



MAR 3 1 2016

Bert de Jong D.J. Dairy, LLC 9231 Avenue 368 Dinuba, CA 93618

Notice of Final Action - Authority to Construct RE:

> Facility Number: S-6998 Project Number: S-1151244

Dear Mr. de Jong:

The Air Pollution Control Officer has issued the Authority to Construct permits to D.J. Dairy, LLC for the installation of two natural gas-fired IC engines powering agricultural irrigation pumps (one engine is 469 bhp and the other is 400 bhp), at 4390 Avenue 352 in Kingsburg, CA. Enclosed are the Authority to Construct permits and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the Authority to Construct permits was published on February 23, 2016. The District's analysis of the proposal was also sent to CARB on February 18, 2016. No comments were received following the District's preliminary decision on this project.

Also enclosed is an invoice for the engineering evaluation fees pursuant to District Rule 3010. Please remit the amount owed, along with a copy of the attached invoice, within 60 days.

> Seyed Sadredin Executive Director/Air Pollution Control Officer

Mr. Bert de Jong

Page 2

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Errol Villegas at (559) 230-6000.

Sincerely,

Arnaud Marjollet

Director of Permit Services

AM:sll

**Enclosures** 

cc: Tung Le, CARB (w/enclosure) via email

Bert De Jong: elkhorndairy@aol.com





Facility # S-6998 **DJ DAIRY** 9231 AVENUE 368 **DINUBA. CA 93618** 

# **AUTHORITY TO CONSTRUCT (ATC)**

## QUICK START GUIDE

- 1. Pay Invoice: Please pay enclosed invoice before due date.
- 2. Fully Understand ATC: Make sure you understand ALL conditions in the ATC prior to construction, modification and/or operation.
- 3. Follow ATC: You must construct, modify and/or operate your equipment as specified on the ATC. Any unspecified changes may require a new ATC.
- 4. Notify District: You must notify the District's Compliance Department, at the telephone numbers below, upon start-up and/or operation under the ATC. Please record the date construction or modification commenced and the date the equipment began operation under the ATC. You may NOT operate your equipment until you have notified the District's Compliance Department. A startup inspection may be required prior to receiving your Permit to Operate.
- 5. Source Test: Schedule and perform any required source testing. See http://www.valleyair.org/busind/comply/source testing.htm for source testing resources.
- 6. Maintain Records: Maintain all records required by ATC. Records are reviewed during every inspection (or upon request) and must be retained for at least 5 years.

By operating in compliance, you are doing your part to improve air quality for all Valley residents.

For assistance, please contact District Compliance staff at any of the telephone numbers listed below.

> Seyed Sadredin Executive Director/Air Pollution Control Officer

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

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

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

Southern Region





## **AUTHORITY TO CONSTRUCT**

PERMIT NO: S-6998-7-0 ISSUANCE DATE: 03/29/2016

**LEGAL OWNER OR OPERATOR: DJ DAIRY** 

MAILING ADDRESS: 9231 AVENUE 368

**DINUBA, CA 93618** 

**LOCATION:** 4390 AVENUE 352

KINGSBURG, CA 93631

#### **EQUIPMENT DESCRIPTION:**

469 BHP DRESSER RAND MODEL SFGLD 180 LEAN-BURN NATURAL GAS-FIRED IC ENGINE UTILIZING AN ADVANCED CATALYST SYSTEMS OXIDIZING CATALYST POWERING AN AGRICULTURAL IRRIGATION PUMP

### **CONDITIONS**

- 1. 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 Rule 1070]
- 2. 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 Rule 1070]
- 3. 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]
- 4. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 6. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 7. This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rules 4701 and 4702]

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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 \$-6998-7-0; Mar 29 2016 7:17AM - LOWELES: Joint Inspection NOT Required

- 8. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
- 9. This engine shall be equipped with a functional oxidizing catalyst unit for reduction of VOC emissions, which is maintained and operated per the manufacturer's recommendations. [District Rules 2201 and 4702]
- 10. The engine shall be fitted with the necessary connections and ports to monitor the back pressure across the catalyst. [District Rule 4702]
- 11. The engine shall be operated in a lean-burn configuration (greater than or equal to 4% O2 exhaust concentration). [District Rule 4702]
- 12. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201 and 4801]
- 13. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
- 14. Operation of this engine shall not exceed 5,600 hours per year. [District Rule 2201]
- 15. 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]
- 16. The operator shall inspect the catalyst and measure the back pressure at least once each calendar month. [District Rule 4702]
- 17. If the back pressure across the catalyst is 2 psi or greater, the catalyst shall be removed and either washed/cleaned or replaced. The engine shall not be operated until an appropriate catalyst is re-installed and the back pressure across the catalyst is less than 2 psi. [District Rule 4702]
- 18. Emissions from this IC engine shall not exceed any of the following limits: 83.6 ppmvd NOx @ 15% O2 (equivalent to 1.0 g-NOx/bhp-hr), 155 ppmvd CO @ 15% O2 (equivalent to 1.8 g-CO/bhp-hr), 0.033 g-PM10/bhp-hr, or 50 ppmvd VOC @ 15% O2 (equivalent to 0.21 g-VOC/hp-hr). [District Rules 2201 and 4702]
- 19. Source testing to measure VOC emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201 and 4702]
- 20. Source testing to measure CO emissions from this unit shall be conducted within 60 days of initial start-up and every 60 months thereafter. [District Rule 4702]
- 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]
- 22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
- 23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit, the test cannot be used to demonstrate compliance with an applicable limit. VOC emissions shall be reported as methane. VOC concentration and CO concentration shall be reported in ppmv, corrected to 15% oxygen. [District Rule 4702]
- 24. Emissions source testing shall be conducted with the engine operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. [District Rule 4702]
- 25. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702]

