall not exceed 0.004 gr/dscf. [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
17. PM10 emissions from the grain handling/transfer baghouse shall not exceed 0.004 gr/dscf. [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
18. Visible emissions from the baghouse serving the grain receiving operation shall be evaluated using EPA Method 22 for a period of at least 6 minutes at least once during each day that the permit unit is operated. [40 CFR Part 64] Federally Enforceable Through Title V Permit
19. Visible emissions from the baghouse serving the grain receiving pit shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. Upon determining an excursion from this requirement, the permittee shall investigate the excursion and take corrective action to minimize emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
20. The baghouse serving the grain receiving pit shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [40 CFR Part 64] Federally Enforceable Through Title V Permit
21. The baghouse serving the grain receiving pit shall operate at all times with a minimum differential pressure of 1 inches water column and a maximum differential pressure of 5 inches water column. [40 CFR Part 64] Federally Enforceable Through Title V Permit
22. Differential operating pressure shall be monitored and recorded on each day that the baghouse serving the grain receiving pit operates. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. During each day of operation, the permittee shall record the pressure drop of the baghouse serving the grain receiving pit, and compare the readings with the acceptable range. Upon detecting any excursion from the acceptable range pressure readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
24. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
25. The permittee shall maintain daily and annual records of the amount of grain received and transferred to storage, in tons, and annual records of the amount of time the grain receiving baghouse operates, in hours. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Differential operating pressure shall be monitored and recorded on each day that each baghouse operates. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Records of all maintenance of each baghouse, including all change outs of filter media, shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
28. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 10 CFR Part 64] Federally Enforceable Through Title V Permit
29. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-4-5

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:

MODIFICATION OF ONE 18,500 GALLON SLURRY TANK AND ONE 78,050 GALLON SLURRY MIX TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-5, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-5, '-6, '-7, '-8, '-9, -10 AND '-11); INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. ATC shall be implemented concurrently with or subsequent to ATC N-7365-4-4. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All vapors from the slurry tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-4-5 : Sep 5 2015 11:53AM - EDGHEILR : Joint Inspection NOT Required

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7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the slurry tank served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The VOC content of the vapor in the slurry tank and slurry mix tank shall not exceed 10% by weight. [District Rules 2201 and 4455]
14. Operator shall conduct initial sampling from the slurry mix tank to qualify for exemption from fugitive component counts for components handling fluids with less than 10% VOC by weight. [District Rule 2201]
15. VOC content of vapor shall be determined by ASTM D1945, ASTM D1946, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201]
16. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted within 120 days after initial start-up and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
25. During source testing, permittee shall maintain record of ethanol production rate measured in gal-ethanol/hour. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
27. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
39. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-5-5

ISSUANCE DATE: DRAFT

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:

MODIFICATION OF 29,653 GALLON YEAST TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-6, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-6, '-7, '-8, '-9, '-10 AND '-11); INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All vapors from the slurry tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-5-5 : Sep 6 2015 12:31PM - EDGEHILL : Joint Inspection NOT Required

7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the slurry tank served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC emissions from equipment leaks associated with this tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
19. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted within 60 days after recommencing the operation and at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted within 60 days after recommencing the operation and at least once every 12 months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

23. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
24. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
37. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
38. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

39. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
40. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
41. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
42. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
43. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-6-4

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:

MODIFICATION OF ONE 177,748 GALLON LIQUEFACTION TANK SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-9, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-7, '-8, '-9, '-10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All vapors from the liquefaction tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjolle, Director of Permit Services
N-7365-6-4 : Sep 6 2015 12:31PM - EDGEHILL : Joint Inspection NOT Required

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7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the slurry tank served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC emissions from equipment leaks associated with the liquefaction tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
16. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
19. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months thereafter, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\frac{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}]}{[\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
24. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall maintain daily records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7 [40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
37. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
38. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

39. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
40. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
41. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
42. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
43. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-7-5

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:

MODIFICATION OF FERMENTATION PROCESS CONSISTING OF FOUR 705,000 GALLON FIXED ROOF PROCESS TANKS, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-8) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-8). THE EXHAUST FROM THE PROCESS TANKS IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND -11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-7-5 : Sep 5 2015 12:32PM - EDGEHILL : Joint Inspection NOT Required

