



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



MAR 11 2015

Mr. Martin Hein
Martin Hein Ranch Company Premiere Almonds 8
27210 Road 108
Visalia, CA 93277

**Re: Notice of Final Action - Title V Permit
District Facility # S-7589
Project # S-1133474**

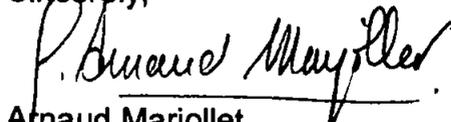
Dear Mr. Hein:

The District has issued the Final Title V Permit for Martin Hein Ranch Company Premiere Almonds 8. The preliminary decision for this project was made on January 15, 2015. No comments were received subsequent to the District preliminary decision. Enclosed are the Final Title V Permit and public notice to be published approximately three days from the date of this letter.

The public notice for issuance of the Final Title V Permit will be published approximately three days from the date of this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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)
1980 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 861-392-5500 FAX: 661-392-5585



Facility # S-7589
MARTIN HEIN RANCH COMPANY PRE ALMONDS 8
27210 ROAD 108
VISALIA, CA 93277

Notice of Permit Issuance

The enclosed permit unit requirements authorize the operation of the equipment as described. These permit unit requirements supersede any and all previous permits for the specified equipment.* Please insert these documents into the Facility Permit to Operate, and post copies on or near the equipment as required by District Rule 2010.

Please contact any of our Small Business Assistance (SBA) staff at the numbers below if you have any questions:

Modesto: (209) 557-6446
Fresno: (559) 230-5888
Bakersfield: (661) 392-5665

*Failure to comply with the permit unit requirements may result in enforcement action.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-8400 FAX: (209) 557-6475

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

Southern Region
34948 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585



Permit to Operate

FACILITY: S-7589

EXPIRATION DATE: 05/31/2017

LEGAL OWNER OR OPERATOR:
MAILING ADDRESS:

MARTIN HEIN RANCH COMPANY PRE ALMONDS 8
27210 ROAD 108
VISALIA, CA 93277

FACILITY LOCATION:

NORTHEAST CORNER OF WILDWOOD & MCCOMBS
WASCO, CA

FACILITY DESCRIPTION:

TREE NUTS

The Facility's Permit to Operate may include Facility-wide Requirements as well as requirements that apply to specific permit units.

This Permit to Operate remains valid through the permit expiration date listed above, subject to payment of annual permit fees and compliance with permit conditions and all applicable local, state, and federal regulations. This permit is valid only at the location specified above, and becomes void upon any transfer of ownership or location. Any modification of the equipment or operation, as defined in District Rule 2201, will require prior District approval. This permit shall be posted as prescribed in District Rule 2010.

Seyed Sadredin
Executive Director / APCO

Arnaud Marjollet
Director of Permit Services

San Joaquin Valley Air Pollution Control District

FACILITY: S-7589-0-1

EXPIRATION DATE: 05/31/2017

FACILITY-WIDE REQUIREMENTS

1. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100; Kern County Rule 111] Federally Enforceable Through Title V Permit
2. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100; County Rule 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160] Federally Enforceable Through Title V Permit
4. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (12/20/07). [District Rules 2010 and 2020] Federally Enforceable Through Title V Permit
5. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 2080, and 2520] Federally Enforceable Through Title V Permit
6. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
7. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
8. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520] Federally Enforceable Through Title V Permit
9. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.

Facility Name: MARTIN HEIN RANCH COMPANY PRE ALMONDS 8
Location: NORTHEAST CORNER OF WILDWOOD & MCCDMBS, WASCO, CA
S-7589-0-1: Mar 2 2015 3:47PM - GILLEBR

10. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520] Federally Enforceable Through Title V Permit
11. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520 and 1100] Federally Enforceable Through Title V Permit
12. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520] Federally Enforceable Through Title V Permit
13. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520] Federally Enforceable Through Title V Permit
14. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520] Federally Enforceable Through Title V Permit
15. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520] Federally Enforceable Through Title V Permit
16. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520] Federally Enforceable Through Title V Permit
17. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520] Federally Enforceable Through Title V Permit
18. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rules 1070 and 2520] Federally Enforceable Through Title V Permit
20. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101] Federally Enforceable Through Title V Permit
21. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in Table of Standards 1 effective until 12/30/10 or Table of Standards 2 effective on and after 1/1/11 of District Rule 4601 (12/17/09) for use or sale within the District. [District Rule 4601] Federally Enforceable Through Title V Permit
22. All VOC-containing materials subject to Rule 4601 (12/17/09) shall be stored in closed containers when not in use. [District Rule 4601] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (12/17/09). [District Rule 4601] Federally Enforceable Through Title V Permit
24. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520] Federally Enforceable Through Title V Permit
25. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82, Subpart F] Federally Enforceable Through Title V Permit
26. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit
27. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit
28. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit
29. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit
30. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit
31. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/2004) or Rule 8011 (8/19/2004). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit
32. Any unpaved vehicle/equipment area that anticipates more than 50 Average annual daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 150 vehicle trips per day (VDT) shall comply with the requirements of Section 5.1.2 of District Rule 8071. On each day that 25 or more VDT with 3 or more axles will occur on an unpaved vehicle/equipment traffic area, the owner/operator shall comply with the requirements of Section 5.1.3 of District Rule 8071. On each day when a special event will result in 1,000 or more vehicles that will travel/park on an unpaved area, the owner/operator shall comply with the requirements of Section 5.1.4 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/2004) or Rule 8011 (8/19/2004). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit
33. The owner or operator shall comply with Sections 5.1 through 5.3 of District Rule 8081 and shall sufficiently implement at least one of the control measures indicated in each section of Table 8081-1 to limit Visible Dust Emissions to 20% opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011, unless specifically exempted under Section 4.0 of Rule 8081 (9/16/2004) or Rule 8011 (8/19/2004). The owner or operator shall also comply with all applicable requirements of Regulation VIII unless specifically exempted by the applicable rules. [District Rule 8081 and 8011] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

34. The owner or operator shall implement the applicable conservation management practices (CMP) selected in the approved CMP plan pursuant to Section 6.2 of District Rule 4550 (8/19/04). The owner or operator shall submit a CMP application to the APCO prepared pursuant to Section 6.1 of District Rule 4550 (8/19/04) within 90 days for an agricultural operation site or an agricultural parcel that is acquired or becomes subject to District Rule 4550 and within 60 days of any operational, administrative, or other modification that necessitates revision of the CMP Plan. The owner or operator shall maintain a copy of each CMP application, CMP plan, and any supporting information necessary to confirm the implementation of the CMPs for a minimum of five (5) years. [District Rule 4550] Federally Enforceable Through Title V Permit
35. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit
36. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520] Federally Enforceable Through Title V Permit
37. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520] Federally Enforceable Through Title V Permit
38. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520] Federally Enforceable Through Title V Permit
39. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), Rule 111 (Kern, Tulare, Kings), and Rule 202 (Fresno, Kern, Tulare, Kings, Madera, Stanislaus, Merced, San Joaquin). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4601 (12/17/09); 8021 (8/19/2004); 8031 (8/19/2004); 8041 (8/19/2004); 8051 (8/19/2004); 8061 (8/19/2004); and 8071 (9/16/2004). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
41. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
42. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
43. This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [Public Resources Code 21000-21177: California Environmental Quality Act]
44. On MONTH, DAY, YEAR, the initial Title V permit was issued. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report are based upon this initial permit issuance date, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-7589-1-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

157 HP CUMMINS MODEL G12 SERIAL #25192196 NATURAL GAS-FIRED IC ENGINE POWERING AN AGRICULTURAL PUMP

PERMIT UNIT REQUIREMENTS

1. This IC engine shall only be used for the growing of crops or raising of fowl or animals. [District Rule 4701 and 4702] Federally Enforceable Through Title V Permit
2. In order to ensure compliance with the requirements of District Rule 4702, Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, the permittee shall demonstrate full compliance with the requirements of the Authority to Construct (ATC) which authorized the installation of the Lambda Management system within six months of the date of issuance of the finalized Title V permit for this site. [District Rules 2520 and 4702 and 40 CFR Part 63, Subpart ZZZZ] 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: S-7589-2-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

167 BHP CUMMINS MODEL G12, SN 25204820, RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH A CONDITIONALLY CERTIFIED LAMBDA MANAGEMENT SYSTEM POWERING AN AGRICULTURAL IRRIGATION PUMP