- 26. The permittee shall update the I&M plan for this engine prior to any planned change in operation. The permittee must notify the District no later than seven days after changing the I&M plan and must submit an updated I&M plan to the APCO for approval no later than 14 days after the change. The date and time of the change to the I&M plan shall be recorded in the engine's operating log. For modifications, the revised I&M plan shall be submitted to and approved by the APCO prior to issuance of the Permit to Operate. The permittee may request a change to the I&M plan at any time. [District Rule 4702]
- 27. The permittee shall record the total time the engine operates, in hours per calendar year. [District Rule 2201]
- 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]
- 29. All records shall be maintained and retained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 2201 and 4702]





### **AUTHORITY TO CONSTRUCT**

**PERMIT NO:** S-6998-8-0

**ISSUANCE DATE: 03/29/2016** 

**LEGAL OWNER OR OPERATOR: DJ DAIRY** 

MAILING ADDRESS:

9231 AVENUE 368

**DINUBA, CA 93618** 

LOCATION:

4390 AVENUE 352

KINGSBURG, CA 93631

#### **EQUIPMENT DESCRIPTION:**

400 BHP CATERPILLAR MODEL 3408TA RICH-BURN NATURAL GAS-FIRED IC ENGINE WITH A CERTIFIED MURCAL SNGEC SYSTEM AND UTILIZING AN ADVANCED CATALYST SYSTEMS OXIDIZING CATALYST POWERING AN AGRICULTURAL IRRIGATION PUMP

### CONDITIONS

- 1. 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 Rule 1070]
- 2. 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 Rule 1070]
- 3. 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]
- 4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
- 5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
- 6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
- 7. This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rules 4701 and 4702]

#### CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 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

- 8. The add-on emission control system (hereinafter referred to as the "SNGEC System") shall consist of a Compliance Controls (FW Murphy) Model AFR (64R) air/fuel ratio controller, a Johnson-Matthey Modulex C three-way catalyst system, two (one pre- and one post-catalyst) Type K thermocouples, a Manifold Absolute Pressure (MAP) sensor, and two (one pre- and one post-catalyst) Zirconia HEGO type oxygen sensors. [District Rule 4702]
- 9. The SNGEC System shall be installed, maintained and operated according to the component manufacturer's recommendations and shall be in place and operating at all times during engine operation. [District Rule 4702]
- 10. A person performing installation of or maintenance specific to the SNGEC System shall be certified by MurCal, or work under the direct and personal supervision of an individual physically present at the work site who is certified. [District Rule 4702]
- 11. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]
- 12. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer, MurCal, or their certified installer. [District Rule 4702]
- 13. 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]
- 14. This IC engine shall be fired on Public Utility Commission (PUC) regulated natural gas only. [District Rules 2201, 4702 and 4801]
- 15. The oxygen sensors shall be replaced when the "health" percentage on the AFR controller shows 50% or less. Whenever the oxygen sensors are replaced, the SNGEC System shall be calibrated, prior to resuming normal engine operation, according to the procedures outlined by MurCal. [District Rule 4702]
- 16. The catalyst module housing and elements shall be visually inspected at least once every calendar quarter. The catalyst shall be washed according to the manufacturer recommendations at least every 12-months and replaced at least every 36-months of operation. [District Rule 4702]
- 17. The thermocouples shall be replaced every 36,000 hours of engine operation or every 48 calendar months, whichever comes first. Whenever the thermocouples are replaced, the SNGEC System shall be calibrated, prior to resuming normal engine operation, according to the procedures outlined by MurCal. [District Rule 4702]
- 18. The MAP sensor shall be replaced every 16,000 hours of engine operation or every 36 calendar months, whichever comes first. Whenever the MAP sensor is replaced, the SNGEC System shall be calibrated, prior to resuming normal engine operation, according to the procedures outlined by MurCal. [District Rule 4702]
- 19. The pre- and post-catalyst exhaust temperatures shall be monitored and the temperature increase over the catalyst shall be recorded at initial system calibration. Both temperatures shall be monitored at least once in each calendar month that the engine operates. If the temperature increase over the catalyst becomes less than 50% of the initially determined value, the SNGEC System shall be calibrated or repaired, as necessary. [District Rule 4702]
- 20. After the SNGEC System is calibrated or repaired in response to a catalyst temperature drop, a District-approved portable analyzer shall be used to determine that the NOx and CO emissions and O2 levels are at or below permitted levels. The pre- and post-catalyst exhaust temperatures shall be monitored and the temperature increase over the catalyst shall be re-established. Monthly monitoring of the pre- and post-catalyst exhaust temperature shall resume as required in the previous condition, based on the new temperature increase value. [District Rule 4702]
- 21. Within 30 days after installation of the SNGEC System, a District-approved portable analyzer shall be used to determine NOx and CO emissions and O2 levels. All emission readings shall be taken with the unit operating at conditions representative of normal operations. The analyzer shall be calibrated, maintained, 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]