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6. All vapors from the fermentation tanks shall be vented through the CO2 scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the CO2 scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from each fermentation tank served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the entire fermentation process served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the fermentation process and beerwell process tank all served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-VOC/MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions from equipment leaks associated with the fermentation process shall not exceed 3.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
16. VOC content in the fluid handled through the chiller system (shared with permit N-7365-8) shall be less than or equal to 10% by weight. Compliance with this condition shall be verified by sampling fluid from chilled water tank, as well as, the sump of the CO2 scrubber within 60 days of startup under this permit and whenever required by the District, ARB, or EPA. [District Rules 2201, 4455, 40 CFR 60.480a (d)(5)] Federally Enforceable Through Title V Permit
17. The owner or operator shall keep records of the following items for VOC content testing: a.) the date, b.) vessel or location from where fluid is sampled, c.) name of the person taking and analyzing samples and company affiliation, d.) VOC content (% by wt.) in the sample, and e.) report of the test results. [District Rules 2201 and 4455, 40 CFR 60.486a (i)(3)] Federally Enforceable Through Title V Permit
18. The permittee shall include in the Operator Management Plan all components exclusively handling liquid streams with VOC content less than 10% by weight. [District Rule 4455] Federally Enforceable Through Title V Permit
19. The results of any laboratory testing or other pertinent information to demonstrate compliance with the exemption criteria for components exclusively handling liquid streams with VOC content less than 10% by weight shall be submitted with the Operator Management Plan. [District Rule 4455] Federally Enforceable Through Title V Permit
20. VOC content shall be determined using South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids, or EPA Method 8260B, or other alternative test methods approved by the District prior to their use. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
21. Tanks shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

22. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
23. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
24. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
25. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
29. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
30. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
31. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The CO2 scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The water flow rate through the CO2 scrubber shall not be less than 33 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall monitor and record the water flow rate through the CO2 scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. If the water flow rate through the CO2 scrubber is less than 33 gal/minute, the permittee shall correct the water flow rate to exceed 33 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the CO2 scrubber continues to be less than 33 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The permittee shall maintain daily records of (1) the date of water flow rate measurements, (2) the water flow rate through the CO2 scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 33 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

39. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
40. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
41. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 $\text{^\circ F}$ limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
42. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
43. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
44. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
45. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
46. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
47. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
48. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
49. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
50. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-8-6

ISSUANCE DATE: DRAFT

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:

MODIFICATION OF ONE 928,526 GALLON FIXED ROOF BEERWELL PROCESS TANK, A CHILLER SYSTEM (SHARED WITH PERMIT N-7365-7) CONSISTING OF AN AIR COOLED ROTARY LIQUID CHILLER, AN ENCLOSED CHILLED WATER HOLDING TANK, CHILLED WATER INJECTORS, AND A KOCH GLICH CO2 WET SCRUBBER (SHARED WITH PERMIT N-7365-7). THE EXHAUST FROM THE PROCESS TANK IS VENTED THROUGH THE CHILLED WATER INJECTORS BEFORE ITS RELEASE INTO THE CO2 SCRUBBER WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-8, '-9, -10 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-8-6 : Aug 31 2015 8:37AM - EDGEHLR : Joint Inspection NOT Required

6. All vapors from the beerwell process tank shall be vented through the CO2 scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the CO2 scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the beerwell process tank served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the fermentation process and beerwell process tank all served by the CO2 scrubber vented to the RTO shall not exceed 0.05365 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOx/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOx/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC emissions from equipment leaks associated with the beerwell process tank shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
15. VOC content in the fluid handled through the chiller system (shared with permit N-7365-7) shall be less than or equal to 10% by weight. Compliance with this condition shall be verified by sampling fluid from chilled water tank, as well as, the sump of the CO2 scrubber within 60 days of startup under this permit and whenever required by the District, ARB, or EPA. [District Rules 2201, 4455, 40 CFR 60.480a (d)(5)] Federally Enforceable Through Title V Permit
16. The owner or operator shall keep records of the following items for VOC content testing: a.) the date, b.) vessel or location from where fluid is sampled, c.) name of the person taking and analyzing samples and company affiliation, d.) VOC content (% by wt.) in the sample, and e.) report of the test results. [District Rules 2201 and 4455, 40 CFR 60.486a (i)(3)] Federally Enforceable Through Title V Permit
17. The permittee shall include in the Operator Management Plan all components exclusively handling liquid streams with VOC content less than 10% by weight. [District Rule 4455] Federally Enforceable Through Title V Permit
18. The results of any laboratory testing or other pertinent information to demonstrate compliance with the exemption criteria for components exclusively handling liquid streams with VOC content less than 10% by weight shall be submitted with the Operator Management Plan. [District Rule 4455] Federally Enforceable Through Title V Permit
19. VOC content shall be determined using South Coast Air Quality Management District (SCAQMD) Method 304-91 for liquids, or EPA Method 8260B, or other alternative test methods approved by the District prior to their use. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
20. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
21. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
24. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
29. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The CO₂ scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The water flow rate through the CO₂ scrubber shall not be less than 33 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. The permittee shall monitor and record the water flow rate through the CO₂ scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. If the water flow rate through the CO₂ scrubber is less than 33 gal/minute, the permittee shall correct the water flow rate to exceed 33 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the CO₂ scrubber continues to be less than 33 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The permittee shall maintain daily records of (1) the date of water flow rate measurements, (2) the water flow rate through the CO₂ scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 33 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

39. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
40. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64]
41. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
42. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
43. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
44. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
45. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
46. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
47. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
48. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
49. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-9-3

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:

MODIFICATION OF DISTILLATION PROCESS CONSISTING OF ONE DE-GAS VESSEL, ONE BEER STRIPPER, ONE SIDE STRIPPER, ONE RECTIFIER, TWO MOLECULAR SIEVES AND ONE 200 PROOF ETHANOL CONDENSER, ALL SERVED BY KOCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-10 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-10 AND '-11); INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All vapors from the distillation process shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director / APCO

Amaud Marjolle, Director of Permit Services

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6. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Controlled VOC emissions rate from the distillation process served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Emissions rates from the combustion of natural gas in the RTO burner shall not exceed any of the following limits: 0.05 lb-NOX/MMBtu; 0.084 lb-CO/MMBtu; 0.0055 lb-MMBtu; 0.0076 lb-PM10/MMBtu; or 0.00285 lb-SOX/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Fugitive VOC emissions from equipment leaks associated with the distillation process shall not exceed 3.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
20. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
25. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64]
27. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
31. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
33. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
34. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
35. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
36. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
37. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

38. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
39. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
40. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-10-4

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:

MODIFICATION OF ONE 190,400 GALLON PROCESS CONDENSATE TANK, COLLECTING WATER FROM THE CO2 AND VENT GAS SCRUBBERS, SERVED BY A KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-11) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-11): INCREASE ANNUAL ETHANOL PRODUCTION AND REDUCE COMBINED VOC EMISSION FACTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
N-7365-10-4: Sep 5 2016 12:34PM - EDGEHLR : Joint Inspection NOT Required

6. All vapors from the process condensate tank shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Controlled VOC emissions rate from the distillation process served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Fugitive VOC emissions from equipment leaks associated with this process condensate tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
15. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
16. Tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 95% by weight as determined by the test method specified in Section 6.4.7. [District Rule 4623] Federally Enforceable Through Title V Permit
17. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
18. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
19. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO₂ scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
24. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
26. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
27. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
28. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
29. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
30. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64]
31. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
32. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
34. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
37. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

38. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
39. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
40. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
41. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
42. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
43. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
44. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-11-7

ISSUANCE DATE: DRAFT

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:

MODIFICATION OF WET CAKE PROCESS CONSISTING OF ONE 194,400 GALLON WHOLE STILLAGE TANK, ONE CENTRIFUGE SYSTEM WITH FIVE CENTRIFUGES, ONE 127,000 GALLON THIN STILLAGE TANK, THREE EVAPORATORS, ONE 129,600 GALLON SYRUP TANK, CORN OIL EXTRACTION SYSTEM CONSISTING OF ONE 36,000 GALLON HEAT SOAK TANK, THREE CENTRIFUGES, ONE 800 GALLON BUFFER TANK, ONE 1,285 GALLON FINAL PRODUCT TANK, TWO 10,500 GALLON CORN OIL LOADOUT STORAGE TANKS ALL SERVED BY AN KOTCH GLICH VENT GAS SCRUBBER (SCRUBBER SHARED WITH PERMITS N-7365-4, '-5, '-6, '-9 AND '-10) WHICH IS VENTED TO A 2.4 MMBTU/HR A.H. LUNDBERG ASSOCIATES, INC. REGENERATIVE THERMAL OXIDIZER WITH A MAXON MODEL KINEDIZER LE LOW NOX BURNER (RTO SHARED WITH PERMITS N-7365-4, '-5, '-6, '-7, '-8, '-9 AND '-10) AND A TRUCK LOADOUT SYSTEM: INCREASE ANNUAL ETHANOL PRODUCTION, REDUCE CORN OIL LOADOUT EMISSION FACTOR, INCREASE CORN OIL LOADOUT RATE, REDUCE CORN OIL FUGITIVE EMISSIONS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Authority to Construct (ATC) N-7365-11-6 shall be implemented concurrently, or prior to the modification and startup of the equipment authorized by this Authority to Construct. [District Rule 2201]
4. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-11-7, Oct 19 2015 9:45AM -- EDGEHILL Joint Inspection NOT Required