PERMIT UNIT REQUIREMENTS

1. This IC engine shall only be used for the growing of crops or raising of fowl or animals. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
2. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The engine's oil and filter shall be changed every 1,440 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The engine's spark plugs shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
8. The engine's hoses and belts shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The add-on emission control system (hereinafter referred to as the "Lambda Management System") shall consist of a Johnson-Matthey Model CXX8-4 3-way catalyst module, a Gas Systems Model LMS-MF-2D1 air/fuel ratio controller ("Lambda Management Controller"), and a Bosch Model LSU 4.2 oxygen sensor. [District Rule 4702] Federally Enforceable Through Title V Permit
11. The Lambda Management System shall be installed, maintained and operated according to Lambda's recommendations and shall be in place and operating at all times during engine operation. [District Rule 4702] Federally Enforceable Through Title V Permit
12. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer. [District Rule 4702] Federally Enforceable Through Title V Permit
13. The oxygen sensor shall be replaced at least once every 2,000 hours of operation. Whenever the oxygen sensor is replaced, the new oxygen sensor shall be calibrated according to the procedures outlined by Lambda prior to engine operation. [District Rule 4702] Federally Enforceable Through Title V Permit
14. The catalyst module shall be washed according to manufacturer recommendations or replaced as necessary at least once every 8,000 hours of operation. [District Rule 4702] Federally Enforceable Through Title V Permit
15. If the lambda setting is either fuel lean (yellow light) or fuel rich (red light), the operator shall adjust the lambda management controller as necessary to return the system to the optimum lambda setting (green light) as soon as possible, but no longer than eight hours after detection. If the lambda setting cannot be returned to the optimum lambda setting within eight hours after detection, the operator shall notify the District and shut the engine down within the following hour, and shall not operate the engine until after making all necessary repairs to return the system to green light status. [District Rule 4702] Federally Enforceable Through Title V Permit
16. When using exhaust concentration to demonstrate compliance, if the NO_x concentration corrected to 15% O₂, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
17. When using percent reduction to demonstrate compliance, if the percent reduction (using NO_x concentrations, as measured by the portable analyzer, corrected to 15% O₂) is less than 80%, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to demonstrate percent reduction less than 80% after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
18. If compliance is based on the percent reduction allowance, then the exhaust system shall be equipped with adequate sampling ports located both upstream and downstream of the catalyst module. Each sampling port shall be located at least 1/2 duct diameter upstream and at least 2 duct diameters downstream of any bend, diameter change or stack obstruction. [District Rule 4702] Federally Enforceable Through Title V Permit
19. NO_x emissions from this IC engine shall be reduced by 80% or not exceed 90 ppmvd-NO_x @ 15% O₂ (equivalent to 1.3 g-NO_x/bhp-hr). [District Rule 4702] Federally Enforceable Through Title V Permit
20. PM₁₀ emissions from this IC engine shall not exceed 0.075 g-PM₁₀/bhp-hr. [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.

21. Emissions from this IC engine shall not exceed any of the following limits: 2,000 ppmvd CO @ 15% O₂ (equivalent to 17.0 g-CO/bhp-hr) or 250 ppmvd-VOC @ 15% O₂ (equivalent to 1.2 g-VOC/bhp-hr). [District Rule 4702] Federally Enforceable Through Title V Permit
22. Operation of this engine shall not exceed 6,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
24. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
25. The operator shall perform monthly inspections of the Lambda Management System. The monthly inspection shall ensure the system is operating correctly, i.e. the wiring, installation, and indicator lights are all visibly compliant per Lambda's recommendation. The operator shall monitor the lambda management controller and record any adjustments necessary to return the system to the optimum lambda setting (green light) at least once every month. Monitoring shall be performed with the engine operating at conditions representative of normal source operations. Monitoring shall not be required if the engine is not in operation during any one calendar month, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within a week of restarting the engine unless monitoring has been performed within the last calendar month. Records shall be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
26. The operator shall maintain records of: 1.) The date and time of the lambda management controller monitoring, the lambda setting (e.g. green, yellow, or red light), and a description of any adjustments made to return the system to the optimum lambda setting (green light); 2.) The date and engine hour meter reading at each oxygen sensor change and a description of the oxygen sensor calibration procedures used; and 3.) The date and engine hour meter reading of each catalyst module washing or replacement. [District Rule 4702] Federally Enforceable Through Title V Permit
27. The permittee shall monitor and record the stack concentration (pre- and post-catalyst, if using percent reduction to demonstrate compliance) of NO_x and O₂ at least once every 60 months using a portable emissions monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
28. The owner/operator shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
29. The permittee shall record the total time the engine operates, in hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
30. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] 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.

32. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit
35. The District may revise and/or add requirements in the future as necessary to ensure the Lambda Management System operates according to its conditional certification requirements. [District Rule 4702] 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: S-7589-3-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

250 BHP CUMMINS MODEL GTA12, SN 25210093, RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH A CONDITIONALLY CERTIFIED LAMBDA MANAGEMENT SYSTEM POWERING AN AGRICULTURAL IRRIGATION PUMP

PERMIT UNIT REQUIREMENTS

1. This IC engine shall only be used for the growing of crops or raising of fowl or animals. [District Rules 4701 and 4702] Federally Enforceable Through Title V Permit
2. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801] Federally Enforceable Through Title V Permit
3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit
4. The permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
5. The engine shall be in full compliance with 40 CFR Part 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
6. The engine's oil and filter shall be changed every 1,440 hours of operation or every 12 months, whichever comes first. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
7. The engine's spark plugs shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
8. The engine's hoses and belts shall be inspected every 1,440 hours of operation or every 12 months, whichever comes first, and replaced as necessary. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
9. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d of Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The add-on emission control system (hereinafter referred to as the "Lambda Management System") shall consist of a Johnson-Matthey Model CXX8-4 3-way catalyst module, a Gas Systems Model LMS-MF-2D1 air/fuel ratio controller ("Lambda Management Controller"), and a Bosch Model LSU 4.2 oxygen sensor. [District Rule 4702] Federally Enforceable Through Title V Permit
11. The Lambda Management System shall be installed, maintained and operated according to Lambda's recommendations and shall be in place and operating at all times during engine operation. [District Rule 4702] Federally Enforceable Through Title V Permit
12. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer. [District Rule 4702] Federally Enforceable Through Title V Permit
13. The oxygen sensor shall be replaced at least once every 2,000 hours of operation. Whenever the oxygen sensor is replaced, the new oxygen sensor shall be calibrated according to the procedures outlined by Lambda prior to engine operation. [District Rule 4702] Federally Enforceable Through Title V Permit
14. The catalyst module shall be washed according to manufacturer recommendations or replaced as necessary at least once every 8,000 hours of operation. [District Rule 4702] Federally Enforceable Through Title V Permit
15. If the lambda setting is either fuel lean (yellow light) or fuel rich (red light), the operator shall adjust the lambda management controller as necessary to return the system to the optimum lambda setting (green light) as soon as possible, but no longer than eight hours after detection. If the lambda setting cannot be returned to the optimum lambda setting within eight hours after detection, the operator shall notify the District and shut the engine down within the following hour, and shall not operate the engine until after making all necessary repairs to return the system to green light status. [District Rule 4702] Federally Enforceable Through Title V Permit
16. When using exhaust concentration to demonstrate compliance, if the NO_x concentration corrected to 15% O₂, as measured by the portable analyzer, exceed the allowable emission concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
17. When using percent reduction to demonstrate compliance, if the percent reduction (using NO_x concentrations, as measured by the portable analyzer, corrected to 15% O₂) is less than 80%, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 8 hours after detection. If the portable analyzer readings continue to demonstrate percent reduction less than 80% after 8 hours, the permittee shall notify the District within the following 1 hour, and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4702] Federally Enforceable Through Title V Permit
18. If compliance is based on the percent reduction allowance, then the exhaust system shall be equipped with adequate sampling ports located both upstream and downstream of the catalyst module. Each sampling port shall be located at least 1/2 duct diameter upstream and at least 2 duct diameters downstream of any bend, diameter change or stack obstruction. [District Rule 4702] Federally Enforceable Through Title V Permit
19. NO_x emissions from this IC engine shall be reduced by 80% or not exceed 90 ppmvd-NO_x @ 15% O₂ (equivalent to 1.3 g-NO_x/bhp-hr). [District Rule 4702] Federally Enforceable Through Title V Permit
20. PM₁₀ emissions from this IC engine shall not exceed 0.075 g-PM₁₀/bhp-hr. [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.