- 22. If either the NOx or CO concentrations 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 eight (8) hours after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after eight (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 performing the notification and testing required by this condition. [District Rule 4702]
- 23. During the start-up inspection, the District shall be provided with written documentation that the emission control system is suitable for use on this engine and verify the engine's horsepower rating, exhaust flow rate, exhaust temperature, oil consumption, general mechanical condition, and the available fuel supply pressure will satisfy the criteria for proper operation of the SNGEC System, along with portable analyzer calibration records and results. [District Rule 4702]
- 24. NOx emissions from this IC engine shall not exceed 90 ppmvd-NOx @ 15% O2 (equivalent to 1.3 g-NOx/bhp-hr). [District Rules 2201 and 4702]
- 25. PM10 emissions from this IC engine shall not exceed 0.063 g-PM10/bhp-hr. [District Rule 2201]
- 26. Emissions from this IC engine shall not exceed any of the following limits: 1,000 ppmvd CO @ 15% O2 (equivalent to 8.49 g-CO/bhp-hr) or 50 ppmvd-VOC @ 15% O2 (equivalent to 0.21 g-VOC/bhp-hr). [District Rules 2201 and 4702]
- 27. Source testing to measure VOC emissions from this unit shall be conducted within 60 days of startup. [District Rules 2201 and 4702]
- 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]
- 29. The following test methods shall be used: NOx (ppmv) EPA Method 7E or ARB Method 100, CO (ppmv) EPA Method 10 or ARB Method 100, stack gas oxygen EPA Method 3 or 3A or ARB Method 100, and VOC (ppmv) EPA Method 18, 25A or 25B, or ARB Method 100. [District Rules 1081 and 4702]
- 30. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
- 31. The operator shall maintain engine operating log records of: 1) the monthly engine hour meter reading; 2) the date and the engine hour meter reading at each oxygen sensor change, MAP sensor change, and thermocouples change; 3) the monthly pre- and post-catalyst exhaust temperatures monitoring data including the initial temperature differential and any subsequently determined temperature differentials; 4) the date and engine hour meter reading of each catalyst module inspection, washing, and replacement; and 5) fuel purchase records. [District Rule 4702]
- 32. The permittee shall record the total time the engine operates, in hours per calendar year. [District Rule 2201]
- 33. 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 Rules 2201 and 4702]
- 34. The District may revise and/or add requirements in the future as necessary to ensure the SNGEC System operates according to its certification requirements. [District Rule 4702]

**CALIFORNIA OPERATIONS** 

March 25, 2016

Mr. Arnaud Marjollet Director of Permit Services San Joaquin Valley Unified Air Pollution Control District 1990E. Gettysburg Avenue Fresno, California 93726

RECEIVED

MAR 3 0 2016

Permits Services

RE: C-5749 Homeland Ranch Source Routine Replacement of Rental Engines

Dear Mr. Marjollet:

Please find attached an application for the proposed routine replacement of (1) diesel engine powering an electrical generator (powering a well pump awaiting electrification) and (1) dormant diesel agricultural irrigation engine with (1) rental diesel engine powering an electrical generator (powering a well pump awaiting electrification). The replacement engine is within 10% of the rated capacity of the units being replaced, performs the same process (pumping irrigation water), and are portable. After consultation with the Air District staff, it was determined that this action may comply with the Routine Replacement provisions for replacement of agricultural rental irrigation engines. The replacement is summarized below:

	EXISTING ENGINE UNITS					REPLACEMENT RENTAL ENGINE UNIT					
	Permit	Make	Model	Hp.	Tier		Make	Model	Нp	Tier	Family
Generator	826	Detroit Diesel	6063-HV35R	685	3	- Generator	Caterpillar	C15	779	4i	ECPXL15.2HZA
Dormant Irrigation Engine	332-1	John Deere	6329DN01	87	0	-	***************************************				*
Total:				772					779	***	

Also note that in addition to C-5749, these rental engines will be operated at additional farming stationary sources. A listing of the stationary sources is attached in the reference document. Please note that there is an Engineering Evaluation Template, previously prepared by Air District's staff, for the routine replacement of Agricultural Rental engines specific to the J.G. Boswell Company to assist with this application.

Enclosed please find the application package detailing the proposed routine replacement and a check in the amount of \$75.00 for the filing fees. If you or your staff need additional information or have any questions, please do not hesitate to contact me. Thank you.

Sincerely,

Jose Lemus

**Environmental Affairs Specialist** 

Attachments:

Application, Supplemental Information Forms, CARB Certification Documents, Stationary Source Site List, Existing PTOs, Application Check for \$75.00