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

5. Wet cake conveyors between each tank or each emissions unit at the wet cake process unit shall be fully enclosed. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The maximum amount of ethanol produced at this facility shall not exceed either of the following limits: 360,000 gallon/day or 70,000,000 gallon/year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All vapors from the wet cake process shall be vented through the vent gas scrubber and then through the RTO. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The RTO shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The overall control efficiency for the vent gas scrubber vented to the RTO shall be a minimum of 99.5% for VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Controlled VOC emissions rate from the distillation process served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb-VOC/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Controlled VOC emissions rate from the slurry tank, yeast tank, liquefaction tank, distillation process, process condensate tank and wet cake process all served by the vent gas scrubber vented to the RTO shall not exceed 0.00995 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Controlled VOC emissions rate from the exhaust of the RTO while serving the slurry tank, yeast tank, liquefaction tank, fermentation process, beerwell process tank, distillation process, process condensate tank and wet cake process shall not exceed 0.0636 lb/1,000 gal-ethanol produced at the facility. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Emissions rates from the combustion of natural gas 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-MMBtu; 0.0076 lb-PM₁₀/MMBtu; or 0.00285 lb-SO_x/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Loading losses from the distiller's syrup loadout operation shall not exceed 0.526 lb-VOC/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Loading losses from the distiller's corn oil loadout operation shall not exceed 0.000175 lb-VOC/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The maximum throughput of distiller's syrup loaded shall not exceed any of the following: 67,371 gallons per day or 24,590,415 gallons per year. [District Rule 2201]
17. The maximum throughput of corn oil loaded shall not exceed any of the following: 26,000 gallons per day or 5,000,000 gallons per year. [District Rule 2201]
18. Fugitive VOC emissions from equipment leaks associated with the wet cake process shall not exceed 2.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall not exceed 0.03 lb/day. [District Rule 2201]
20. Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall not exceed 2.9 lb/day. [District Rule 2201]
21. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Fugitive VOC emissions from equipment leaks associated with the corn oil operation shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-9, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Leak Rate/Screening Value Correlations Emission Factors. [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

23. Fugitive VOC emissions from equipment leaks associated with the distiller's syrup operation shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-9, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Leak Rate/Screening Value Correlations Emission Factors. [District Rule 2201]
24. The permittee shall maintain daily and annual records, in gallons, of the quantity of distiller's syrup and corn oil loaded at this facility. [District Rule 2201]
25. The permittee shall maintain daily and annual records, in gallons, of the quantity of ethanol produced at this facility. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
26. Permittee shall maintain accurate component count and shall update such records when new components are approved and installed. [District Rule 2201]
27. Source testing to demonstrate compliance with the 99.5% overall control efficiency of the CO2 scrubber vented to the RTO and the vent gas scrubber vented to the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Source testing to demonstrate compliance with the overall VOC emissions rate from the exhaust of the RTO shall be conducted at least once every twelve (12) months, with equipment in operational condition. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Compliance with the 99.5% overall VOC control efficiency shall be determined as follows: Overall VOC Control Efficiency (%) = $\{[(\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}) - \text{RTO Outlet}] / [\text{CO}_2 \text{ Scrubber Inlet} + \text{Vent Gas Scrubber Inlet}]\} \times 100\%$. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
31. Source testing for VOC emissions shall be conducted using EPA Method 18, 25 or 25A. Source testing shall also be conducted in accordance with EPA's Midwest Scaling Protocol for the Measurement of "VOC Mass Emissions" at Ethanol Production Facilities and/or any other testing methodology that has been previously approved by the District, CARB, and EPA. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
32. During source testing, permittee shall maintain records of the amount of ethanol produced, in gal-ethanol/hour. [District Rule 2201] Federally Enforceable Through Title V Permit
33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
34. The vent gas scrubber shall be equipped with a water flow meter, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
35. The water flow rate through the vent gas scrubber shall not be less than 25 gal/minute. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. The permittee shall monitor and record the water flow rate through the vent gas scrubber at least once every day. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. If the water flow rate through the vent gas scrubber is less than 25 gal/minute, the permittee shall correct the water flow rate to exceed 25 gal/minute, as soon as possible, but no longer than 1 hour of operation after detection. If the water flow rate through the vent gas scrubber continues to be less than 25 gal/minute after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. The permittee shall maintain records of (1) the date of water flow rate measurements, (2) the water flow rate through the vent gas scrubber at the time of measure, and (3) a description of any corrective action taken to maintain the water flow rate above the 25 gal/minute limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