21. Emissions from this IC engine shall not exceed any of the following limits: 2,000 ppmvd CO @ 15% O2 (equivalent to 17.0 g-CO/bhp-hr) or 250 ppmvd-VOC @ 15% O2 (equivalent to 1.2 g-VOC/bhp-hr). [District Rule 4702] Federally Enforceable Through Title V Permit
22. Operation of this engine shall not exceed 6,000 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
23. All monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4702] Federally Enforceable Through Title V Permit
24. During periods of operation, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
25. The operator shall perform monthly inspections of the Lambda Management System. The monthly inspection shall ensure the system is operating correctly, i.e. the wiring, installation, and indicator lights are all visibly compliant per Lambda's recommendation. The operator shall monitor the lambda management controller and record any adjustments necessary to return the system to the optimum lambda setting (green light) at least once every month. Monitoring shall be performed with the engine operating at conditions representative of normal source operations. Monitoring shall not be required if the engine is not in operation during any one calendar month, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within a week of restarting the engine unless monitoring has been performed within the last calendar month. Records shall be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
26. The operator shall maintain records of: 1.) The date and time of the lambda management controller monitoring, the lambda setting (e.g. green, yellow, or red light), and a description of any adjustments made to return the system to the optimum lambda setting (green light); 2.) The date and engine hour meter reading at each oxygen sensor change and a description of the oxygen sensor calibration procedures used; and 3.) The date and engine hour meter reading of each catalyst module washing or replacement. [District Rule 4702] Federally Enforceable Through Title V Permit
27. The permittee shall monitor and record the stack concentration (pre- and post-catalyst, if using percent reduction to demonstrate compliance) of NOx and O2 at least once every 60 months using a portable emissions monitor that meets District specifications. Monitoring shall not be required if the engine is not in operation, i.e. the engine need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the engine unless monitoring has been performed within the last month. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rule 4702] Federally Enforceable Through Title V Permit
28. The owner/operator shall maintain an engine operating log to demonstrate compliance. The engine operating log shall include, on a monthly basis, the following information: total hours of operation, type of fuel used, maintenance or modifications performed, monitoring data, and any other information necessary to demonstrate compliance. [District Rule 4702] Federally Enforceable Through Title V Permit
29. The permittee shall record the total time the engine operates, in hours per calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
30. The permittee shall maintain monthly records that include any information necessary to demonstrate compliance with 40 CFR 63, ZZZZ. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
31. The permittee shall maintain monthly records of all performance tests and required maintenance performed on the air pollution control and monitoring equipment. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] 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.

32. The permittee shall maintain monthly records of the occurrence and duration of each malfunction of the operation (i.e., process equipment) or the air pollution control and monitoring equipment. The permittee shall also maintain monthly records of the action(s) taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning operation and air pollution control and monitoring equipment to its normal or usual manner of operation. [District Rule 1070 and 40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [40 CFR 63 Subpart ZZZZ] Federally Enforceable Through Title V Permit
34. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702] Federally Enforceable Through Title V Permit
35. The District may revise and/or add requirements in the future as necessary to ensure the Lambda Management System operates according to its conditional certification requirements. [District Rule 4702] 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: S-7589-4-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

250 HP CUMMINS MODEL GTA12 SERIAL #25210285 NATURAL GAS-FIRED IC ENGINE POWERING AN AGRICULTURAL PUMP

PERMIT UNIT REQUIREMENTS

1. This IC engine shall only be used for the growing of crops or raising of fowl or animals. [District Rule 4701 and 4702] Federally Enforceable Through Title V Permit
2. In order to ensure compliance with the requirements of District Rule 4702, Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, the permittee shall demonstrate full compliance with the requirements of the Authority to Construct (ATC) which authorized the installation of the Lambda Management system within six months of the date of issuance of the finalized Title V permit for this site. [District Rules 2520 and 4702 and 40 CFR Part 63, Subpart ZZZZ] 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: S-7589-5-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

250 HP CUMMINS MODEL GTA12 SERIAL #25207419 NATURAL GAS-FIRED IC ENGINE POWERING AN AGRICULTURAL PUMP

PERMIT UNIT REQUIREMENTS

1. This IC engine shall only be used for the growing of crops or raising of fowl or animals. [District Rule 4701 and 4702] Federally Enforceable Through Title V Permit
2. In order to ensure compliance with the requirements of District Rule 4702, Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, the permittee shall demonstrate full compliance with the requirements of the Authority to Construct (ATC) which authorized the installation of the Lambda Management system within six months of the date of issuance of the finalized Title V permit for this site. [District Rules 2520 and 4702 and 40 CFR Part 63, Subpart ZZZZ] 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: S-7589-6-1

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

250 HP CUMMINS MODEL GTA12 SERIAL #25210095 NATURAL GAS-FIRED IC ENGINE POWERING AN AGRICULTURAL PUMP

PERMIT UNIT REQUIREMENTS

1. This IC engine shall only be used for the growing of crops or raising of fowl or animals. [District Rule 4701 and 4702] Federally Enforceable Through Title V Permit
2. In order to ensure compliance with the requirements of District Rule 4702, Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, the permittee shall demonstrate full compliance with the requirements of the Authority to Construct (ATC) which authorized the installation of the Lambda Management system within six months of the date of issuance of the finalized Title V permit for this site. [District Rules 2520 and 4702 and 40 CFR Part 63, Subpart ZZZZ] Federally Enforceable Through Title V Permit

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