39. The RTO shall be operated at a temperature of no less than 1,400 °F. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
40. The RTO shall be equipped with a continuous temperature monitoring and recording device, in operation at all times. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
41. Upon detecting any excursion from the acceptable temperature readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule and 40 CFR Part 64] Federally Enforceable Through Title V Permit
42. The permittee shall comply with the compliance assurance monitoring and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
43. The permittee shall maintain daily records of (1) the date of RTO temperature measurements, (2) the temperature of the RTO at the time of measure, and (3) a description of any corrective action taken to maintain the temperature above the 1,400 °F limit. [District Rule 2201 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
44. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
45. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
46. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
47. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455] Federally Enforceable Through Title V Permit
48. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
49. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
50. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
51. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
52. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-13-3

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:

MODIFICATION OF 190,357 GALLON INTERNAL FLOATING ROOF 190-PROOF ETHANOL STORAGE TANK WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: INCREASE THROUGHPUT FROM 600,000 GALS PER YR TO 25 MILLION GALS PER YR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of 190-proof ethanol processed through this storage tank shall not exceed either of the following limits: 206,000 gallons/day or 25,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from this 190-proof ethanol storage tank shall not exceed 2.4 lb/day or 384 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Fugitive VOC emissions from equipment leaks associated with this 190-proof ethanol storage tank shall not exceed 0.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-13-3 : Sep 5 2016 12:36PM -- EDGEHLR : Joint Inspection NOT Required

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7. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee shall maintain daily and annual records, in gallons, of the quantity of 190-proof ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
9. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
10. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
11. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
12. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
13. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
15. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
16. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
17. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
20. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
21. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

23. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
24. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
25. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
26. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
27. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
28. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
29. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
31. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
32. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
33. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
34. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit

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35. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
36. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
37. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
38. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
39. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit
40. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
41. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
42. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
43. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
44. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

45. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
46. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
47. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
49. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
50. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
51. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
52. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-14-3

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:

MODIFICATION OF 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: INCREASE THROUGHPUT FROM 60 MILLION GALS PER YR TO 70 MILLION GALS PER YR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of 200-proof ethanol processed through this storage tank shall not exceed either of the following limits: 342,000 gallons/day or 70,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The combined maximum amount of 200-proof ethanol processed through the storage tanks operating under permits N-7365-14 and N-7365-15 shall not exceed 70,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emissions from the 200-proof ethanol storage tank shall not exceed 3.7 lb/day or 479 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Sayed Sadredin, Executive Director, APCO

Amaud Marjollet, Director of Permit Services

N-7365-14-3 : Aug 31 2015 8:37AM - EDOEHLR : Joint Inspection NOT Required

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7. Fugitive VOC emissions from equipment leaks associated with this 200-proof ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall maintain daily and annual records, in gallons, of the quantity of 200-proof ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
11. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
12. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
16. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
21. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit

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24. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
27. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
28. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
29. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
31. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
32. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
33. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
34. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit

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36. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
37. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
38. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
39. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m3 storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m3 but less than 151 m3 storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
40. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit
41. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
42. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
43. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
44. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
45. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

46. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
47. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
49. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
50. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
51. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
52. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
53. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-7365-15-3

ISSUANCE DATE: DRAFT

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:

MODIFICATION OF 190,357 GALLON INTERNAL FLOATING ROOF 200-PROOF ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: INCREASE THROUGHPUT FROM 60 MILLION GALS PER YR TO 70 MILLION GALS PER YR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of 200-proof ethanol processed through this storage tank shall not exceed either of the following limits: 342,000 gallons/day or 70,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The combined maximum amount of 200-proof ethanol processed through the storage tanks operating under permits N-7365-14 and N-7365-15 shall not exceed 70,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emissions from the 200-proof ethanol storage tank shall not exceed 3.7 lb/day or 479 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services
N-7365-15-3: Sep 5 2015 12:46PM - EDG:HLR : Joint Inspection NOT Required

7. Fugitive VOC emissions from equipment leaks associated with this 200-proof ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall maintain daily and annual records, in gallons, of the quantity of 200-proof ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
11. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
12. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
16. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
21. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
23. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

24. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
27. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
28. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
29. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
31. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
32. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
33. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
34. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit
35. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit

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36. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
37. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
38. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
39. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
40. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit
41. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
42. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
43. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
44. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
45. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

46. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
47. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
49. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one (1) centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
50. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
51. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
52. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
53. All records shall be retained on site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-16-3

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:

MODIFICATION OF 635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #1 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: CORRECT THE STORAGE CAPACITY TO 582,750 GALS, INCREASE DAILY THROUGHPUT RATE FROM 360,000 GALS TO 1,000,000 GALS, INCREASE ANNUAL THROUGHPUT RATE FROM 93,000,000 GALS TO 300,000,000 GALS, INCREASE THE COMBINED ANNUAL THROUGHPUT RATE FOR N-7365-16 AND -17 FROM 93,000,000 GALS TO 300,000,000 GALS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of denatured ethanol processed through this storage tank shall not exceed either of the following limits: 1,000,000 gallons/day or 300,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from the denatured ethanol storage tank shall not exceed 5.2 lb/day or 992 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-16-3 : Sep 5 2015 12:43PM - EDGEHILL : Joint Inspection NOT Required

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6. Fugitive VOC emissions from equipment leaks associated with this denatured ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The combined maximum amount of denatured ethanol processed through the storage tanks operating under permits N-7365-16 and N-7365-17 shall not exceed 300,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall maintain daily and annual records, in gallons, of the quantity of denatured ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
11. The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal roof shall be floating on the liquid surface except during initial fill and when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible. Whenever the permittee intends to land the roof on its legs, the permittee shall notify the APCO in writing at least five days prior to performing the work. [District Rule 4623, and 40 CFR 60.112b(a)(i)] Federally Enforceable Through Title V Permit
12. This storage tank shall be equipped with an Ultraflote, model Dual Ultraseal, seal system. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
13. Gaps between the tank shell and the primary seal shall not exceed 1 1/2 inches. [District Rule 4623] Federally Enforceable Through Title V Permit
14. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
16. No continuous gap in the primary seal greater than 1/8 inch wide shall exceed 10% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
17. No gap between the tank shell and the secondary seal shall exceed 1/2 inch. [District Rule 4623] Federally Enforceable Through Title V Permit
18. The cumulative length of all gaps between the tank shell and the secondary seal, greater than 1/8 inch shall not exceed 5% of the tank circumference. [District Rule 4623] Federally Enforceable Through Title V Permit
19. The Ultraflote model Dual Ultraseal seal system shall be installed so that one end of the shoe extends into the stored liquid and the other end extends a minimum vertical distance of 18 inches above the stored liquid surface. [District Rule 4623] Federally Enforceable Through Title V Permit
20. The geometry of the Ultraflote model Dual Ultraseal seal system shall be such that the maximum gap between the shoe and the tank shell shall be no greater than 3 inches for a length of at least 18 inches in the vertical plane above the liquid. [District Rule 4623] Federally Enforceable Through Title V Permit
21. There shall be no holes, tears, or openings in the secondary seal or in the primary seal envelope that surrounds the annular vapor space enclosed by the roof edge, seal fabric, and secondary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
22. The secondary seal shall allow easy insertion of probes of up to 1 1/2 inches in width in order to measure gaps in the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit

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23. The secondary seal shall extend from the roof to the tank shell and shall not be attached to the primary seal. [District Rule 4623] Federally Enforceable Through Title V Permit
24. All openings in the roof used for sampling and gauging, except pressure-vacuum valves which shall be set to within 10% of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface to prevent belching of liquid and to prevent entrained or formed organic vapor from escaping from the liquid contents of the tank and shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas tight, except when the device or appurtenance is in use. [District Rule 4623] Federally Enforceable Through Title V Permit
25. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 100 ppmv for valves and connectors or 500 ppmv for pumps and compressor seals above background is a violation of this permit and Rule 2201 and shall be reported as a deviation. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit
26. Each opening in a non-contact internal floating roof, except for automatic bleeder vents (vacuum breaker vents) and rim space vents, shall provide a projection below the liquid surface. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iii)] Federally Enforceable Through Title V Permit
27. Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover, or a lid shall be maintained in a closed position at all times (i.e. no visible gaps) except when the device is in use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted in place except when they are in use. [District Rule 4623 and 40 CFR 60.112b(a)(1)(iv)] Federally Enforceable Through Title V Permit
28. Automatic bleeder vents shall be equipped with a gasket and shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the leg roof supports. [District Rule 4623 and 40 CFR 60.112b(a)(1)(v)] Federally Enforceable Through Title V Permit
29. Rim vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vi)] Federally Enforceable Through Title V Permit
30. Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The well shall have a slit fabric cover that covers at least 90 percent of the opening. The fabric cover must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(vii)] Federally Enforceable Through Title V Permit
31. Each penetration of the internal floating roof that allows for the passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. The fabric sleeve must be impermeable. [District Rule 4623 and 40 CFR 60.112b(a)(1)(viii)] Federally Enforceable Through Title V Permit
32. Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 60.112b(a)(1)(ix)] Federally Enforceable Through Title V Permit
33. The permittee shall visually inspect the internal floating roof, and its appurtenant parts, fittings, etc. and measure the gaps of the primary seal and/or secondary seal prior to filling the tank for newly constructed, repair, or rebuilt internal floating roof tanks. If holes, tears, or openings in the primary seal, the secondary seal, the seal fabric or defects in the internal floating roof or its appurtenant parts, components, fittings, etc., are found, they shall be repaired prior to filling the tank. [District Rule 4623 and 40 CFR 60.113b(a)(1)] Federally Enforceable Through Title V Permit
34. The permittee shall visually inspect, through the manholes, roof hatches, or other openings on the fixed roof, the internal floating roof and its appurtenant parts, fittings, etc., and the primary seal and/or secondary seal at least once every 12 months after the tank is initially filled with an organic liquid. There should be no visible organic liquid on the roof, tank walls, or anywhere. Other than the gap criteria specified by this rule, no holes, tears, or other openings are allowed that would permit the escape of vapors. Any defects found are violations of this rule. [District Rule 4623 and 40 CFR 60.113b(a)(2)] Federally Enforceable Through Title V Permit

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35. The permittee shall maintain records of all visual inspections required by this permit. Each record shall identify the storage vessel on which the inspection was performed, the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). [40 CFR 60.115b(a)(2)] Federally Enforceable Through Title V Permit
36. The permittee shall conduct actual gap measurements of the primary seal and/or secondary seal at least once every 60 months. [District Rule 4623] Federally Enforceable Through Title V Permit
37. Operator shall maintain a record showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The record shall be maintained for the life of the vessel. [40 CFR 60.116b(b)] Federally Enforceable Through Title V Permit
38. Operator shall keep a record of the liquids stored in this container, the period of storage, the storage temperature, the maximum true vapor pressure (TVP) of that liquid during the respective storage period and API gravity. [District Rule 4623 and 40 CFR 60.116b(c)] Federally Enforceable Through Title V Permit
39. Operator of each storage vessel, either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 0.75 psia or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure normally less than 4.0 psia, shall notify the APCO within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range. [40CFR 60.116b(d)] Federally Enforceable Through Title V Permit
40. For storage vessels operated above or below ambient temperatures, the operator shall calculate the maximum true vapor pressure based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service. [40 CFR 60.116b(e)(1)] Federally Enforceable Through Title V Permit
41. Maximum true vapor pressure, for crude oil or refined petroleum products, may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.116b(e)(2)(i)] Federally Enforceable Through Title V Permit
42. Operator shall determine the true vapor pressure of each type of crude oil with a Reid vapor pressure less than 2.0 psia or whose physical properties preclude determination by the recommended method from available data and record if the true vapor pressure is greater than 0.5 psia. [40 CFR 60.116b(e)(2)(ii)] Federally Enforceable Through Title V Permit
43. Operator shall determine the true vapor pressure of each VOL, other than crude oil or refined petroleum products, from standard reference texts, by ASTM Method D2879, or by using an appropriate method approved by EPA. [40 CFR 60.116b(e)(3)] Federally Enforceable Through Title V Permit
44. Operator of a tank storing a waste mixture of indeterminate or variable composition shall determine the highest maximum true vapor pressure for the range of liquid compositions to be stored prior to the initial filling, using methods specified for maximum true vapor pressure in this permit. [40CFR 60.116b(f)] Federally Enforceable Through Title V Permit
45. The permittee shall submit the reports of the floating roof tank inspections to the APCO within five calendar days after the completion of the inspection only for those tanks that failed to meet the applicable requirements of Rule 4623, Sections 5.2 through 5.5. The inspection report for tanks that have been determined to be in compliance with the requirements of Sections 5.2 through 5.5 need not be submitted to the APCO, but the inspection report shall be kept on-site and made available upon request by the APCO. The inspection report shall contain all necessary information to demonstrate compliance with the provisions of this rule, including the following: 1) Date of inspection and names and titles of company personnel doing the inspection. 2) Tank identification number and Permit to Operate number. 3) Measurements of the gaps between the tank shell and primary and secondary seals. 4) Gas-tight status of the tank and floating roof deck fittings. Records of the gas-tight status shall include the vapor concentration values measured in parts per million by volume (ppmv). 5) Data, supported by calculations, demonstrating compliance with the requirements specified in Sections 5.3, 5.5.2.3.3, 5.5.2.4.2, and 5.5.2.4.3 of Rule 4623. 6) Any corrective actions or repairs performed on the tank in order to comply with rule 4623 and the date(s) such actions were taken. [District Rule 4623 and 40 CFR 60.115b(a)(3)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

46. Permittee shall maintain the records of the internal floating roof landing activities that are performed pursuant to Rule 4623, Sections 5.3.1.3 and 5.4.3. The records shall include information on the true vapor pressure (TVP), API gravity, storage temperature, type of organic liquid stored in the tank, the purpose of landing the roof on its legs, the date of roof landing, duration the roof was on its legs, the level or height at which the tank roof was set to land on its legs, and the lowest liquid level in the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
47. Valves, threaded connections, and flanges shall not leak VOCs in excess of 100 ppmv above background when measured in accordance with EPA Method 21, provided the total number of leaking tagged components of any component type does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
48. Pressure relief valves (PRVs) shall not leak VOC's in excess of 100 ppmv above background when measured in the plane at the centroid of any atmospheric vent with an instrument calibrated with methane, provided the total number of leaking PRVs does not exceed 0.5 percent of the total number of components of that type inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
49. Process drains shall not leak VOC's in excess of 100 ppmv above background when measured at a distance of one centimeter of the potential source with an instrument calibrated with methane, provided the total number of leaking process drains does not exceed 0.5 percent of the total number of components inspected. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
50. Pumps or compressors which handle a VOC or any associated seal fluid system which circulates a fluid through or between seals on process pumps or compressors shall not leak in excess of 500 ppmv above background when measured in accordance with EPA Method 21. [District Rules 2201 and 4455, 5.1.4] Federally Enforceable Through Title V Permit
51. This operation shall comply with the requirements of District Rule 4455, Components at Petroleum Refineries, Gas Liquids Processing Facilities, and Chemical Plants, as specified on facility wide permit N-7365-0. [District Rule 4455] Federally Enforceable Through Title V Permit
52. This operation shall comply with the requirements of 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry, as specified on facility wide permit N-7365-0. [40 CFR 60.480 and 60.481] Federally Enforceable Through Title V Permit
53. All records shall be retained on site for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-7365-17-3

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:

MODIFICATION OF 635,397 GALLON INTERNAL FLOATING ROOF DENATURED ETHANOL STORAGE TANK #2 WITH A ULTRAFLOTE MODEL DUAL ULTRASEAL SEAL SYSTEM: CORRECT THE STORAGE CAPACITY TO 582,750 GALS, INCREASE DAILY THROUGHPUT RATE FROM 360,000 GALS TO 1,000,000 GALS, INCREASE ANNUAL THROUGHPUT RATE FROM 93,000,000 GALS TO 300,000,000 GALS, INCREASE THE COMBINED ANNUAL THROUGHPUT RATE FOR N-7365-16 AND -17 FROM 93,000,000 GALS TO 300,000,000 GALS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
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3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The maximum amount of denatured ethanol processed through this storage tank shall not exceed either of the following limits: 1,000,000 gallons/day or 300,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
5. VOC emissions from the denatured ethanol storage tank shall not exceed 5.6 lb/day or 992 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-7365-17-3 : Sep 5 2015 12:47PM - EDGEHILL : Joint inspection NOT Required

6. Fugitive VOC emissions from equipment leaks associated with this denatured ethanol storage tank shall not exceed 1.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Fugitive VOC emissions shall be calculated using the EPA "1995 Protocol for equipment Leak Emissions Estimates" (EPA-453/R-95-017), Table 2-1, Synthetic Organic Chemical Manufacturing Industry (SOCMI) Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The combined maximum amount of denatured ethanol processed through the storage tanks operating under permits N-7365-16 and N-7365-17 shall not exceed 300,000,000 gallons/year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The permittee shall maintain daily and annual records, in gallons, of the quantity of denatured ethanol processed through this storage tank. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
10. The tank shall be equipped with a fixed roof with an internal floating type cover equipped with two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. [District Rule 4623 and 40 CFR 60.112b(a)(1)(ii)] Federally Enforceable Through Title V Permit
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14. The cumulative length of all gaps between the tank shell and the primary seal greater than 1/2 inch shall not exceed 10% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
15. The cumulative length of all primary seal gaps greater than 1/8 inch shall not exceed 30% of the circumference of the tank. [District Rule 4623] Federally Enforceable Through Title V Permit
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PCL XL error

Subsystem: IMAGE

Error: ExtraData

Operator: ReadImage

Position: 562